

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
HIGHWAY DIVISION 1

**PROPOSAL**

**DATE AND TIME OF BID OPENING: JANUARY 3, 2024 AT 2:00 PM**

**CONTRACT ID: DA00596**

**WBS ELEMENT NO.: 16.401**

**COUNTY: DARE**

**TYPE OF WORK: M/V FRISCO CREDIT DRY DOCK (CDD)**

**NOTICE:**

**ALL BIDDERS SHALL COMPLY WITH ALL APPLICABLE LAWS REGULATING THE PRACTICE OF GENERAL CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA WHICH REQUIRES THE BIDDER TO BE LICENSED BY THE N.C. LICENSING BOARD FOR CONTRACTORS WHEN BIDDING ON ANY NON-FEDERAL AID PROJECT WHERE THE BID IS \$30,000 OR MORE, EXCEPT FOR CERTAIN SPECIALTY WORK AS DETERMINED BY THE LICENSING BOARD. BIDDERS SHALL ALSO COMPLY WITH ALL OTHER APPLICABLE LAWS REGULATING THE PRACTICES OF ELECTRICAL, PLUMBING, HEATING AND AIR CONDITIONING AND REFRIGERATION CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA. NOTWITHSTANDING THESE LIMITATIONS ON BIDDING, THE BIDDER WHO IS AWARDED ANY FEDERAL - AID FUNDED PROJECT SHALL COMPLY WITH CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA FOR LICENSING REQUIREMENTS WITHIN 60 CALENDAR DAYS OF BID OPENING.**

**THIS IS A DIVISION LET PROJECT**

**5% BID BOND OR BID DEPOSIT REQUIRED**

**NC GENERAL CONTRACTORS LICENSE NOT REQUIRED**

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**NAME OF BIDDER**

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**ADDRESS OF BIDDER**

**PROPOSAL FOR THE CONSTRUCTION OF  
CONTRACT NO. DA00596 IN DARE COUNTY, NORTH CAROLINA  
DATE: NOVEMBER 22, 2023  
DEPARTMENT OF TRANSPORTATION,  
RALEIGH, NORTH CAROLINA**

The Bidder has carefully examined the location of the proposed work to be known as Contract No. **DA00596**; has carefully examined the plans and specifications, which are acknowledged to be part of the proposal, the special provisions, the proposal, the form of contract, and the forms of contract payment bond and contract performance bond; and thoroughly understands the stipulations, requirements, and provisions. The undersigned bidder agrees to bound upon his execution of the bid and subsequent award to him by the Department of Transportation in accordance with this proposal to provide the necessary contract payment bond and contract performance bond within fourteen days after the written notice of award is received by him. The undersigned Bidder further agrees to provide all necessary machinery, tools, labor, and other means of construction; and to do all the work and to furnish all materials, except as otherwise noted, necessary to perform and complete the said contract in accordance with *the 2024 Standard Specifications for Roads and Structures* by the dates(s) specified in the Project Special Provisions and in accordance with the requirements of the Engineer, and at the unit or lump sum prices, as the case may be, for the various items given on the sheets contained herein.

The Bidder shall provide and furnish all the materials, machinery, implements, appliances and tools, and perform the work and required labor to construct and complete State Highway Contract No. **DA00596** in **Dare County** for the unit or lump sum prices, as the case may be, bid by the Bidder in his bid and according to the proposal, plans, and specifications prepared by said Department, which proposal, plans, and specifications show the details covering this project, and hereby become a part of this contract.

The published volume entitled *North Carolina Department of Transportation, Raleigh, Standard Specifications for Roads and Structures, January 2024* with all amendments and supplements thereto, is by reference incorporated into and made a part of this contract; that, except as herein modified, all the construction and work included in this contract is to be done in accordance with the specifications contained in said volume, and amendments and supplements thereto, under the direction of the Engineer.

If the proposal is accepted and the award is made, the contract is valid only when signed either by the Contract Officer or such other person as may be designated by the Secretary to sign for the Department of Transportation. The conditions and provisions herein cannot be changed except over the signature of the said Contract Officer or Division Engineer.

The quantities shown in the itemized proposal for the project are considered to be approximate only and are given as the basis for comparison of bids. The Department of Transportation may increase or decrease the quantity of any item or portion of the work as may be deemed necessary or expedient.

An increase or decrease in the quantity of an item will not be regarded as sufficient ground for an increase or decrease in the unit prices, nor in the time allowed for the completion of the work, except as provided for the contract.

Accompanying this bid is a bid bond secured by a corporate surety, or certified check payable to the order of the Department of Transportation, for five percent of the total bid price, which deposit is to be forfeited as liquidated damages in case this bid is accepted and the Bidder shall fail to provide the required payment and performance bonds with the Department of Transportation, under the condition of this proposal, within 14 calendar days after the written notice of award is received by him, as provided in the Standard Specifications; otherwise said deposit will be returned to the Bidder.

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## **INSTRUCTIONS TO BIDDERS**

**PLEASE READ ALL INSTRUCTIONS CAREFULLY  
BEFORE PREPARING AND SUBMITTING YOUR BID.**

**All bids shall be prepared and submitted in accordance with the following requirements. Failure to comply with any requirement may cause the bid to be considered irregular and may be grounds for rejection of the bid.**

For preparing and submitting the bid electronically, refer to Article 102-8(B) of the *2024 Standard Specifications*.

Bidders that bid electronically on Raleigh Central-Let projects will need a separate Digital Signature from the approved electronic bidding provider for Division Contracts.

### **ELECTRONIC ON-LINE BID:**

1. Download entire proposal from Connect NCDOT website. Download the electronic submittal file from the approved electronic bidding provider website.
2. If the *Interested Parties List* provision SP01 G02 is part of the proposal prior to submitting a bid on a project, the bidder shall sign up on the *Interested Parties List* in conformance with Interested Parties List provision SP01 G02.
3. Prepare and submit the electronic submittal file using the approved electronic bidding provider software.
4. Electronic bidding software necessary for electronic bid preparation may be downloaded from the Bid Express website following the directions at:  
<https://connect.ncdot.gov/letting/Pages/Electronic-Bidding.aspx>.
5. Questions should be emailed 7 calendar days prior to the bid opening to **Jeremy Remme** at **jjremme@ncdot.gov**. Contact with any other NCDOT personnel concerning this project is strictly prohibited, unless otherwise noted, and may result in bids being considered non-responsive.

## PROJECT SPECIAL PROVISIONS

### **MANDATORY PRE-BID CONFERENCE AND PROPOSAL REVIEW:**

**In order to bid on this contract, all prospective bidders shall attend a Mandatory Pre-Bid Conference to be held at the NCDOT Shipyard 8550 Shipyard Road, Manns Harbor, NC 27953 at 9:00 A.M. on Tuesday, December 05, 2023. Please contact Jeremy Remme- (252) 423-5100, [jjremme@ncdot.gov](mailto:jjremme@ncdot.gov) for any further information.**

The pre-bid conference will include a thorough discussion of the plans, contract pay items, special provisions, etc.

Only bidders who have attended and properly registered at the above scheduled pre-bid conferences will be considered qualified to bid on this project. A bid received from a bidder who has not attended and properly registered at the above scheduled pre-bid conferences will not be considered for award.

No questions concerning the project will be answered by any Department personnel at any time, except at the Mandatory Pre-Bid Conference.

This conference will be conducted by Department personnel for the purpose of providing additional information about the project and to give bidders an opportunity to ask any questions they may have.

The Engineer will explain areas of responsibility, standards of performance and expected results. This is also intended to be a time for the Contractor to raise questions.

Any changes made to the contract during the pre-bid conference will be documented and included in an addendum. The addendum must be returned with the bid package, signed and dated. Failure to do so will result in disqualification of bid. Pre-Bid Conference proceedings will be tape recorded.

Attendance at the Pre-Bid Conference will not meet the requirements of proper registration unless the individual attending has registered with the following information:

1. The individual writes his/her name on the official roster at the **beginning** of the pre-bid conference.
2. The individual writes in the name and address of the company he/she represents.
3. Only one company is shown as being represented by the individual attending.
4. The individual is an officer or permanent employee of the firm they represent.
5. The individual shall sign out when the end of the pre-bid conference is completed.

**Only bids received from the bidders who have attended and properly registered at the Pre-Bid Conference will be considered.**

**INTERESTED PARTIES LIST:**

(6-21-22)(Rev. 1-16-24)

102

SP1 G02

Revise the *Standard Specifications* as follows:

The *Interested Parties List* sign up process is not applicable to this contract.

**Page 1-13, Article 102-3 PROPOSALS AND INTERESTED PARTIES LIST, lines 12-15**, delete the first paragraph.

**Page 1-14, Article 102-8 PREPARATION AND SUBMISSION OF BIDS, lines 43-44**, delete the first sentence of the first paragraph.

**BOND REQUIREMENTS:**

(6-1-16)(Rev. 1-16-24)

102-8, 102-10

SPD 01-420A

A Bid Bond is required in accordance with Article 102-10 of the *Standard Specifications* for Roads and Structures.

Contract Payment and Performance Bonds are required in accordance with Article 103-7 of the *Standard Specifications*.

**CONTRACT TIME AND LIQUIDATED DAMAGES:**

(7-1-95) (Rev. 12-18-07)

108

SP1 G10 A

The date of availability for this contract is **January 17, 2024**.

The completion date for this contract is **May 15, 2024**.

Except where otherwise provided by the contract, observation periods required by the contract will not be a part of the work to be completed by the completion date and/or intermediate contract times stated in the contract. The acceptable completion of the observation periods that extend beyond the final completion date shall be a part of the work covered by the performance and payment bonds.

The liquidated damages for this contract are **One Thousand One Hundred Dollars (\$1,100.00)** per calendar day.

**PROSECUTION OF WORK:**

(7-1-95) (Rev. 8-21-12)

108

SP1 G15R

The Contractor will be required to prosecute the work in a continuous and uninterrupted manner from the time he begins the work until completion and final acceptance of the project. The Contractor will not be permitted to suspend his operations except for reasons beyond his control or except where the Engineer has authorized a suspension of the Contractor's operations in writing.

In the event that the Contractor's operations are suspended in violation of the above provisions, the sum of **\$ 500.00** will be charged the Contractor for each and every calendar day that such suspension takes place. The said amount is hereby agreed upon as liquidated damages due to extra engineering and maintenance costs and due to increased public hazard resulting from a suspension of the work. Liquidated damages chargeable due to suspension of the work will be additional to any liquidated damages that may become chargeable due to failure to complete the work on time.

**NO MAJOR CONTRACT ITEMS:**

(2-19-02) (Rev. 8-21-07)

104

SP1 G31

None of the items included in this contract will be major items.

**NO SPECIALTY ITEMS:**

(7-1-95)(Rev. 1-16-24)

108-6

SP1 G34

None of the items included in this contract will be specialty items (see Article 108-6 of the *Standard Specifications*).

**STEEL PRICE ADJUSTMENT:**

(4-19-22) (Rev. 11-21-23)

SP1 G47

**Description and Purpose**

Steel price adjustments will be made to the payments due the Contractor for items as defined herein that are permanently incorporated into the work, when the price of raw steel mill products utilized on the contract have fluctuated. The Department will adjust monthly progress payments up or down as appropriate for cost changes in steel according to this provision.

**Eligible Items**

The list of eligible bid items for steel price adjustment can be found on the Departments website at the following address:

<https://connect.ncdot.gov/letting/LetCentral/Eligible%20Bid%20Items%20for%20Steel%20Price%20Adjustment.xlsx>

Nuts, bolts, anchor bolts, rebar chairs, connecting bands and other miscellaneous hardware associated with these items shall not be included in the price adjustment.

Adjustments will only be made for fluctuations in the material cost of the steel used in the above products as specified in the Product Relationship Table below. The producing mill is defined as the source of steel product before any fabrication has occurred (e.g., coil, plate, rebar, hot rolled shapes, etc.). No adjustment will be made for changes in the cost of fabrication, coating, shipping, storage, etc.

No steel price adjustments will be made for any products manufactured from steel having an adjustment date, as defined by the Product Relationship Table below, prior to the letting date.

### **Bid Submittal Requirements**

The successful bidder, within 14 calendar days after the notice of award is received by him, shall provide the completed Form SPA-1 to the Department (State Contract Officer or Division Contract Engineer) along with the payment bonds, performance bonds and contract execution signature sheets in a single submittal. If Form SPA-1 is not included in the same submittal as the payment bonds, performance bonds and contract execution signature sheets, the Contractor will not be eligible for any steel price adjustment for any item in the contract for the life of the contract. Form SPA-1 can be found on the Department's website at the following address:

<https://connect.ncdot.gov/letting/LetCentral/Form%20SPA-1.xlsm>

The Contractor shall provide Form SPA-1 listing the Contract Line Number, (with corresponding Item Number, Item Description, and Category) for the steel products they wish to have an adjustment calculated. Only the contract items corresponding to the list of eligible item numbers for steel price adjustment may be entered on Form SPA-1. The Contractor may choose to have steel price adjustment applied to any, all, or none of the eligible items. However, the Contractor's selection of items for steel price adjustment or non-selection (non-participation) may not be changed once Form SPA-1 has been received by the Department. Items the Bidder chooses for steel price adjustment must be designated by writing the word "Yes" in the column titled "Option" by each Pay Item chosen for adjustment. Should the bidder elect an eligible steel price item, the entire quantity of the line item will be subject to the price adjustment for the duration of the Contract. The Bidder's designations on Form SPA-1 must be written in ink or typed and signed by the Bidder (Prime Contractor) to be considered complete. Items not properly designated, designated with "No", or left blank on the Bidder's Form SPA-1 will automatically be removed from consideration for adjustment. No steel items will be eligible for steel price adjustment on this Project if the Bidder fails to return Form SPA-1 in accordance with this provision.

### **Establishing the Base Price**

The Department will use a blend of monthly average prices as reported from the Fastmarkets platform to calculate the monthly adjustment indices (BI and MI). This data is typically available on the first day of the month for the preceding month. The indices will be calculated by the Department for the different categories found on the Product Relationship Table below. For item numbers that include multiple types of steel products, the category listed for that item number will be used for adjusting each steel component.

The bidding index for Category 1 Steel items is **\$ 42.25** per hundredweight.  
The bidding index for Category 2 Steel items is **\$ 71.45** per hundredweight.  
The bidding index for Category 3 Steel items is **\$ 62.50** per hundredweight.  
The bidding index for Category 4 Steel items is **\$ 37.30** per hundredweight.  
The bidding index for Category 5 Steel items is **\$ 53.94** per hundredweight.  
The bidding index for Category 6 Steel items is **\$ 65.26** per hundredweight.  
The bidding index for Category 7 Steel items is **\$ 43.68** per hundredweight.



The bidding index represents a selling price of steel based on Fastmarkets data for the month of **September 2023**.

MI = Monthly Index. – in Dollars (\$) per hundredweight (CWT). Use the adjustment indices from the month the steel was shipped from the producing mill, received on the project, or member cast as defined in the Product Relationship Table.

BI = Bidding Index. - in Dollars (\$) per hundredweight (CWT). Use the adjustment indices as listed in the proposal.

<i>Product Relationship Table</i>			
<i>Steel Product (Title)</i>	BI, MI*	Adjustment Date for MI	Category
Reinforcing Steel, Bridge Deck, and SIP Forms	Based on one or more Fastmarkets indices	Delivery Date from Producing Mill	1
Structural Steel and Encasement Pipe	Based on one or more Fastmarkets indices	Delivery Date from Producing Mill	2
Steel H-Piles, Soldier Pile Walls	Based on one or more Fastmarkets indices	Delivery Date from Producing Mill	3
Guardrail Items and Pipe Piles	Based on one or more Fastmarkets indices	Material Received Date**	4
Fence Items	Based on one or more Fastmarkets indices	Material Received Date**	5
Overhead Sign Assembly, Signal Poles, High Mount Standards	Based on one or more Fastmarkets indices	Material Received Date**	6
Prestressed Concrete Members	Based on one or more Fastmarkets indices	Cast Date of Member	7
* BI and MI are in converted units of Dollars per Hundredweight (\$/CWT)			
** Material Received Date is defined as the date the materials are received on the project site. If a material prepayment is made for a Category 4-6 item, the Adjustment Date to be used will be the date of the prepayment request instead of the Materials Received Date.			

Submit documentation to the Engineer for all items listed in the Contract for which the Contractor is requesting a steel price adjustment.

### **Submittal Requirements**

The items in categories 1,2, and 3, shall be specifically stored, labeled, or tagged, recognizable by color marking, and identifiable by Project for inspection and audit verification immediately upon arrival at the fabricator.

Furnish the following documentation for all steel products to be incorporated into the work and documented on Form SPA-2, found on the Departments website at the following address:

<https://connect.ncdot.gov/projects/construction/Construction%20Forms/Form%20SPA-2.xlsx>

Submit all documentation to the Engineer prior to incorporation of the steel into the completed work. The Department will withhold progress payments for the affected contract line item if the documentation is not provided and at the discretion of the Engineer the work is allowed to proceed. Progress payments will be made upon receipt of the delinquent documentation.

#### Step 1 (Form SPA -2)

Utilizing Form SPA-2, submit separate documentation packages for each line item from Form SPA-1 for which the Contractor opted for a steel price adjustment. For line items with multiple components of steel, each component should be listed separately. Label each SPA-2 documentation package with a unique number as described below.

- a. Documentation package number: (Insert the contract line-item) - (Insert sequential package number beginning with "1").

Example: 412 - 1,

412 - 2,

424 - 1,

424 - 2,

424 - 3, etc.

- b. The steel product quantity in pounds
  - i. The following sources should be used, in declining order of precedence, to determine the weight of steel/iron, based on the Engineers decision:
    1. Department established weights of steel/iron by contract pay item per pay unit;
    2. Approved Shop Drawings;
    3. Verified Shipping Documents;
    4. Contract Plans;
    5. Standard Drawing Sheets;
    6. Industry Standards (i.e., AISC Manual of Steel Construction, AWWA Standards, etc.); and
    7. Manufacture's data.
  - ii. Any item requiring approved shop drawings shall have the weights of steel calculated and shown on the shop drawings or submitted and certified separately by the fabricator.
- c. The date the steel product, subject to adjustment, was shipped from the producing mill (Categories 1-3), received on the project (Categories 4-6), or casting date (Category 7).

#### Step 2 (Monthly Calculator Spreadsheet)

For each month, upon the incorporation of the steel product into the work, provide the Engineer the following:

- 1) Completed NCDOT Steel Price Adjustment Calculator Spreadsheet, summarizing all the steel submittal packages (Form SPA-2) actually incorporated into the completed work in the given month.
  - a. Contract Number
  - b. Bidding Index Reference Month
  - c. Contract Completion Date or Revised Completion Date
  - d. County, Route, and Project TIP information
  - e. Item Number
  - f. Line-Item Description
  - g. Submittal Number from Form SPA-2
  - h. Adjustment date
  - i. Pounds of Steel
- 2) An affidavit signed by the Contractor stating the documentation provided in the NCDOT Steel Price Adjustment Calculator Spreadsheet is true and accurate.

### **Price Adjustment Conditions**

Download the Monthly Steel Adjustment Spreadsheet with the most current reference data from the Department's website each month at the following address:

<https://connect.ncdot.gov/projects/construction/Construction%20Forms/Form%20SPA-3%20NCDOT%20Steel%20Price%20Adjustment%20Calculator.xlsx>

If the monthly Fastmarkets data is not available, the data for the most recent immediately preceding month will be used as the basis for adjustment.

### **Price Adjustment Calculations**

The price adjustment will be determined by comparing the percentage of change in index value listed in the proposal (BI) to the monthly index value (MI). (See included sample examples). Weights and date of shipment must be documented as required herein. The final price adjustment dollar value will be determined by multiplying this percentage increase or decrease in the index by the represented quantity of steel incorporated into the work, and the established bidding index (BI) subject to the limitations herein.

**Price increase/decrease will be computed as follows:**

$$\text{SPA} = ((\text{MI}/\text{BI}) - 1) * \text{BI} * (\text{Q}/100)$$

Where;

SPA = Steel price adjustment in dollars

MI = Monthly Shipping Index. – in Dollars (\$) per hundredweight (CWT). Use the adjustment indices from the month the steel was shipped from the producing mill, received on the project, or member cast as defined in the Product Relationship Table.

BI = Bidding Index. - in Dollars (\$) per hundredweight (CWT). Use the adjustment indices as listed in the proposal.

Q = Quantity of steel, product, pounds actually incorporated into the work as documented by the Contractor, or Design Build Team and verified by the Engineer.

Calculations for price adjustment shall be shown separate from the monthly progress estimate and will not be included in the total cost of work for determination of progress or for extension of Contract time in accordance with Subarticle 108-10(B)(1).

Any apparent attempt to unbalance bids in favor of items subject to price adjustment may result in rejection of the bid proposal.

Adjustments will be paid or charged to the Contractor only. Any Contractor receiving an adjustment under this provision shall distribute the proper proportional part of such adjustments to the subcontractor who performed the applicable work.

Delays to the work caused by steel shortages may be justification for a Contract time extension but will not constitute grounds for claims for standby equipment, extended office overhead, or other costs associated with such delays.

If an increase in the steel material price is anticipated to exceed 50% of the original quoted price, the contractor must notify the Department within 7 days prior to purchasing the material. Upon receipt of such notification, the Department will direct the Contractor to either (1) proceed with the work or (2) suspend the work and explore the use of alternate options.

If the decrease in the steel material exceeds 50% of the original quoted price, the contractor may submit to the Department additional market index information specific to the item in question to dispute the decrease. The Department will review this information and determine if the decrease is warranted.

When the steel product adjustment date, as defined in the Product Relationship Table, is after the approved contract completion date, the steel price adjustments will be based on the lesser value of either the MI for the month of the approved contract completion date or the MI for the actual adjustment date.

If the price adjustment is based on estimated material quantities for that time, and a revision to the total material quantity is made in a subsequent or final estimate, an appropriate adjustment will be made to the price adjustment previously calculated. The adjustment will be based on the same indices used to calculate the price adjustment which is being revised. If the adjustment date of the revised material quantity cannot be determined, the adjustment for the quantity in question, will be based on the indices utilized to calculate the steel price adjustment for the last initial documentation package submission, for the steel product subject to adjustment, that was incorporated into the particular item of work, for which quantities are being finalized.

Example: Structural steel for a particular bridge was provided for in three different shipments with each having a different mill shipping date. The quantity of structural steel actually used for the bridge was calculated and a steel price adjustment was made in a progress payment. At the conclusion of the work an error was found in the plans of the final quantity of structural steel used for the bridge. The quantity to be adjusted cannot be directly related to any one of the three mill shipping dates. The steel price adjustment for the quantity in question would be calculated using the indices that were utilized to calculate the steel price adjustment for the quantity of structural steel represented by the last initial structural steel documentation package submission. The package used will be the one with the greatest sequential number.

**Extra Work/Force Account:**

When steel products, as specified herein, are added to the contract as extra work, in accordance with the provisions of Article 104-7 or 104-3, the Engineer will determine and specify in the supplemental agreement, the need for application of steel price adjustments on a case-by-case basis. No steel price adjustments will be made for any products manufactured from steel having an adjustment date prior to the supplemental agreement execution date. Price adjustments will be made as provided herein, except the Bidding Index will be based on the month in which the supplemental agreement pricing was executed.

For work performed on force account basis, reimbursement of actual material costs, along with the specified overhead and profit markup, will be considered to include full compensation for the current cost of steel and no steel price adjustments will be made.

**Examples Form SPA-2**  
**Steel Price Adjustment Submission Form**

Contract Number  C203394  Bid Reference Month  January   
 2019

Submittal Date  8/31/2019

Contract Line Item  237

Line Item Description  APPROX....LBS Structural Steel

Sequential Submittal  
 Number  2

Supplier	Description of material	Location information	Quantity in lbs.	Adjustment Date
XYZ mill	Structural Steel	Structure 3, Spans A-C	1,200,000	May 4, 2020
ABC distributing	Various channel & angle shapes	Structure 3 Spans A-C	35,000	July 14, 2020
		Total Pounds of Steel	1,235,000	

Note: Attach the following supporting documentation to this form.

- Bill of Lading to support the shipping dates
- Supporting information for weight documentation (e.g., Pay item reference, Shop drawings, shipping documents, Standards Sheets, industry standards, or manufacturer's data)

By providing this data under my signature, I attest to the accuracy of and validity of the data on this form and certify that no deliberate misrepresentation in any manner has occurred.

Printed Name  
 \_\_\_\_\_

Signature  
 \_\_\_\_\_

**Examples Form SPA-2**  
**Steel Price Adjustment Submission Form**

Contract Number C203394 Bid Reference Month January 2019

Submittal Date August 31, 2019

Contract Line Item 237

Line Item Description SUPPORT, OVRHD SIGN STR -DFEB – STA 36+00

Sequential Submittal  
 Number 2

Supplier	Description of material	Location information	Quantity in lbs.	Adjustment Date
XYZ mill	Tubular Steel (Vertical legs)	<u>-DFEB – STA 36+00</u>	12000	December 11, 2021
PDQ Mill	4" Tubular steel (Horizontal legs)	<u>-DFEB – STA 36+00</u>	5900	December 11, 2021
ABC distributing	Various channel & angle shapes (see quote)	<u>-DFEB – STA 36+00</u>	1300	December 11, 2021
	Catwalk assembly	<u>-DFEB – STA 36+00</u>	2000	December 11, 2021
Nucor	Flat plate	<u>-DFEB – STA 36+00</u>	650	December 11, 2021
		Total Pounds of Steel	21,850	

Note: Attach the following supporting documentation to this form.

- Bill of Lading to support the shipping dates
- Supporting information for weight documentation (e.g., Pay item reference, Shop drawings, shipping documents, Standards Sheets, industry standards, or manufacturer's data)

By providing this data under my signature, I attest to the accuracy of and validity of the data on this form and certify that no deliberate misrepresentation in any manner has occurred.

Printed Name

Signature

\_\_\_\_\_

\_\_\_\_\_

### Price Adjustment Sample Calculation (increase)

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Project bid on September 17, 2019

Line Item 635 “Structural Steel” has a plan quantity of 2,717,000 lbs.

Bidding Index for Structural Steel (Category 2) in the proposal was \$36.12/CWT = BI

450,000 lbs. of Structural Steel for Structure 2 at Station 44+08.60 were shipped to fabricator from the producing mill in same month, May 2021.

Monthly Index for Structural Steel (Category 2) for May 2021 was \$64.89/CWT = MI

The Steel Price Adjustment formula is as follows:

$$\text{SPA} = ((\text{MI} / \text{BI}) - 1) * \text{BI} * (\text{Q} / 100)$$

Where; SPA = Steel price adjustment in dollars

BI = Bidding Index – in dollars (\$) per hundredweight (CWT). Use the adjustment indices as listed in the proposal.

MI = Mill Shipping Index – in dollars (\$) per hundredweight (CWT). Use the adjustment indices from the month the steel was shipped from the producing mill, received on the project, or member cast as defined in the Product Relationship Table.

Q = Quantity of steel product, in pounds (lbs.) actually incorporated into the work as documented by the Contractor, or Design Build Team and verified by the Engineer.

$$\text{BI} = \$36.12 / \text{CWT}$$

$$\text{MI} = \$64.89 / \text{CWT}$$

$$\% \text{ change} = ((\text{MI} / \text{BI}) - 1) = (\$64.89 / \$36.12 - 1) = (1.79651 - 1) = 0.79651162791$$

$$\text{Q} = 450,000 \text{ lbs.}$$

$$\text{SPA} = 0.79651162791 \times \$36.12 \times (450,000 / 100)$$

$$\text{SPA} = 0.79651162791 * \$36.12 * 4,500$$

SPA = \$129,465 pay adjustment to Contractor for Structural Steel (Structure 2 at Station 44+08.60)



### Price Adjustment Sample Calculation (decrease)

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Project bid on December 18, 2018

Line Item 635 Structural Steel has a plan quantity of 2,717,000 lbs.

Bidding Index for Structural Steel (Category 2) in the proposal was \$46.72/CWT = BI

600,000 lbs. of Structural Steel for Structure 1 at Station 22+57.68 were shipped to fabricator from the producing mill in same month, August 2020.

Monthly Index for Structural Steel (Category 2) for August 2020 was \$27.03/CWT = MI

The Steel Price Adjustment formula is as follows:

$$\text{SPA} = ((\text{MI} / \text{BI}) - 1) * \text{BI} * (\text{Q} / 100)$$

Where; SPA = Steel price adjustment in dollars

BI = Bidding Index – in dollars (\$) per hundredweight (CWT). Use the adjustment indices as listed in the proposal.

MI = Mill Shipping Index – in dollars (\$) per hundredweight (CWT). Use the adjustment indices from the month the steel was shipped from the producing mill, received on the project, or member cast as defined in the Product Relationship Table.

Q = Quantity of steel product, in pounds (lbs.) actually incorporated into the work as documented by the Contractor, or Design Build Team and verified by the Engineer.

$$\text{BI} = \$46.72 / \text{CWT}$$

$$\text{MI} = \$27.03 / \text{CWT}$$

$$\% \text{ change} = ((\text{MI} / \text{BI}) - 1) = (\$27.03 / \$46.72 - 1) = (0.57855 - 1) = -0.421446917808$$

$$\text{Q} = 600,000 \text{ lbs.}$$

$$\text{SPA} = -0.421446917808 * \$46.72 * (600,000 / 100)$$

$$\text{SPA} = -0.421446917808 * \$46.72 * 6,000$$

$$\text{SPA} = \$ 118,140.00 \text{ Credit to the Department for Structural Steel (Structure 1 at Station 22+57.68)}$$

### Price Adjustment Sample Calculation (increase)

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Project bid on July 16, 2020

Line Item 614 Reinforced Concrete Deck Slab has a plan quantity of 241974 lbs.

Bidding Index Reference Month was May 2020. Bidding Index for Reinforced Concrete Deck Slab (Category 1) in the proposal was \$29.21/CWT = BI

51,621 lbs. of reinforcing steel and 52,311 lbs. of epoxy coated reinforcing steel for Structure 2 at Station 107+45.55 -L- was shipped to fabricator from the producing mill in same month, May 2021.

Monthly Index for Reinforced Concrete Deck Slab (Category 1) for May 2021 was \$43.13/CWT = MI

The Steel Price Adjustment formula is as follows:

$$\text{SPA} = ((\text{MI} / \text{BI}) - 1) * \text{BI} * (\text{Q} / 100)$$

Where; SPA = Steel price adjustment in dollars

BI = Bidding Index – in dollars (\$) per hundredweight (CWT). Use the adjustment indices as listed in the proposal.

MI = Mill Shipping Index – in dollars (\$) per hundredweight (CWT). Use the adjustment indices from the month the steel was shipped from the producing mill, received on the project, or member cast as defined in the Product Relationship Table.

Q = Quantity of steel product, in pounds (lbs.) actually incorporated into the work as documented by the Contractor, or Design Build Team and verified by the Engineer.

$$\text{BI} = \$29.21 / \text{CWT}$$

$$\text{MI} = \$43.13 / \text{CWT}$$

$$\% \text{ change} = ((\text{MI} / \text{BI}) - 1) = (\$43.13 / \$29.21 - 1) = (1.47655 - 1) = 0.47654912701$$

$$\text{Q} = 103932 \text{ lbs.}$$

$$\text{SPA} = 0.47654912701 * \$29.21 * (103,932 / 100)$$

$$\text{SPA} = 0.47654912701 * \$29.21 * 1,039.32$$

SPA = \$14,467.33 Pay Adjustment to Contractor for Reinforced Concrete Deck Slab (Category 1) at Station 107+45.55 -L-

**MINORITY BUSINESS ENTERPRISE AND WOMEN BUSINESS ENTERPRISE (DIVISIONS):**

(10-16-07)(Rev. 8-17-21)

102-15(J)

SP1 G67

**Description**

The purpose of this Special Provision is to carry out the North Carolina Department of Transportation's policy of ensuring nondiscrimination in the award and administration of contracts financed in whole or in part with State funds.

**Definitions**

*Additional MBE/WBE Subcontractors* - Any MBE/WBE submitted at the time of bid that will not be used to meet the Combined MBE/WBE goal. No submittal of a Letter of Intent is required.

*Combined MBE/WBE Goal*: A portion of the total contract, expressed as a percentage that is to be performed by committed MBE/WBE subcontractors.

*Committed MBE/WBE Subcontractor* - Any MBE/WBE submitted at the time of bid that is being used to meet the Combined MBE / WBE goal by submission of a Letter of Intent. Or any MBE or WBE used as a replacement for a previously committed MBE or WBE firm.

*Contract Goal Requirement* - The approved participation at time of award, but not greater than the advertised Combined MBE/WBE contract goal.

*Goal Confirmation Letter* - Written documentation from the Department to the bidder confirming the Contractor's approved, committed participation along with a listing of the committed MBE and WBE firms.

*Manufacturer* - A firm that operates or maintains a factory or establishment that produces on the premises, the materials or supplies obtained by the Contractor.

*MBE Participation (Anticipated)* - A portion of the total contract, expressed as a percentage that is anticipated to be performed by committed MBE subcontractor(s).

*Minority Business Enterprise (MBE)* - A firm certified as a Disadvantaged Minority-Owned Business Enterprise through the North Carolina Unified Certification Program.

*Regular Dealer* - A firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials or supplies required for the performance of the contract are bought, kept in stock, and regularly sold to the public in the usual course of business. A regular dealer engages in, as its principal business and in its own name, the purchase and sale or lease of the products in question. A regular dealer in such bulk items as steel, cement, gravel, stone, and petroleum products need not keep such products in stock, if it owns and operates distribution equipment for the products. Brokers and packagers are not regarded as manufacturers or regular dealers within the meaning of this section.

*Replacement / Substitution* – A full or partial reduction in the amount of work subcontracted to a committed (or an approved substitute) MBE/WBE firm.

*North Carolina Unified Certification Program (NCUCP)* - A program that provides comprehensive services and information to applicants for MBE/WBE certification. The MBE/WBE program follows the same regulations as the federal Disadvantaged Business Enterprise (DBE) program in accordance with 49 CFR Part 26.

*United States Department of Transportation (USDOT)* - Federal agency responsible for issuing regulations (49 CFR Part 26) and official guidance for the DBE program.

*WBE Participation (Anticipated)* - A portion of the total contract, expressed as a percentage that is anticipated to be performed by committed WBE subcontractor(s).

*Women Business Enterprise (WBE)* - A firm certified as a Disadvantaged Women-Owned Business Enterprise through the North Carolina Unified Certification Program.

### **Forms and Websites Referenced in this Provision**

*Payment Tracking System* - On-line system in which the Contractor enters the payments made to MBE and WBE subcontractors who have performed work on the project.  
<https://apps.dot.state.nc.us/Vendor/PaymentTracking/>

*DBE-IS Subcontractor Payment Information* - Form for reporting the payments made to all MBE/WBE firms working on the project. This form is for paper bid projects only.  
<https://connect.ncdot.gov/business/Turnpike/Documents/Form%20DBE-IS%20Subcontractor%20Payment%20Information.pdf>

*RF-1 MBE/WBE Replacement Request Form* - Form for replacing a committed MBE or WBE.  
<http://connect.ncdot.gov/projects/construction/Construction%20Forms/DBE%20MBE%20WBE%20Replacement%20Request%20Form.pdf>

*SAF Subcontract Approval Form* - Form required for approval to sublet the contract.  
<http://connect.ncdot.gov/projects/construction/Construction%20Forms/Subcontract%20Approval%20Form%20Rev.%202012.zip>

*JC-1 Joint Check Notification Form* - Form and procedures for joint check notification. The form acts as a written joint check agreement among the parties providing full and prompt disclosure of the expected use of joint checks.  
<http://connect.ncdot.gov/projects/construction/Construction%20Forms/Joint%20Check%20Notification%20Form.pdf>

*Letter of Intent* - Form signed by the Contractor and the MBE/WBE subcontractor, manufacturer or regular dealer that affirms that a portion of said contract is going to be performed by the signed MBE/WBE for the estimated amount (based on quantities and unit prices) listed at the time of bid.  
<http://connect.ncdot.gov/letting/LetCentral/Letter%20of%20Intent%20to%20Perform%20as%20a%20Subcontractor.pdf>

*Listing of MBE and WBE Subcontractors Form* - Form for entering MBE/WBE subcontractors on a project that will meet the Combined MBE/WBE goal. This form is for paper bids only.

[http://connect.ncdot.gov/municipalities/Bid%20Proposals%20for%20LGA%20Content/09%20MBE-WBE%20Subcontractors%20\(State\).docx](http://connect.ncdot.gov/municipalities/Bid%20Proposals%20for%20LGA%20Content/09%20MBE-WBE%20Subcontractors%20(State).docx)

*Subcontractor Quote Comparison Sheet* - Spreadsheet for showing all subcontractor quotes in the work areas where MBEs and WBEs quoted on the project. This sheet is submitted with good faith effort packages.

<http://connect.ncdot.gov/business/SmallBusiness/Documents/DBE%20Subcontractor%20Quote%20Comparison%20Example.xls>

### **Combined MBE/WBE Goal**

The Combined MBE/WBE Goal for this project is **0 %**

The Combined Goal was established utilizing the following anticipated participation for Minority Business Enterprises and Women Business Enterprises:

(A) **Minority Business Enterprises 0 %**

- (1) *If the anticipated MBE participation is more than zero*, the Contractor shall exercise all necessary and reasonable steps to ensure that MBEs participate in at least the percent of the contract as set forth above.
- (2) *If the anticipated MBE participation is zero*, the Contractor shall make an effort to recruit and use MBEs during the performance of the contract. Any MBE participation obtained shall be reported to the Department.

(B) **Women Business Enterprises 0%**

- (1) *If the anticipated WBE participation is more than zero*, the Contractor shall exercise all necessary and reasonable steps to ensure that WBEs participate in at least the percent of the contract as set forth above.
- (2) *If the anticipated WBE participation is zero*, the Contractor shall make an effort to recruit and use WBEs during the performance of the contract. Any WBE participation obtained shall be reported to the Department.

The Bidder is required to submit only participation to meet the Combined MBE/WBE Goal. The Combined Goal may be met by submitting all MBE participation, all WBE participation, or a combination of MBE and WBE participation.

### **Directory of Transportation Firms (Directory)**

Real-time information is available about firms doing business with the Department and firms that

are certified through NCUCP in the Directory of Transportation Firms. Only firms identified in the Directory as MBE and WBE certified shall be used to meet the Combined MBE / WBE goal. The Directory can be found at the following link.

<https://www.ebs.nc.gov/VendorDirectory/default.html>

The listing of an individual firm in the directory shall not be construed as an endorsement of the firm's capability to perform certain work.

### **Listing of MBE/WBE Subcontractors**

At the time of bid, bidders shall submit all MBE and WBE participation that they anticipate to use during the life of the contract. Only those identified to meet the Combined MBE/WBE goal will be considered committed, even though the listing shall include both committed MBE/WBE subcontractors and additional MBE/WBE subcontractors. Any additional MBE/WBE subcontractor participation above the goal will follow the banking guidelines found elsewhere in this provision. All other additional MBE/WBE subcontractor participation submitted at the time of bid will be used toward the Department's overall race-neutral goals. Only those firms with current MBE and WBE certification at the time of bid opening will be acceptable for listing in the bidder's submittal of MBE and WBE participation. The Contractor shall indicate the following required information:

#### **(A) Electronic Bids**

Bidders shall submit a listing of MBE and WBE participation in the appropriate section of the electronic submittal file.

- (1) Submit the names and addresses of MBE and WBE firms identified to participate in the contract. If the bidder uses the updated listing of MBE and WBE firms shown in the electronic submittal file, the bidder may use the dropdown menu to access the name and address of the firms.
- (2) Submit the contract line numbers of work to be performed by each MBE and WBE firm. When no figures or firms are entered, the bidder will be considered to have no MBE or WBE participation.
- (3) The bidder shall be responsible for ensuring that the MBE and WBE are certified at the time of bid by checking the Directory of Transportation Firms. If the firm is not certified at the time of the bid-letting, that MBE's or WBE's participation will not count towards achieving the Combined MBE/WBE goal.

#### **(B) Paper Bids**

- (1) *If the Combined MBE/ WBE goal is more than zero,*
  - (a) Bidders, at the time the bid proposal is submitted, shall submit a listing of MBE/WBE participation, including the names and addresses on *Listing of*

*MBE and WBE Subcontractors* contained elsewhere in the contract documents in order for the bid to be considered responsive. Bidders shall indicate the total dollar value of the MBE and WBE participation for the contract.

- (b) If bidders have no MBE or WBE participation, they shall indicate this on the *Listing of MBE and WBE Subcontractors* by entering the word “None” or the number “0.” This form shall be completed in its entirety. **Blank forms will not be deemed to represent zero participation.** Bids submitted that do not have MBE and WBE participation indicated on the appropriate form will not be read publicly during the opening of bids. The Department will not consider these bids for award and the proposal will be rejected.
  - (c) The bidder shall be responsible for ensuring that the MBE/WBE is certified at the time of bid by checking the Directory of Transportation Firms. If the firm is not certified at the time of the bid-letting, that MBE’s or WBE’s participation will not count towards achieving the Combined MBE/WBE goal.
- (2) *If the Combined MBE/WBE Goal is zero*, entries on the *Listing of MBE and WBE Subcontractors* are not required for the zero goal, however any MBE or WBE participation that is achieved during the project shall be reported in accordance with requirements contained elsewhere in the special provision.

### **MBE or WBE Prime Contractor**

When a certified MBE or WBE firm bids on a contract that contains a Combined MBE/WBE Goal, the firm is responsible for meeting the goal or making good faith efforts to meet the goal, just like any other bidder. In most cases, a MBE or WBE bidder on a contract will meet the Combined MBE/WBE goal by virtue of the work it performs on the contract with its own forces. However, all the work that is performed by the MBE or WBE bidder and any other similarly certified subcontractors will count toward the goal. The MBE or WBE bidder shall list itself along with any MBE or WBE subcontractors, if any, in order to receive credit toward the goals.

MBE/WBE prime contractors shall also follow Sections A or B listed under *Listing of MBE/WBE Subcontractors* just as a non-MBE/WBE bidder would.

### **Written Documentation – Letter of Intent**

The bidder shall submit written documentation for each MBE/WBE that will be used to meet the Combined MBE/WBE goal of the contract, indicating the bidder’s commitment to use the MBE/WBE in the contract. This documentation shall be submitted on the Department’s form titled *Letter of Intent*.

The documentation shall be received in the office of the Engineer no later than 2:00 p.m. of the

fifth calendar day following opening of bids, unless the fifth day falls on Saturday, Sunday or an official state holiday. In that situation, it is due in the office of the Engineer no later than 10:00 a.m. on the next official state business day.

If the bidder fails to submit the Letter of Intent from each committed MBE and WBE to be used toward the Combined MBE/WBE goal, or if the form is incomplete (i.e. both signatures are not present), the MBE/WBE participation will not count toward meeting the Combined MBE/WBE goal. If the lack of this participation drops the commitment below the Combined MBE/WBE goal, the Contractor shall submit evidence of good faith efforts for the goal not met, completed in its entirety, to the Engineer no later than 2:00 p.m. of the eighth calendar day following opening of bids, unless the eighth day falls on Saturday, Sunday or an official state holiday. In that situation, it is due in the office of the Engineer no later than 10:00 a.m. on the next official state business day.

### **Banking MBE/WBE Credit**

If the committed MBE/WBE participation submitted exceeds the algebraic sum of the Combined MBE/WBE goal by \$1,000 or more, the excess will be placed on deposit by the Department for future use by the bidder. Separate accounts will be maintained for MBE and WBE participation and these may accumulate for a period not to exceed 24 months.

When the apparent lowest responsive bidder fails to submit sufficient participation by MBE and WBE firms to meet the advertised goal, as part of the good faith effort, the Department will consider allowing the bidder to withdraw funds to meet the Combined MBE/WBE goal as long as there are adequate funds available from the bidder's MBE and WBE bank accounts.

### **Submission of Good Faith Effort**

If the bidder fails to meet or exceed the Combined MBE/WBE goal, the apparent lowest responsive bidder shall submit to the Department documentation of adequate good faith efforts made to reach that specific goal.

One complete set of this information shall be received in the office of the Engineer no later than 2:00 p.m. of the fifth calendar day following opening of bids, unless the fifth day falls on Saturday, Sunday or an official state holiday. In that situation, it is due in the office of the Engineer no later than 10:00 a.m. on the next official state business day.

Note: Where the information submitted includes repetitious solicitation letters, it will be acceptable to submit a representative letter along with a distribution list of the firms that were solicited. Documentation of MBE/WBE quotations shall be a part of the good faith effort submittal. This documentation may include written subcontractor quotations, telephone log notations of verbal quotations, or other types of quotation documentation.



### **Consideration of Good Faith Effort for Projects with a Combined MBE/WBE Goal More Than Zero**

Adequate good faith efforts mean that the bidder took all necessary and reasonable steps to achieve the goal which, by their scope, intensity, and appropriateness, could reasonably be expected to obtain sufficient MBE/WBE participation. Adequate good faith efforts also mean that the bidder actively and aggressively sought MBE/WBE participation. Mere *pro forma* efforts are not considered good faith efforts.

The Department will consider the quality, quantity, and intensity of the different kinds of efforts a bidder has made. Listed below are examples of the types of actions a bidder will take in making a good faith effort to meet the goals and are not intended to be exclusive or exhaustive, nor is it intended to be a mandatory checklist.

- (A) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising, written notices, use of verifiable electronic means through the use of the NCDOT Directory of Transportation Firms) the interest of all certified MBEs/WBEs that are also prequalified subcontractors. The bidder must solicit this interest within at least 10 days prior to bid opening to allow the MBEs/WBEs to respond to the solicitation. Solicitation shall provide the opportunity to MBEs/WBEs within the Division and surrounding Divisions where the project is located. The bidder must determine with certainty if the MBEs/WBEs are interested by taking appropriate steps to follow up initial solicitations.
- (B) Selecting portions of the work to be performed by MBEs/WBEs in order to increase the likelihood that the Combined MBE/WBE goal will be achieved.
  - (1) Where appropriate, break out contract work items into economically feasible units to facilitate MBE/WBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.
  - (2) Negotiate with subcontractors to assume part of the responsibility to meet the advertised goal when the work to be sublet includes potential for MBE/WBE participation (2<sup>nd</sup> and 3<sup>rd</sup> tier subcontractors).
- (C) Providing interested certified MBEs/WBEs that are also prequalified subcontractors with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
- (D) (1) Negotiating in good faith with interested MBEs/WBEs. It is the bidder's responsibility to make a portion of the work available to MBE/WBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available MBE/WBE subcontractors and suppliers, so as to facilitate MBE/WBE participation. Evidence of such negotiation includes the names,

addresses, and telephone numbers of MBEs/WBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for MBEs/WBEs to perform the work.

- (2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including MBE/WBE subcontractors, and would take a firm's price and capabilities as well as the advertised goal into consideration. However, the fact that there may be some additional costs involved in finding and using MBEs/WBEs is not in itself sufficient reason for a bidder's failure to meet the advertised goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Bidding contractors are not, however, required to accept higher quotes from MBEs/WBEs if the price difference is excessive or unreasonable.
- (E) Not rejecting MBEs/WBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associates and political or social affiliations (for example, union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.
- (F) Making efforts to assist interested MBEs/WBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or bidder.
- (G) Making efforts to assist interested MBEs/WBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.
- (H) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; Federal, State, and local minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of MBEs/WBEs. Contact within 7 days from the bid opening the Business Opportunity and Work Force Development Unit at [BOWD@ncdot.gov](mailto:BOWD@ncdot.gov) to give notification of the bidder's inability to get MBE or WBE quotes.
- (I) Any other evidence that the bidder submits which shows that the bidder has made reasonable good faith efforts to meet the advertised goal.

In addition, the Department may take into account the following:

- (1) Whether the bidder's documentation reflects a clear and realistic plan for achieving the Combined MBE/WBE goal.
- (2) The bidders' past performance in meeting the contract goal.

- (3) The performance of other bidders in meeting the advertised goal. For example, when the apparent successful bidder fails to meet the goal, but others meet it, you may reasonably raise the question of whether, with additional reasonable efforts the apparent successful bidder could have met the goal. If the apparent successful bidder fails to meet the advertised goal, but meets or exceeds the average MBE and WBE participation obtained by other bidders, the Department may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made a good faith effort.

If the Department does not award the contract to the apparent lowest responsive bidder, the Department reserves the right to award the contract to the next lowest responsive bidder that can satisfy to the Department that the Combined MBE/WBE goal can be met or that an adequate good faith effort has been made to meet the advertised goal.

### **Non-Good Faith Appeal**

The Engineer will notify the contractor verbally and in writing of non-good faith. A contractor may appeal a determination of non-good faith made by the Goal Compliance Committee. If a contractor wishes to appeal the determination made by the Committee, they shall provide written notification to the Engineer. The appeal shall be made within 2 business days of notification of the determination of non-good faith.

### **Counting MBE/WBE Participation Toward Meeting the Combined MBE/WBE Goal**

#### **(A) Participation**

The total dollar value of the participation by a committed MBE/WBE will be counted toward the contract goal requirements. The total dollar value of participation by a committed MBE/WBE will be based upon the value of work actually performed by the MBE/WBE and the actual payments to MBE/WBE firms by the Contractor.

#### **(B) Joint Checks**

Prior notification of joint check use shall be required when counting MBE/WBE participation for services or purchases that involves the use of a joint check. Notification shall be through submission of Form JC-1 (*Joint Check Notification Form*) and the use of joint checks shall be in accordance with the Department's Joint Check Procedures.

#### **(C) Subcontracts (Non-Trucking)**

A MBE/WBE may enter into subcontracts. Work that a MBE subcontracts to another MBE firm may be counted toward the anticipated MBE participation. The same holds for work that a WBE subcontracts to another WBE firm. Work that a MBE/WBE subcontracts to a non-MBE/WBE firm does not count toward the contract goal requirement. It should be noted that every effort shall be made by MBE and WBE contractors to subcontract to the

same certification (i.e., MBEs to MBEs and WBEs to WBEs), in order to fulfill the MBE or WBE participation breakdown. This, however, may not always be possible due to the limitation of firms in the area. If the MBE or WBE firm shows a good faith effort has been made to reach out to similarly certified firms and there is no interest or availability, and they can get assistance from other certified firms, the Engineer will not hold the prime responsible for meeting the individual MBE or WBE breakdown. If a MBE or WBE contractor or subcontractor subcontracts a significantly greater portion of the work of the contract than would be expected on the basis of standard industry practices, it shall be presumed that the MBE or WBE is not performing a commercially useful function.

(D) Joint Venture

When a MBE or WBE performs as a participant in a joint venture, the Contractor may count toward its contract goal requirement a portion of the total value of participation with the MBE or WBE in the joint venture, that portion of the total dollar value being a distinct clearly defined portion of work that the MBE or WBE performs with its forces.

(E) Suppliers

A contractor may count toward its MBE /WBE requirement 60 percent of its expenditures for materials and supplies required to complete the contract and obtained from a MBE or WBE regular dealer and 100 percent of such expenditures from a MBE or WBE manufacturer.

(F) Manufacturers and Regular Dealers

A contractor may count toward its MBE /WBE requirement the following expenditures to MBE/WBE firms that are not manufacturers or regular dealers:

- (1) The fees or commissions charged by a MBE/WBE firm for providing a *bona fide* service, such as professional, technical, consultant, or managerial services, or for providing bonds or insurance specifically required for the performance of a DOT-assisted contract, provided the fees or commissions are determined to be reasonable and not excessive as compared with fees and commissions customarily allowed for similar services.
- (2) With respect to materials or supplies purchased from a MBE/WBE, which is neither a manufacturer nor a regular dealer, count the entire amount of fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on a job site (but not the cost of the materials and supplies themselves), provided the fees are determined to be reasonable and not excessive as compared with fees customarily allowed for similar services.

**Commercially Useful Function****(A) MBE/WBE Utilization**

The Contractor may count toward its contract goal requirement only expenditures to MBEs and WBEs that perform a commercially useful function in the work of a contract. A MBE/WBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the MBE/WBE shall also be responsible with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material and installing (where applicable) and paying for the material itself. To determine whether a MBE/WBE is performing a commercially useful function, the Department will evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing and the MBE/WBE credit claimed for its performance of the work, and any other relevant factors. If it is determined that a MBE or WBE is not performing a Commercially Useful Function, the contractor may present evidence to rebut this presumption to the Department.

**(B) MBE/WBE Utilization in Trucking**

The following factors will be used to determine if a MBE or WBE trucking firm is performing a commercially useful function:

- (1) The MBE/WBE shall be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract, and there shall not be a contrived arrangement for the purpose of meeting the Combined MBE/WBE goal.
- (2) The MBE/WBE shall itself own and operate at least one fully licensed, insured, and operational truck used on the contract.
- (3) The MBE/WBE receives credit for the total value of the transportation services it provides on the contract using trucks it owns, insures, and operates using drivers it employs.
- (4) The MBE may subcontract the work to another MBE firm, including an owner-operator who is certified as a MBE. The same holds true that a WBE may subcontract the work to another WBE firm, including an owner-operator who is certified as a WBE. When this occurs, the MBE or WBE who subcontracts work receives credit for the total value of the transportation services the subcontracted MBE or WBE provides on the contract. It should be noted that every effort shall be made by MBE and WBE contractors to subcontract to the same certification (i.e., MBEs to MBEs and WBEs to WBEs), in order to fulfill the participation

breakdown. This, however, may not always be possible due to the limitation of firms in the area. If the MBE or WBE firm shows a good faith effort has been made to reach out to similarly certified transportation service providers and there is no interest or availability, and they can get assistance from other certified providers, the Engineer will not hold the prime responsible for meeting the individual MBE or WBE participation breakdown.

- (5) The MBE/WBE may also subcontract the work to a non-MBE/WBE firm, including from an owner-operator. The MBE/WBE who subcontracts the work to a non-MBE/WBE is entitled to credit for the total value of transportation services provided by the non-MBE/WBE subcontractor not to exceed the value of transportation services provided by MBE/WBE-owned trucks on the contract. Additional participation by non-MBE/WBE subcontractors receives credit only for the fee or commission it receives as a result of the subcontract arrangement. The value of services performed under subcontract agreements between the MBE/WBE and the Contractor will not count towards the MBE/WBE contract requirement.
- (6) A MBE/WBE may lease truck(s) from an established equipment leasing business open to the general public. The lease must indicate that the MBE/WBE has exclusive use of and control over the truck. This requirement does not preclude the leased truck from working for others during the term of the lease with the consent of the MBE/WBE, so long as the lease gives the MBE/WBE absolute priority for use of the leased truck. This type of lease may count toward the MBE/WBE's credit as long as the driver is under the MBE/WBE's payroll.
- (7) Subcontracted/leased trucks shall display clearly on the dashboard the name of the MBE/WBE that they are subcontracted/leased to and their own company name if it is not identified on the truck itself. Magnetic door signs are not permitted.

### **MBE/WBE Replacement**

When a Contractor has relied on a commitment to a MBE or WBE subcontractor (or an approved substitute MBE or WBE subcontractor) to meet all or part of a contract goal requirement, the contractor shall not terminate the MBE/WBE subcontractor for convenience. This includes, but is not limited to, instances in which the Contractor seeks to perform the work of the terminated subcontractor with another MBE/WBE subcontractor, a non-MBE/WBE subcontractor, or with the Contractor's own forces or those of an affiliate.

The Contractor must give notice in writing both by certified mail and email to the MBE/WBE subcontractor, with a copy to the Engineer of its intent to request to terminate and/or substitute, and the reason for the request. The Contractor must give the MBE/WBE subcontractor five (5) business days to respond to the Contractor's Notice of Intent to Request Termination and/or Substitution. If the MBE/WBE subcontractor objects to the intended termination/substitution, the MBE/WBE, within five (5) business days must advise the Contractor and the Department of the reasons why the action should not be approved. The five-day notice period shall begin on the next business day after written notice is provided to the MBE/WBE subcontractor.

A committed MBE/WBE subcontractor may only be terminated after receiving the Department's written approval based upon a finding of good cause for the proposed termination and/or substitution. For purposes of this section, good cause shall include the following circumstances:

- (a) The listed MBE/WBE subcontractor fails or refuses to execute a written contract;
- (b) The listed MBE/WBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the MBE/WBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the prime contractor;
- (c) The listed MBE/WBE subcontractor fails or refuses to meet the prime contractor's reasonable, nondiscriminatory bond requirements;
- (d) The listed MBE/WBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness;
- (e) The listed MBE/WBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant to 2 CFR Parts 180, 215 and 1,200 or applicable state law;
- (f) The listed MBE/WBE subcontractor is not a responsible contractor;
- (g) The listed MBE/WBE voluntarily withdraws from the project and provides written notice of withdrawal;
- (h) The listed MBE/WBE is ineligible to receive MBE/WBE credit for the type of work required;
- (i) A MBE/WBE owner dies or becomes disabled with the result that the listed MBE/WBE contractor is unable to complete its work on the contract;
- (j) Other documented good cause that compels the termination of the MBE/WBE subcontractor. Provided, that good cause does not exist if the prime contractor seeks to terminate a MBE/WBE it relied upon to obtain the contract so that the prime contractor can self-perform the work for which the MBE/WBE contractor was engaged or so that the prime contractor can substitute another MBE/WBE or non-MBE/WBE contractor after contract award.

The Contractor shall comply with the following for replacement of a committed MBE/WBE:

(A) Performance Related Replacement

When a committed MBE/WBE is terminated for good cause as stated above, an additional MBE/WBE that was submitted at the time of bid may be used to fulfill the MBE/WBE commitment to meet the Combined MBE/WBE Goal. A good faith effort will only be required for removing a committed MBE/WBE if there were no additional MBE/WBEs submitted at the time of bid to cover the same amount of work as the MBE/WBE that was terminated.

If a replacement MBE/WBE is not found that can perform at least the same amount of work as the terminated MBE/WBE, the Contractor shall submit a good faith effort documenting the steps taken. Such documentation shall include, but not be limited to, the following:

- (1) Copies of written notification to MBE/WBEs that their interest is solicited in contracting the work defaulted by the previous MBE/WBE or in subcontracting other items of work in the contract.
  - (2) Efforts to negotiate with MBE/WBEs for specific subbids including, at a minimum:
    - (a) The names, addresses, and telephone numbers of MBE/WBEs who were contacted.
    - (b) A description of the information provided to MBE/WBEs regarding the plans and specifications for portions of the work to be performed.
  - (3) A list of reasons why MBE/WBE quotes were not accepted.
  - (4) Efforts made to assist the MBE/WBEs contacted, if needed, in obtaining bonding or insurance required by the Contractor.
- (B) Decertification Replacement
- (1) When a committed MBE/WBE is decertified by the Department after the SAF (*Subcontract Approval Form*) has been received by the Department, the Department will not require the Contractor to solicit replacement MBE/WBE participation equal to the remaining work to be performed by the decertified firm. The participation equal to the remaining work performed by the decertified firm will count toward the contract goal requirement.
  - (2) When a committed MBE/WBE is decertified prior to the Department receiving the SAF (*Subcontract Approval Form*) for the named MBE/WBE firm, the Contractor shall take all necessary and reasonable steps to replace the MBE/WBE subcontractor with another MBE/WBE subcontractor to perform at least the same amount of work to meet the Combined MBE/WBE goal requirement. If a MBE/WBE firm is not found to do the same amount of work, a good faith effort must be submitted to NCDOT (see A herein for required documentation).
  - (3) Exception: If the MBE/WBE's ineligibility is caused solely by its having exceeded the size standard during the performance of the contract, the Department will not require the Contractor to solicit replacement MBE/WBE participation equal to the remaining work to be performed by the decertified firm. The participation equal to the remaining work performed by the decertified firm will count toward the contract goal requirement and overall goal.

All requests for replacement of a committed MBE/WBE firm shall be submitted to the Engineer for approval on Form RF-1 (*DBE Replacement Request*). If the Contractor fails to follow this procedure, the Contractor may be disqualified from further bidding for a period of up to 6 months.



### **Changes in the Work**

When the Engineer makes changes that result in the reduction or elimination of work to be performed by a committed MBE/WBE, the Contractor will not be required to seek additional participation. When the Engineer makes changes that result in additional work to be performed by a MBE/WBE based upon the Contractor's commitment, the MBE/WBE shall participate in additional work to the same extent as the MBE/WBE participated in the original contract work.

When the Engineer makes changes that result in extra work, which has more than a minimal impact on the contract amount, the Contractor shall seek additional participation by MBEs/WBEs unless otherwise approved by the Engineer.

When the Engineer makes changes that result in an alteration of plans or details of construction, and a portion or all of the work had been expected to be performed by a committed MBE/WBE, the Contractor shall seek participation by MBEs/WBEs unless otherwise approved by the Engineer.

When the Contractor requests changes in the work that result in the reduction or elimination of work that the Contractor committed to be performed by a MBE/WBE, the Contractor shall seek additional participation by MBEs/WBEs equal to the reduced MBE/WBE participation caused by the changes.

### **Reports and Documentation**

A SAF (*Subcontract Approval Form*) shall be submitted for all work which is to be performed by a MBE/WBE subcontractor. The Department reserves the right to require copies of actual subcontract agreements involving MBE/WBE subcontractors.

When using transportation services to meet the contract commitment, the Contractor shall submit a proposed trucking plan in addition to the SAF. The plan shall be submitted prior to beginning construction on the project. The plan shall include the names of all trucking firms proposed for use, their certification type(s), the number of trucks owned by the firm, as well as the individual truck identification numbers, and the line item(s) being performed.

Within 30 calendar days of entering into an agreement with a MBE/WBE for materials, supplies or services, not otherwise documented by the SAF as specified above, the Contractor shall furnish the Engineer a copy of the agreement. The documentation shall also indicate the percentage (60% or 100%) of expenditures claimed for MBE/WBE credit.

### **Reporting Minority and Women Business Enterprise Participation**

The Contractor shall provide the Engineer with an accounting of payments made to all MBE and WBE firms, including material suppliers and contractors at all levels (prime, subcontractor, or second tier subcontractor). This accounting shall be furnished to the Engineer for any given month by the end of the following month. Failure to submit this information accordingly may result in the following action:

- (A) Withholding of money due in the next partial pay estimate; or
- (B) Removal of an approved contractor from the prequalified bidders' list or the removal of other entities from the approved subcontractors list.

While each contractor (prime, subcontractor, 2nd tier subcontractor) is responsible for accurate accounting of payments to MBEs/WBEs, it shall be the prime contractor's responsibility to report all monthly and final payment information in the correct reporting manner.

Failure on the part of the Contractor to submit the required information in the time frame specified may result in the disqualification of that contractor and any affiliate companies from further bidding until the required information is submitted.

Failure on the part of any subcontractor to submit the required information in the time frame specified may result in the disqualification of that contractor and any affiliate companies from being approved for further work on future projects until the required information is submitted.

Contractors reporting transportation services provided by non-MBE/WBE lessees shall evaluate the value of services provided during the month of the reporting period only.

At any time, the Engineer can request written verification of subcontractor payments. The Contractor shall report the accounting of payments through the Department's DBE Payment Tracking System.

#### **Failure to Meet Contract Requirements**

Failure to meet contract requirements in accordance with Subarticle 102-15(J) of the *2018 Standard Specifications* may be cause to disqualify the Contractor.

#### **RESTRICTIONS ON ITS EQUIPMENT AND SERVICES:**

(11-17-20)

SP01 G090

All telecommunications, video or other ITS equipment or services installed or utilized on this project must be in conformance with UNIFORM ADMINISTRATIVE REQUIREMENTS, COST PRINCIPLES, AND AUDIT REQUIREMENTS FOR FEDERAL AWARDS 2 CFR, § 200.216 **Prohibition on certain telecommunications and video surveillance services or equipment.**

**USE OF UNMANNED AIRCRAFT SYSTEM (UAS):**

(8-20-19)

SP1 G092

The Contractor shall adhere to all Federal, State and Local regulations and guidelines for the use of Unmanned Aircraft Systems (UAS). This includes but is not limited to US 14 CFR Part 107 *Small UAS Rule*, NC GS 15A-300.2 *Regulation of launch and recovery sites*, NC GS 63-95 *Training required for the operation of unmanned aircraft systems*, NC GS 63-96 *Permit required for commercial operation of unmanned aircraft system*, and NCDOT UAS Policy. The required operator certifications include possessing a current Federal Aviation Administration (FAA) Remote Pilot Certificate, a NC UAS Operator Permit as well as operating a UAS registered with the FAA.

Prior to beginning operations, the Contractor shall complete the NCDOT UAS – Flight Operation Approval Form and submit it to the Engineer for approval. All UAS operations shall be approved by the Engineer prior to beginning the operations.

All contractors or subcontractors operating UAS shall have UAS specific general liability insurance to cover all operations under this contract.

The use of UAS is at the Contractor's discretion. No measurement or payment will be made for the use of UAS. In the event that the Department directs the Contractor to utilize UAS, payment will be in accordance with Article 104-7 Extra Work.

**EQUIPMENT IDLING GUIDELINES:**

(1-19-21)

107

SP1 G096

Exercise reduced fuel consumption and reduced equipment emissions during the construction of all work associated with this contract. Employees engaged in the construction of this project should turn off vehicles when stopped for more than thirty (30) minutes and off-highway equipment should idle no longer than fifteen (15) consecutive minutes.

These guidelines for turning off vehicles and equipment when idling do not apply to:

1. Idling when queuing.
2. Idling to verify the vehicle is in safe operating condition.
3. Idling for testing, servicing, repairing or diagnostic purposes.
4. Idling necessary to accomplish work for which the vehicle was designed (such as operating a crane, mixing concrete, etc.).
5. Idling required to bring the machine system to operating temperature.
6. Emergency vehicles, utility company, construction, and maintenance vehicles where the engines must run to perform needed work.
7. Idling to ensure safe operation of the vehicle.
8. Idling when the propulsion engine is providing auxiliary power for other than heating or air conditioning. (such as hydraulic systems for pavers)
9. When specific traffic, safety, or emergency situations arise.

10. If the ambient temperature is less than 32 degrees Fahrenheit. Limited idling to provide for the safety of vehicle occupants (e.g. to run the heater).
  11. If the ambient temperature is greater than 90 degrees Fahrenheit. Limited idling to provide for the safety of vehicle occupants of off-highway equipment (e.g. to run the air conditioning) no more than 30 minutes.
  12. Diesel powered vehicles may idle for up to 30 minutes to minimize restart problems.
- Any vehicle, truck, or equipment in which the primary source of fuel is natural gas or electricity is exempt from the idling limitations set forth in this special provision.

**COOPERATION BETWEEN CONTRACTORS:**

(7-1-95)(Rev. 1-16-24)

105-7

SP1 G133

The Contractor's attention is directed to Article 105-7 of the *Standard Specifications*.

The Contractor on this project shall cooperate with the Contractor working within or adjacent to the limits of this project to the extent that the work can be carried out to the best advantage of all concerned.

**TWELVE MONTH GUARANTEE:**

(7-15-03)

108

SP1 G145

- (A) The Contractor shall guarantee materials and workmanship against latent and patent defects arising from faulty materials, faulty workmanship or negligence for a period of twelve months following the date of final acceptance of the work for maintenance and shall replace such defective materials and workmanship without cost to the Department. The Contractor will not be responsible for damage due to faulty design, normal wear and tear, for negligence on the part of the Department, and/or for use in excess of the design.
- (B) Where items of equipment or material carry a manufacturer's guarantee for any period in excess of twelve months, then the manufacturer's guarantee shall apply for that particular piece of equipment or material. The Department's first remedy shall be through the manufacturer although the Contractor is responsible for invoking the warranted repair work with the manufacturer. The Contractor's responsibility shall be limited to the term of the manufacturer's guarantee. NCDOT would be afforded the same warranty as provided by the Manufacturer.

This guarantee provision shall be invoked only for major components of work in which the Contractor would be wholly responsible for under the terms of the contract. Examples would include pavement structures, bridge components, and sign structures. This provision will not be used as a mechanism to force the Contractor to return to the project to make repairs or perform additional work that the Department would normally compensate the Contractor for. In addition, routine maintenance activities (i.e. mowing grass, debris removal, ruts in earth shoulders,) are not parts of this guarantee.

Appropriate provisions of the payment and/or performance bonds shall cover this guarantee for the project.

To ensure uniform application statewide the Division Engineer will forward details regarding the circumstances surrounding any proposed guarantee repairs to the Chief Engineer for review and approval prior to the work being performed.

**OUTSOURCING OUTSIDE THE USA:**

(9-21-04) (Rev. 5-16-06)

SP1 G150

All work on consultant contracts, services contracts, and construction contracts shall be performed in the United States of America. No work shall be outsourced outside of the United States of America.

*Outsourcing* for the purpose of this provision is defined as the practice of subcontracting labor, work, services, staffing, or personnel to entities located outside of the United States.

The North Carolina Secretary of Transportation shall approve exceptions to this provision in writing.

## VESSEL SPECIAL PROVISIONS

### **INTRODUCTION:**

The following "Special Provisions" (comprised of both "General Specifications" and "Technical Specifications") applicable to the Dry-Docking and Repair of the vessel M/V Frisco, shall be used in conjunction with the North Carolina Department of Transportation (NCDOT) "NCDOT Standard Specifications" for Vessels and the 2024 NCDOT Standard Specifications for Roads and Structures, herein referred to as the "Specifications." The Special Provisions are crafted to complement the Specifications. In the event of a conflict, though, the Special Provisions take precedence. The Special Provisions and Specifications, together with drawings, attachments, and all other appendices included with the entire integrated agreement between the Contractor and NCDOT shall be referred to as the Contract Documents. The Contract Documents describe the performance expected for all dry dock and repair work to be completed on the vessel.

### **VESSEL AVAILABILITY:**

The ferry [M/V Frisco] will be available for the work outlined in these Special Provisions between the dates of January 17, 2024 to May 15, 2024 – The vessel [M/V Frisco] must be returned to the NCDOT no later than May 15, 2024, to be placed back in regular service. It is anticipated that the work shall require portion of which shall require the vessel to be in the dry dock.

### **DESCRIPTION OF WORK:**

The Contract Documents describe the requirements for dry docking, repairs, and improvements on NCDOT vessel [M/V Frisco].

The [M/V Frisco] is a steel-hulled passenger/car ferry operated for service between [Hatteras and Ocracoke]. The principal characteristics of the vessel are as follows:

Length Overall:	149'-9" ( <i>149'9" @ Main Deck</i> )
Breadth:	34'-0" ( <i>42' @ Main Deck</i> )
Draft, DLWL:	4'-6" ( <i>8'6" Depth</i> )
Displacement, DLWL:	241.46 LT (Gross Long Tons)

The vessel is a U.S. Coast Guard (USCG) inspected and subchapter H certificated vessel and maintains a Certificate of Inspection (COI) issued by the USCG. The Contractor shall perform the dry docking, repairs, and improvements as required by the USCG and the Contract Documents and all items directed by the vessel's owner, NCDOT, to make the vessel suitable in all respects for unrestricted service on its USCG certificated route, in all normally encountered sea states and weather conditions, and to improve the vessel's general material condition.

A list of items and activities is included in various sections of the Contract Documents to emphasize major details of the requirements. It remains the responsibility of the Contractor to inspect the vessel and discern the detailed production requirements, including interference removal, before making an offer for this work.

It is not the intent of the Contract Documents to cover every minor detail of construction and equipment. Details and components that are not mentioned but are necessary to complete the installation to function as intended or are usual and necessary in accordance with good ship repair practice for this class of ship, shall be provided by the Contractor to the satisfaction of NCDOT.

The Contractor shall provide all certificates, documentation, labor, material, equipment, tools, rigging, and staging, transportation, power, and supplies necessary to complete the work in accordance with the Contract Documents. Any material or part whose omission would be detrimental to either the seaworthiness or intended service, the inclusion of which is generally accepted good marine practice, shall be provided by the Shipyard at no additional cost to NCDOT. The Contractor shall complete all work per USCG Regulations, Title 46 Code of Federal Regulations (CFR), Subchapter H. At the completion of the work, demonstrate to the satisfaction of NCDOT that the vessel is complete in all respects, fully equipped, outfitted to the best current marine practice, clean, and ready to engage in unrestricted operations in its intended service, approved and certificated by the U.S. Coast Guard.

Tests and inspections called out in the Contract Documents shall be organized, directed, and documented by the Contractor.

## **DEFINITIONS**

To clarify requirements in the Contract Documents, maintenance terms shall be defined as follows:

**ADDITIONAL WORK:** Any emergent or new work that is discovered during the course of accomplishing the defined work scopes of this specification.

**ADJUST:** To manipulate a system or component to conform or correspond to specifications, special provisions, and manufacturer settings and tolerances.

**BERTHING DAYS:** Days when the vessel must be tied up pier side, in the Contractor's facility, beyond the period initially anticipated and contracted to complete the basic work, in order to accomplish "Additional Work" that requires the vessel to remain at the Contractor's facility. See also the section on "Berthing Days" in the Technical Specification below.

**CHECK:** To observe, in process or performing its intended function as a part or as a member of an assembly, to determine suitability for continued safe and accurate service, in the capacity intended by the Original Equipment Manufacturer (OEM).

**CHECK POINT or INSPECTION:** A formal inspection point in the construction process specifically called out in the specification. A brief pause in the ongoing, immediate work scope is typically required to complete a CHECK POINT or INSPECTION. Contractor is required to provide the NCDOT Representative a minimum 1-day advance notice before CHECKPOINTS or INSPECTIONS. All such inspections are to occur between 0800 and 1430 on weekdays. No CHECK POINTS or INSPECTIONS are allowed on weekends or holidays, unless a written request is submitted and approved by the NCDOT Representative, at least 24 hours in advance of the scheduled inspection. Results of all CHECK POINTS or INSPECTIONS are to be summarized in a written report, and provided to the NCDOT Representative on the same day the inspection occurs.

**CONTRACTOR:** A shipyard or other company/entity/facility that is primarily in charge and responsible for all business activity or work associated with this "Specification."

**COMPETENT PERSON:** An individual meeting all requirements and capabilities defined in 29 CFR 1915.4 and 1915.7. A COMPETENT PERSON means a person who is capable of recognizing and evaluating employee exposure to hazardous substances or to other unsafe conditions. They are capable of specifying the necessary protection and precautions to be taken to ensure the safety of employees.

**DISASSEMBLE:** To remove an assembly from a machine and to further deconstruct or take apart an assembly sufficiently to expose completely all running, rotating, sliding, reciprocating, oscillating, or structural components to permit detailed inspection. During disassembly, all soft parts, seals, grommets, non-metallic bushings, plastics, and gaskets should be removed and discarded. All soft parts, seals, grommets, non-metallic bushings, plastics, and gaskets shall be renewed at re-assembly.

**EXCHANGE:** To trade a worn or unserviceable component for a genuine OEM new or remanufactured component.

**INSPECT:** To examine closely and compare to a standard, by micrometer measurement, comparator, gauge, visual method, microscopic method, non-destructive chemical analysis, non-destructive liquid penetrant examination, non-destructive mechanical examination, probing, scraping, electrical measurement, non-destructive radiographic examination, non-destructive audio method, or tactile method, as applicable, for the purpose of determining an assembly's or part's suitability for continued service, repair, rebuild, or disposal. This item is intended to allow the contractor to perform advance, routine, or contract required inspections of components, machinery and systems without prior notice to the NCDOT Representative. These inspections typically precede CHECK POINTS or formal INSPECTIONS requiring the presence of the NCDOT Representative.

Results of all inspections are to be summarized in a written report, which is to be delivered to NCDOT Representative within 24 hours of the inspection.

**INSPECT/REBUILD OR INSPECT/EXCHANGE:** Inspect to make a rebuild or exchange decision only.



**INTERFERENCE(S):** A system, structure, assembly, machine, pipe, fluid system, item of outfit, cargo, furnishing, deck covering, paint, surface finish, protective coating, wall hanging, trim, other solid object, debris, fuel, water, lubricant, or ballast, in way of another, system, structure, assembly, machine, item of outfit, cargo, furnishing, deck covering, paint, surface finish, protective coating, wall hanging, trim, other solid object, debris, fuel, water, lubricant, or ballast such that it impedes, complicates, precludes accomplishment of any work prescribed by these Specifications or the Contract Documents. Any item that must be moved out of the way to efficiently, safely, and competently complete any work prescribed by these Specifications or the Contract Documents is an interference.

**LAY DAY:** Days in which the vessel is required to be kept in dry dock in order to accomplish Additional Work that requires the vessel to remain on the dry dock. See also the section on Lay Days, in the Technical Specification below.

**LUBRICATE:** To apply lubricant of sufficient quality and quantity, as specified, to reduce or eliminate friction wear and heat between two solid surfaces in contact or nearly in contact with one another, where the parts normally operate with motion relative to one another.

**NCDOT REPRESENTATIVE:** An on-site representative of NCDOT authorized to inspect work, review reports and advise NCDOT on any Additional Work and change orders.

**OFFICIAL NUMBER:** (O.N.) Official Number as assigned to the vessel by USCG.

**OPTIONAL ITEM:** A work scope item all Contractors must bid on, but that NCDOT is not obligated to accept, approve, or incorporate into the larger project. An OPTIONAL ITEM may be accepted and approved by NCDOT, at which time the CONTRACTOR must incorporate it into their production plan, for the fixed bid price submitted.

**REASSEMBLE:** To return a structure, system, assembly, or component to its pre-disassembled or inspected condition: preserved, protected, secured, intact in all respects and ready to perform its intended function. To restore a structure, system, or assembly, using the same components found in the structure, system, or assembly during disassembly. Re-assembly includes restoration, reconstruction, and reconstitution, completely, of all running, rotating, sliding, reciprocating, oscillating, structural components, or pipe to permit the structure, system, or assembly to operate or exist in the state it was found in at disassembly, except, during re-assembly all soft parts, seals, grommets, non-metallic bushings, plastics, and gaskets shall be renewed at re-assembly without further requirement in the Specifications or Special Provisions. "Reassemble" is generally used to describe restoration of disassembled, inspected, or checked machinery and equipment.

**REBUILD:** To repair a structure, assembly, or discreet component by installing new or remanufactured parts, during reconstruction or assembly.

**RENEW or REPLACE:** To install a new structure, assembly or component, as specified, in place of an existing or removed assembly or component (also referred to as "replace with new").

**RESTORE/RESTORATION:** To return a structure, system, assembly, or component to its pre-disassembled or inspected condition preserved, protected, secured, intact in all respects and ready to perform its intended function. To restore a structure, system, or assembly, using the same components found in the structure, system, or assembly during disassembly. Re-assembly includes complete restoration, reconstruction, and reconstitution of all running, rotating, sliding, reciprocating, oscillating, and structural components or pipe to permit the structure, system, or assembly to operate or exist in the state it was found in at disassembly, except all soft parts, seals, grommets, non-metallic bushings, plastics, and gaskets shall be renewed at re-assembly without further requirement in the Specifications or Special Provisions. Generally used to describe restoration and reconstruction of removed structure, fluid systems, insulation, outfit, surface finish, deck covering, paint, cargo, furnishing, protective coating, wall hanging, trim, other solid object, fuel, water, lubricant, or ballast.

**TEST:** To conduct a procedure per an OEM, industry, or regulatory standard or description to certify a structure's, assembly's, or component's suitability for continued service, prove the integrity of a new, restored, or reassembled structure, assembly, or component, and to validate satisfactory performance for its intended service.

**WORKING DAY:** Any day except Saturday and Sunday or one of the following holidays: January 1, the third Monday of January, the third Monday of February, Memorial Day, July 4, Labor Day, November 11, Thanksgiving Day, the day after Thanksgiving, and Christmas Day. When any of these holidays fall on a Sunday, the following Monday shall be counted a nonworking day. When the holiday falls on a Saturday, the preceding Friday shall be counted a nonworking day. The days between December 25 and January 1 will be classified as nonworking days.

**NON-HAZARDOUS AND HAZARDOUS WASTE:** Materials either removed from the vessel or produced during the repair process. Examples include but are not limited to run off from sand or water blasting of the vessel, paint, oil, fuel, joiner materials, steel, pipe, wiring or other materials associated with vessel repairs.

**U.S. COAST GUARD INSPECTION:**

The Contractor shall call out; schedule and coordinate Coast Guard inspections, and have all work inspected and approved by the U.S. Coast Guard (USCG). The Coast Guard Inspector must approve all USCG-inspected work before the NCDOT Representative will accept it.

**Payment**

Fees for certificates, including associated inspection fees and expenses of regulatory bodies shall be paid by the Contractor and shall be incidental to the unit contract prices of the various bid items in this project and no further payment will be made.

**FISH AND WILDLIFE, AND ECOLOGY REGULATIONS:**

Throughout the work, the Contractor shall comply with all applicable state and federal regulations. Any one of these regulatory departments may, without prejudice to NCDOT, add rules as needed to protect game, fish, or the environment.

**Payment**

Work required by other agencies to comply with environmental and/or water quality standards, shall be considered incidental to the unit contract price of the various bid items in this project and no further payment will be made.

**TIME FOR COMPLETION:**

This project shall be completed in accordance with the provisions of the Specifications.

In the event that the project is delayed beyond the above-specified time limit, the Contractor shall be liable for Liquidated Damages, in accordance with NCDOT's "Specifications." Liquidated Damages shall be collected for any delays that cannot be demonstrated to have been caused by Additional Work beyond the Contractor's control.

**PRODUCTION PLANNING AND PROJECT MANAGEMENT:**

Concurrent with the requirements of the "Specifications," the Contractor shall prepare a production plan that sequences and schedules all work detailed in the Contract Documents, in accordance with the generally accepted practices for project management. The Contractor shall prepare and submit a time-phased/resource loaded Gantt chart to the NCDOT Representative at the pre-construction conference. The initially submitted plan shall reflect all work included in the project at the time of Contract Award. The Contractor shall decompose the awarded activities indicated in the Contract Documents, down to a sufficient number of tasks, to adequately control and monitor the work and to clearly report progress for the duration of the project. Provide a network diagram indicating the critical path, duration, free float, and total float for each task on the Gantt chart. Indicate all predecessor and successor dependencies for each task. Specifically indicate the number of days on dry dock required to accomplish the work detailed in the Contract Documents.

The Contractor shall schedule and chair a weekly progress meeting, starting the first week, with the NCDOT Representative and the Contractor's key production persons. The Contractor shall provide an updated Gantt chart, a progress report (expressed as a percentage of work complete) by Activity in a tabular form, and a list of completed milestones. The updated Gantt chart shall reflect opened optional items, additional work, deleted work, and modifications, in addition to work progress and completions. At the second progress meeting, the Contractor shall prepare and submit an Open Task Report. The Contractor shall update and submit the Open Task Report at each subsequent weekly progress meeting and then, daily starting the first day of the last week of the scheduled performance period.

**Payment**

All costs for scheduling, controlling, and monitoring the project per these requirements shall be incidental to the unit contract bid prices of the various bid items in this project and no further payment will be made.

**WELDING:**

Welding shall be done by properly trained and qualified personnel. The Contractor shall use only welders and welding operators that are qualified to the satisfaction of American Bureau of Shipping (ABS), or USCG, and the Owner (at no expense to the Owner) for the type of material(s) and welding process(es) being used. Where applicable, welders shall be position and procedure qualified for the areas of construction and system requirements to which they are working.

The Contractor shall accomplish all welding in accordance with ABS, American Welding Society (AWS) USCG, approved welding processes and procedures, as applicable. The procedures shall identify type and size of electrode or filler metal, weld size and arrangements, amperage and voltage, shielding gas and other details of welding processes and procedures, as they relate to the work being addressed.

Structural welding will be carried out in such sequence as to:

- a) Compensate for shrinkage as the work progresses
- b) Prevent locked in stresses
- c) Hold distortion to an acceptable minimum per ABS and/or IACS No.47 Shipbuilding and Repair Quality Standard 2010, as applicable

Structural steel may be manual, or machine welded, depending on the Contractor's standard practice.

Peening of weld material will not be allowed except as specifically approved by USCG and the Owner. Steel to be welded shall be kept entirely free of paint or oil other than "weld-through" primers.

All welds shall be neatly finished, with all spatter and slag removed and ground flush where required.

New welds will be inspected as necessary to satisfy the Owner and regulatory bodies. Should the regulatory bodies or the Owner deem it necessary to increase the area of inspection because of the discovery of unsatisfactory welding, all such additional inspections will be at the Contractor's expense.

Weld inspections shall occur prior to any painting of welds and shall be made by either visual, radiographic, ultrasonic, hydrostatic, air or magnetic tests, separately or in combination, as required by USCG or the Owner. All weld inspection equipment, inspection equipment operators and materials shall be furnished by the Contractor, at no expense to the Owner. No weld inspection shall take place without 24-hour notification of same.

Any internal/external defects or other welding deficiencies found to be unsatisfactory to USCG or the Owner, will be corrected by the Contractor and re-inspected/tested (the test method to be determined by either USCG and/or the Owner), at the Contractor's expense.

Continuous welding for sealing purposes shall be performed on both sides of all new structure and attachments exposed to the weather.

#### Welding Onboard Vessel

- a) All welding, and allied processes shall be in accordance with the requirements 46 CFR Subchapter H, Subchapter F, and/or ABS Rules for Building and Classing Marine Vessels
- b) Welding machines and other welding power sources shall have both cables connected only to the ship hull structure where welding is done. The return ground cable shall never be grounded to anything but the ship's hull structure it is servicing and shall always be grounded to structure in the immediate vicinity (as close as reasonably feasible) to where the welding is taking place. The total cross-sectional areas of the return ground cable shall be at least one million circular mils per 1,000 amperes per 100 feet, but not less than 85,000 circular mils. The ground cable shall be securely fastened to grounding plates or to an integral part of the ship's hull structure, with contact areas thoroughly cleaned to bare metal.
- c) When welding on equipment, machinery, pressure vessels, or piping, the return ground cable to the welding machine shall be connected in the immediate vicinity (as close as practical) of the work to ensure that current does not flow through bearings, pipehangers, machinery, electrical power distribution boxes and controller, or other areas where arcing or high resistance paths exist. Welding leads/cables shall not be run next to (within 3 feet) ship's electrical cable ways, communication, electronic, and DC Control system cables or components.
- d) Coordinate with NCDOT Representative to open circuit breakers to ship sensitive equipment including: 12/24 VDC system: Navigation equipment, communication systems, Pilothouse 12/24 VDC components; Engine Room: 24 VDC power to main engine controls, main engine ECM, steering controls, and engine 24 VDC Alarm Panel.

While under the Contractor's control, the Contractor shall maintain circuit breaker Lockout/Tagout procedures as detailed in the "Take Control and Dry Dock the [M/V Frisco]" section of the Specifications.

### **Payment**

All costs for welding and brazing per these requirements shall be incidental to the unit contract bid prices of the various bid items in this project and no further payment will be made.

### **DISPOSAL OF SURPLUS MATERIAL:**

NCDOT will not provide a waste site for the disposal of excess materials and debris, however all valves 3" or larger, and all equipment made from non-ferrous materials, and other rebuildable equipment, as indicated and approved by the NCDOT Representative, shall be returned to NCDOT with the vessel. Except as otherwise noted above and elsewhere in the Contract Documents, all waste material not claimed by the NCDOT Representative shall become property of the Contractor and shall be disposed of at the Contractor's expense, in accordance with all local, state, and federal laws.

The Contractor shall be solely responsible for obtaining all required permits at his/her expense for the disposal of waste materials and shall comply with all state, federal and/or local requirements with regard to waste disposal. The Contractor shall provide copies of all hazardous waste shipping documents and disposal receipts to the NCDOT Representative.

### **Payment**

Costs for disposal of surplus material, per these requirements, shall be incidental to the unit contract bid prices for the appropriate bid items involved and no further payment will be made.

### **SOURCE OF MATERIALS:**

With only a couple of exceptions and except as explicitly stated in the appropriate specification sections below, contract shall use US sourced/Buy America compliant materials. The Contractor shall provide all materials, equipment, parts, and consumables required to complete the work detailed in the Contract Documents.

### **Payment**

The Contractor shall provide all materials to complete all work detailed in the Contract Documents. All costs of acquiring, producing, and placing this material in the finished work shall be incidental to the unit contract bid prices for the appropriate bid items involved and no further payment will be made.

**FIRE PREVENTION:**

The Contractor shall provide and maintain a water pump or pumps, fire extinguishers, and associated equipment adequate for use in fire suppression on the project at all times. This requirement does not relieve the Contractor of his/her responsibility as outlined in these Specifications.

**Payment**

All costs and expense to the Contractor incurred for such provisions shall be incidental to the unit contract bid prices for the appropriate bid items in this project and no further payment will be made.

**INSPECTION OF VESSEL:**

A mandatory pre-bid conference will be held on the date, time, and location specified below, to provide all interested bidders an opportunity to inspect the vessel. The vessel will be located at:

Manns Harbor Shipyard, North Carolina Department of Transportation

8550 Shipyard Road  
Manns Harbor, NC 27953

Pre-Bid Conference

Tuesday December 05, 2023 @ 09:00 AM

**NOTE:** Bidders are required to notify the NCDOT Representative in writing (contact information provided below) no later than November 28, 2023 to indicate their intent to attend the mandatory pre-bid conference.

**NCDOT REPRESENTATIVE:**

**Craig A. Midgett** – Proposals and Resident Engineer [camidgett@ncdot.gov](mailto:camidgett@ncdot.gov) (252)-423-5131  
Ferry Division, North Carolina Department of Transportation  
8550 Shipyard Road Manns Harbor, NC 27953

**Jeremy J. Remme** – Engineering Supervisor [jjremme@ncdot.gov](mailto:jjremme@ncdot.gov) (252)-423-5104  
Ferry Division, North Carolina Department of Transportation  
8550 Shipyard Road Manns Harbor, NC 27953

**Jon P. Mathias** – Planning/Scheduler Supervisor [jpmathias@ncdot.gov](mailto:jpmathias@ncdot.gov) (252) 423-5016  
Ferry Division, North Carolina Department of Transportation  
8550 Shipyard Road Manns Harbor, NC 27953

Bidders' Representatives inspecting the vessel do so at their own risk and NCDOT takes no responsibility for loss or injury suffered by Bidders' Representatives while onboard a NCDOT vessel.

**REQUESTS FOR INFORMATION:**

Requests for information concerning vessel plans or other related information may be submitted to: NCDOT POC:

**Jeremy Remme** –Engineering Supervisor [jjremme@ncdot.gov](mailto:jjremme@ncdot.gov) (252) 423-5104  
Ferry Division, North Carolina Department of Transportation  
8550 Shipyard Road Manns Harbor, NC 27953

**Brent Jones** – Engineering Technician [btjones@ncdot.gov](mailto:btjones@ncdot.gov) (252) 423-5105  
Ferry Division, North Carolina Department of Transportation  
8550 Shipyard Road Manns Harbor, NC 27953

**CONDITIONS AFFECTING THE WORK AND REMOVALS:**

The Contractor acknowledges that it has conducted its own ship check and satisfied itself regarding all of the onboard conditions affecting the work indicated in the Contract Documents and affecting the Contractor's production plan. In particular, the Contractor acknowledges:

- a) That it has assessed the regulatory requirements for work indicated in the Contract Documents and has considered those requirements in its bid,
- b) That it has inspected the compartments where the work will be accomplished and considered physical restrictions and interferences that will require removal and reinstallation to accomplish the work,
- c) The availability of human resources, indicated materials, and indicated parts and equipment necessary to accomplish the work and considered these constraints in its bid and its production schedule,
- d) The integration of all the work indicated in this package and how one task may impact another task and considered that impact in its bid and its production schedule,
- e) The Contractor shall not design or install a system or feature that will change the vessel's service orientation or capacity indicated in the Contract Documents or on the vessel's current Certificate of Inspection.

The Contractor shall make all removals necessary, including but not limited to interferences, to carry out all the work directed in the Contract Documents. The Contractor shall restore all removed or disturbed work, including but not limited to interferences (except debris) to its original condition unless otherwise directed by the Contract Documents. Coating of all disturbed work shall be equal to or better than that of the original and adjacent areas. The Contractor shall dispose of all debris, removed as interference, in accordance with all local, state, and federal regulations.

Disturbed piping systems, mechanical and electrical systems and associated equipment shall be tested, first at dock, then underway; to prove that each has been returned to design specifications. These dock trials and sea trials shall be conducted on all disturbed systems as indicated below.

The Contractor shall dispose of removed equipment that is not to be re-used after approval by the NCDOT Representative, except as expressly indicated otherwise in the Contract Documents.



Upon completion of the work under this contract, the Contractor shall remove all of its equipment and debris and shall leave the vessel clean and fit for immediate operation.

### **Payment**

All costs and expense to the Contractor for removal work, disposing of removed items, and reinstallation of removed items, as detailed in the Contract Documents and Special Provisions, shall be incidental to the unit contract bid prices for the various bid items in this project and no further payment will be made.

### **DRY DOCK INSPECTION BY THE U.S. COAST GUARD AND NCDOT:**

The vessel shall be dry docked by the Contractor to allow for the necessary inspection of the underwater body and appendages, valves, shafting, rudders, propellers, bow thruster tunnels, sea chests, steering gear, and all other areas of the vessel to meet the USCG requirements for renewal of the COI. The inspection will be carried out under the supervision of the USCG Inspector and will require access to all hull voids and compartments. The Contractor shall inform the NCDOT Representative a minimum 48 hours in advance of all USCG inspections. All required/requested USCG tests shall be performed by the contractor at no additional cost to the department and shall be included in the bid price. These tests are including but not limited to (chalk tests, air tests, exhaust test, skeg test, etc.). The Contractor shall be responsible for removing any equipment, fastenings, interferences, or enclosures and providing access to any areas as directed by the USCG Inspector or the NCDOT Representative. After inspection, repairs, re-inspection, and with the approval of the NCDOT Representative and Coast Guard Inspector, the Contractor shall restore all equipment, fastenings, interferences, or enclosures as required by the NCDOT Representative.

### **NCDOT Inspection Representative POC:**

**George Emerson** – QA Specialist [gaemerson@ncdot.gov](mailto:gaemerson@ncdot.gov) (252) 423-5119  
Ferry Division, North Carolina Department of Transportation  
8550 Shipyard Road Manns Harbor, NC 27953

**Clayton Cutler** – QA Specialist [cscutler@ncdot.gov](mailto:cscutler@ncdot.gov) (252) 423-5110  
Ferry Division, North Carolina Department of Transportation  
8550 Shipyard Road Manns Harbor, NC 27953

The Contractor shall ensure that the NCDOT Representative is informed of and copied on all communications and correspondence with the USCG, including but not limited to inspections.

The Contractor shall schedule all USCG required inspections between 0800 and 1430 on normal business weekdays (Monday through Friday).

### **Payment**

All costs and expense to the Contractor for any required/requested USCG tests, removing and replacing equipment, fastenings, interferences, and enclosures, and any other work as outlined in this section shall be included in the lump sum contract bid price for *Generic Ferry Item (Take Control and Dry-Dock the M/V Frisco)* and no further payment will be made.

## PROJECT TECHNICAL SPECIFICATIONS

### 1.0 TAKE CONTROL AND DRY DOCK M/V FRISCO:

#### 1.1 Description

This section describes the requirements for the Contractor to receive, take complete control of, dry dock and undock the vessel, and redeliver the vessel to the NCDOT when all work indicated in the Contract Documents is complete.

#### 1.2 References

*1.2.1 DWG NC-220-0005 - Outboard Profile & Gen. Arrg'ts*

*1.2.2 DWG NC-220-1007- Midship Section*

*1.2.3 DWG NC-220-0008 - Hull Structure*

*1.2.4 DWG NC-220-0022 - Docking Plan*

#### 1.3 Owner Furnished Equipment

Shore Power Plug & Pigtail

#### 1.4 Requirements

##### **1.4.1 Take Control**

The Contractor shall fill out and submit (with the bid) one copy of the "Dry Dock Certification" form furnished by the NCDOT, an example of which is shown in the bid proposal documents of the Contract Documents. The Contractor shall present a U.S. Navy or American Bureau of Shipping certificate for the lifting facility, at the block inspection called out in this section. If a mechanical lifting facility is utilized, certificates indicating size, type and age of any cables used for lifting or hauling the vessel will be provided to the Owner prior to dry docking the vessel.

The NCDOT vessel operator will move the vessel from the vessel mooring to the Contractor's shipyard and, upon completion of all work and re-delivery to the NCDOT will return it to the vessel's typical mooring at NCDOT expense.

Upon arrival at the Contractor's facility, the Contractor shall provide adequate docking facilities, soft fenders, mooring lines, and line handlers and moor the ship safely. Mooring lines shall accommodate the vessel's draft and will allow the vessel to safely rise and fall with the tide so no damage occurs to the vessel or facility while it is moored to the Contractor's facilities. Mooring lines shall be sized and configured to accommodate the vessel and all reasonably anticipated weather occurrences for the Contractor's facility.

While moored but before ships power is secured and the vessel placed on shore power, NCDOT and the Contractor shall cycle the various systems on board the vessel and prove their operation.

**CHECKPOINT:** Contractor shall provide a written record of this trial to the NCDOT Representative, particularly noting any systems not performing to their design level. If this documentation is not provided to the NCDOT Representative, Contractor shall be liable to repair any malfunctioning systems prior to returning the vessel to NCDOT at no additional cost to NCDOT.

After proving systems, the vessel will be shut down, with sea valves closed, and the keys to the vessel will be presented to the Contractor by the vessel Master. The Contractor shall immediately take control of the vessel, assume responsibility for the vessel's security per the Contract Documents, and start work as directed by the NCDOT Representative. The Contractor and the NCDOT Representative shall conduct a walk-through of the vessel and inventory all major valuables when the Contractor receives the vessel and when the vessel is returned to the owner. During the walk through, the Contractor and the NCDOT Representative shall observe and record details about the general cleanliness and material condition of the vessel. At the completion of all work detailed in the Contract Documents, the Contractor shall restore all removed interferences and restore all disturbed areas and surfaces to their pre-arrival material condition, or better. All areas where paint or surface finishes are disturbed due to Contractor work shall be touched up to pre-arrival aesthetic appearance and preservation integrity, or better.

If the vessel is not immediately taken into the dry dock when it arrives at the Contractor's facility, the Contractor shall provide all labor, material, and equipment, including tugboats as necessary, to secure the vessel to the Contractor's moorings and to move the vessel to the dry dock when appropriate.

Except where specifically indicated otherwise by these Specifications, the vessel will be delivered to the Contractor with minimal fuel and all temporary items removed such as hand radios, binoculars, personal items, food, and trash. The Contractor shall be responsible for any lightering, ballast operation, or liquid load transfer necessary to accommodate the dry dock capacity or complete any work called out in the Contract Documents. The ship will be received with the same amount of fuel onboard as was delivered to the Contractor. Contractor shall store fuel at the contractor facility. Price shall be included in the dry dock bid price. Fuel will be estimated to be less than 3,500 gallons but no less than 2,000gal and final quantity will be determined 7 days prior to arrival.

The Contractor shall plan, budget, and provide a number of days in dry dock as required to complete the work in these Special Provisions. The dry-docking schedule shall be provided to the NCDOT Representative prior to the dry-docking of the vessel. Except for emergency situations (prior docking commitments on the part of the Contractor do not constitute emergency situations), once the vessel is docked, any deviation in the dry-docking schedule or dry-docking evolutions (undocking and re-docking of the vessel) must be requested and submitted in writing to the NCDOT Representative, at least ten (10) days in advance of the proposed change.

Provide all staging, tarpaulins, weather covers, closures, and aerial apparatus necessary to accomplish the repairs and/or inspection work detailed in the Contract Documents.

#### **1.4.2 Docking**

The Contractor shall meet with the NCDOT Representative at least eight (8) hours before the dry-docking and jointly inspect the dry dock and block arrangement. At this joint inspection, the Contractor shall finalize the time and date of the dry-docking and demonstrate the following:

- a) Blocks are set per Reference 1.2.2, [M/V Frisco] "Docking Plan" within the tolerances detailed in this section. This shall include discussion and inspection of the following: the height of reference plane for setting the blocks, the physical reference on the dry dock used to set block heights, height and location of keel blocks, height and location of side blocks, and any special block arrangements to accommodate hull projection, openings, or underwater body work directed by the Contract Documents. Where a floating dry dock will be used to dry dock the ferry, the Contractor shall demonstrate by discussion, engineering drawing, or actual inspection that the blocks, and the ferry, will land on significant structure beneath the caisson deck. If deviations from the blocking plan described in Reference 1.2.2 are proposed, the Contractor shall supply the NCDOT Representative with calculations justifying the deviation no less than 2 normal business days prior to the dry-docking of the vessel. If these calculations are not provided and/or this calculation review period is not met, the NCDOT has the right to delay the docking of the vessel in order to accomplish the calculation review, at no additional cost to NCDOT.
- b) Details of the Contractor's docking plan and procedure will cause the ship to land in accordance with Reference 1.2.2. The Contractor shall display the system intended to indicate the ship's fore and aft and athwartships position (for landing) over the dry dock. This shall include fore and aft centering marks or devices, square marks or devices to position the ferry ends, and divers' visual aids.

- c) The dry dock is structurally sound and pumping systems (if applicable) are in good condition, and the dry dock is as declared in the Dry Dock Certificate submitted with the Contractor's bid.
- d) There is an adequate communications system between all persons at all docking stations, tugs, and the vessel.
- e) Estimated side clearance for the ship.
- f) A visual gauge system for measuring the height of the water over the blocks.

Keel blocks shall be built-up timbers or composite blocks and set to lie within  $\pm 1/4$ " of the horizontal plane established as the block height. Side blocks shall be built up and located to land the ship so the line of force, perpendicular to the upper face of the block, will pass through the middle third of the side block, at the block's base. The line perpendicular to the face of the side block shall land within  $1/2$ " of the half-breadth called out in Reference 1.2.2. Keel blocks shall be finished with new softwood caps. Keel block softwood caps shall be a minimum of 2" thick and a maximum of 6" thick. Side blocks shall be finished with new softwood caps. Side block softwood caps shall be a minimum of 2" thick and a maximum of 6" thick and they shall be proportional to the keel block softwood caps. Keels blocks shall be sized and set on the dry dock per Reference 1.2.2. Contractor-proposed deviation from the docking plan must be approved by the NCDOT Representative, but, in no case will keel block load pressure exceed 150 lbs/in<sup>2</sup>. Keel blocks shall be no less than four (4) feet high. Side blocks shall be sized and set on the dry dock per Reference 1.2.2. Contractor-proposed deviation from the docking plan must be approved by the NCDOT Representative, but, in no case will side block load pressure exceed 100 lbs/in<sup>2</sup>.

The Contractor shall dry dock the ship, without strain or deformation, in accordance with Reference 1.2.2. The Contractor shall, by dry docking the vessel, expose the keel of the ship and all other underwater areas, including but not limited to the rudder, sea chests, underwater log, transducers, and overboard discharges for a complete inspection and any necessary repair or renovation work. The Contractor shall dry dock the ship using good trade, engineering, and shipyard practice. The Contractor shall use divers, experienced with dry docking operations, to verify ship position over the blocks immediately prior to landing the ship. The ship shall be landed on the dry dock blocks within the following parameters:

- No more than 4" off center, on the keel blocks.
- Within 6" of the indicated longitudinal position, per the docking plan.

Place cribbing such that the hull will be exposed to allow work as outlined herein. The ship shall be blocked such that all underwater body painting and inspection detailed in the Contract Documents are accomplished. The Contractor shall shift ("bump") the ship in dry dock to expose, inspect, and paint the areas covered by the docking blocks. The Contractor may use a removable block configuration (sand boxes) in lieu of shifting the ship in dry dock. Shift ("bump") shall be included in the bid price for dry dock. Surface preparation and paint schedule for the bumped areas shall be identical to the areas originally exposed.

If the vessel is dry docked contrary to any of these conditions, the Contractor shall immediately undock the vessel. The condition responsible for the undocking shall be corrected and the vessel shall be dry docked as soon thereafter as possible. The undocking and follow-on dry dockings, under these circumstances, shall be performed by the Contractor at no additional expense to the NCDOT.

If strain or deformation is noted during or after the dry-docking, the Contractor shall immediately undock the vessel. The condition responsible for the undocking shall be corrected and the vessel shall be dry docked as soon thereafter as possible. The undocking and follow-on dry dockings, under these circumstances, if determined to be a result of a Contractor act, omission, or other failure to abide by the direction in the Contract Documents, shall be performed by the Contractor at no additional expense to the NCDOT.

### ***1.4.3 Undocking***

**CHECKPOINT:** Immediately preceding the undocking, the Contractor shall conduct an inspection, in the company of the NCDOT Representative, to verify the ship is ready to undock. During this inspection, the Contractor shall demonstrate:

- a) That all sea chest strainer plates are installed and fastened, with lock wired or tack welded stainless steel nuts or stainless steel Nylock style nuts, on all studs.
- b) That all cover plates, plugs, or other protective devices are removed from transducers and hull openings and that the transducer windows are intact and undamaged.
- c) That all anodes are in place and free of paint or other cover to permit immediate activation at undocking.
- d) That the propeller nut locks are intact, with welded keeper tabs.

- e) That all underwater body hull paint is intact and cured past the minimum dry to launch criteria established by the paint manufacturer.
- f) That the ship's stability is suitable for undocking and that no significant changes in ship's displacement, trim, and heel, from that observed at dry docking, are likely at undocking.
- g) That all gangways and shore services are disconnected.
- h) That all sea valves are closed.
- i) That all shaft seals are intact.
- j) That the rudder packing is intact.
- k) That the ship is in all respects ready to undock.

During the undocking the Contractor shall assign personnel to inspect hull fittings, seals, packings, transducer covers, and valves in all spaces, continuously, to discover and correct leaks. If a leak is discovered, the undocking shall be suspended, the leak shall be stopped and the condition causing the leak corrected, before the undocking is permitted to continue. The ship shall be undocked without strain or deformation.

The Contractor shall vent and bleed all sea water systems and prepare them for unrestricted operation of the vessel, in all normally anticipated sea states and weather conditions. When the ship is undocked, it shall be moored safely, as directed in the Contract Documents, and prepared for dock and sea trials. The Contractor shall ensure that all seawater systems are fully functional for dock and sea trials and at the time of delivery of the vessel.

If the vessel is undocked contrary to any of these conditions, the Contractor shall immediately dry dock the vessel. The Contractor shall correct the condition responsible for the aborted undocking, and then undock the vessel as soon thereafter as possible. The dry-docking and follow-on undockings, under these circumstances, shall be performed by the Contractor at no additional expense to the NCDOT.

If any strain or deformation is noted during or after the undocking, the Contractor shall immediately dry dock the vessel. The Contractor shall correct the condition responsible for the aborted undocking, then undock the vessel as soon thereafter as possible. The dry-docking and follow-on undockings, under these circumstances, shall be performed at no additional expense to the NCDOT.

Contractor shall ensure that the vessel's sinks, toilets, urinals, deck drains, and all other drainage systems are not used, except for the drainage of rainwater or exterior wash water runoff. Use of the drainage systems for the preparation and disposal of materials is specifically prohibited. The Contractor shall ensure that all drainage systems are fully functional at the time of delivery of the vessel.

## 1.5 Lockout/Tagout Electrical

When under the Contractor's control, the Contractor shall maintain circuit breaker lock-out/tag-out procedures. All circuit breakers, regardless of system or function, which are operated by the Contractor or his sub-contractors, from their original position at time of delivery to the Contractor shall be red tagged.

The Contractor shall maintain a log to be located in the Engine Room that will note the original breaker position, location and purpose of the red-tagged breaker and date and time it is either opened or closed each time it is operated. The circuit breaker locks, tags, and log shall be maintained for the entire duration of the contract. Upon returning the vessel to the NCDOT's control, all breakers shall be returned to their original position at the time the Contractor took possession of the vessel.

Additionally, the Contractor shall maintain a log, to be located in the Engine Room near the circuit breaker log discussed above, that will note any change to switches and equipment settings throughout the vessel. Any change to any switch or equipment setting for the duration of the contract shall be noted in the log. Upon returning the vessel to the NCDOT's control, all switches and equipment settings shall be returned to their original positions at the time the Contractor took possession of the vessel.

## 1.6 Valve Lockout/Tagout

While under the Contractor's control, the Contractor shall maintain valve lock-out/tag-out procedures. All valves, regardless of system or function, which are operated by the Contractor or his sub-contractors, from their original position at time of delivery to the Contractor shall be red tagged. The Contractor shall maintain a log to be located in the Engine Room that will note the original valve position, location and purpose of the red-tagged valve and date and time it is either opened or closed each time it is operated. The valve tags and log shall be maintained for the entire duration of the contract. Upon returning the vessel to the owner's control, all valves shall be returned to their original position at the time the Contractor took possession of the vessel.

## 1.7 Deliverables

**1.7.1** Final Lockout/Tagout logs for both valves and circuit breakers.

## 1.8 Payment

The lump sum contract bid price for *Generic Ferry Item (Take Control and Dry Dock the M/V Frisco)* shall be the total compensation for all labor, equipment, tools, and materials to accomplish the work detailed in these Special Provisions, including testing and trials, "bumping" the vessel, and all time necessary in dry dock to complete the work involved. Shall include a daily rate for Dry Docking and a daily rate for dockside mooring.



## 2.0 **SHIPYARD SERVICES:**

### 2.1 **Description**

This section describes the requirements for the Contractor to provide services while vessel is under their control.

### 2.2 **References**

None

### 2.3 **Owner Furnished Equipment**

Shore Power Plug & Pigtail

### 2.4 **Requirements**

The Contractor shall provide the following services: Shorepower, Gangway, Fire protection, Manholes, Garbage removal, Security, Owner's Representative Office and Marine Chemist.

#### 2.4.1 **Shorepower**

- a) The shore power connection for the vessel is [208 VOLTS] VAC, [200 AMPS] Amp, [3] Phase, 60hertz. **NOTE:** NCDOT to provide electrical plug and pigtail shore power connection. Plug and Pigtail to be returned to NCDOT at completion of contract.
- b) The Contractor shall provide shore power for the vessel during its entire stay at the Contractor's facility. It shall be the Contractor's responsibility to provide a suitable shore connection and supply shore power to the vessel. Ensure shore power cable is sufficiently protected from chaffing. Ensure shore power cable does not interfere with safe egress of any personnel.
- c) Shore Power Consumption to be included in a lump sum price.

#### 2.4.2 **Gangway**

- a) Contractor to supply two means of access (one gangway forward and one aft) while on dry dock. All gangway installations/removals shall be included during the repair period. Gangways shall not have any vertical ladder sections or rungs for steps. Gangways shall have slip resistant stair tread and shall be lit for safe access at night.

#### 2.4.3 **Fire Protection**

- a) The Contractor shall provide, as a minimum fire protection posture, the following equipment and practice:
  - Two (2) fully charged fire hoses capable of simultaneously delivering a high velocity, fog fire stream at a minimum nozzle pressure of 75 psi at any point on the ferry.
  - Ten (10) each fully functional and recently inspected portable CO2 or Dry Chemical Fire Extinguishers for use by fire watches at hot work sites.
  - Fire watches assigned at all times in the immediate vicinity of ongoing hot

work; fire watches shall remain on station for 30 minutes after hot work cessation or until the affected structure falls below 140 F, as demonstrated by temperature indicating crayon or heat gun. All fire watches shall be Competent Persons and trained in fire prevention, detection, and firefighting procedures.

- b) Alarm shall be positioned within 25 feet of the gangway. Alarm must alert security or other shipyard personnel to ensure a response at any time.

#### **2.4.4 Garbage Removal**

- a. Provide suitable container onboard the vessel to receive and hold the vessel's garbage. Dump garbage container daily.

#### **2.4.5 Security**

- a. The Contractor shall be responsible for the physical security of the vessel including its contents and equipment from the time the Contractor takes physical control of the vessel until the completion of the contract and the return of the vessel to the NCDOT's control after the vessel is accepted by the NCDOT vessel operator and the work is accepted by the NCDOT Representative. Provide and install temporary plywood deck covering in the walkway in the Passenger Cabin suitable to protect against normal maintenance and repair traffic. (Engine Room deck protection is specified in the Engine Overhaul section of these Special Provisions.) The Contractor shall section off passenger and pilot house to minimize congregation and unnecessary traffic. The Contractor shall note the condition of the entire vessel and will be returned to NCDOT in the same condition.

#### **2.4.6 Owner's Representative Office**

- b. The Contractor shall provide a heated/air-conditioned private office, with two (2) desks and four (4) chairs, a secure 15mb/sec or faster internet connection, small refrigerator and building power (minimum one (1) convenience outlet per wall or equivalent power strip) for the NCDOT Representative for the duration of the project. The office space shall be located as near the vessel dry dock as possible or in the office complex normally provided for the shipyard customer's port engineers. Provide two (2) marked reserved parking spaces, inside the shipyard, for the duration of the project.

#### **2.4.7 Marine Chemist**

- c. Provide a certified Marine Chemist to inspect all necessary spaces and issue hot work certificates as required for the scope of work.
- d. Provide Competent Person to maintain the Marine Chemist Certificate and check and post all required spaces daily for access.
- e. Provide a copy of the Marine Chemist Certificate within 24 hours of issue to the NCDOT Representative.

**CHECKPOINT:** CHECK POWER IS SECURED BEFORE CONNECTING SHOREPOWER.

## 2.5 Deliverables

### 2.5.1 *Marine Chemist Certificates*

### 2.5.2 *Shore Power Inspection and Connection*

## 2.6 Payment

The lump sum contract bid price for *Generic Ferry Item (Shipyard Services)* shall be the total compensation for all labor, equipment, tools, and materials to accomplish the work detailed in these Special Provisions, including testing and trials, “bumping” the vessel, and all time necessary in the dry dock to complete the work involved.

## 3.0 STARTUP, DOCK TRIALS, AND SEA TRIALS:

### 3.1 Description

This section describes the requirements for starting the vessel by NCDOT before dock and sea trials and conducting dock and sea trial (which shall be organized and carried out by the Contractor at the conclusion of the project).

### 3.2 References

None

### 3.3 Owner Furnished Equipment

None

### 3.4 Requirements

The Contractor shall organize and conduct formal dock trials and sea trials, per the Society of Naval Architects and Marine Engineers SNAME T&R 3-39; "Guide for Shop and Installation Tests", and (SNAME) T&R 3-47; "Guide for Sea Trials", respectively and as applicable. Dock and Sea Trials' tests and agenda items shall also include all tests and trials required by equipment and engine manufacturers, for newly installed, re-built, or re-furnished equipment on board the vessel. Any and all items or equipment that has been disturbed in any way will require operational testing to the satisfaction of the NCDOT Representative, prior to final acceptance of the vessel.

The Contractor shall submit detailed test memoranda, bound into a test memoranda booklet, for each system to be tested and for the dock and integrated sea trials, no less than seven (7) working days prior to the scheduled start of dock trials. This milestone shall be inserted in the Contractor's progress schedule. The Contractor shall include as part of the test memoranda book, a sea trial and dock trial agenda detailing the sequence in which the tests will be conducted. The Contractor shall develop and conduct the test and trial protocols and schedules to thoroughly shakedown the vessel, in all modes and at various courses and speeds, including full power, to prove the capability and reliability of the vessel to operate, without restriction, on its certificated routes.

NCDOT shall provide a Coast Guard licensed Master, a Coast Guard licensed Engineer and other crew members as needed and in accordance with the vessel's COI operating requirements, to supervise and exercise operational and technical control of the vessel for all dockside and underway trial periods.

The Contractor shall be responsible for proving the operation and reliability of all systems disturbed by the work detailed in these Specifications, particularly, the main engines, main engine and reduction gear cooling systems, exhaust system, reduction gears, pneumatic engine and clutch controls, shaft brakes, propulsion shafting affected by the work scope, and all disturbed electrical and auxiliary systems. This same Contractor responsibility will extend to any equipment, machinery, or systems that are added to the original contracted work scope through approved change-orders.

The Contractor shall complete all maintenance and repair items and new installations, except for startup and testing, before dock trials and sea trials commence. Systems relying on integration with other systems shall be tested only after full integration is established. Partial trials, interrupted trials, and zone trials may be conducted for the Contractor's purposes and will be attended by the NCDOT Representative but will not be counted as acceptance trials.

Acceptance trials shall commence by 0800 each scheduled day and shall stop no later than 1600 each scheduled trial day. Contractor shall allow 1 day for Dock Trials and 1 Day for Sea Trials.

### **3.5 Tests, Trials, and Documentation**

The Contractor shall provide the NCDOT Representative with a detailed and completed Dock and Sea Trial Agenda at least 4 working days prior to the commencement of dock trials. The NCDOT Representative shall approve of this agenda prior to the commencement of dock and sea trials.

**CHECKPOINT** - NCDOT will conduct a startup of M/V Frisco up to 4 working days before the scheduled dock trials. NCDOT will provide the necessary startup personnel. Contractor shall provide assistance as needed and any repairs required will be addressed as "Additional Work."

### **3.6 Payment**

The lump sum contract bid price for *Generic Ferry Item (Startup, Dock Trials, and Sea Trials)* shall be the total compensation for all labor, equipment, tools and materials to accomplish the work detailed in these Special Provision, including testing and trials and all the time necessary in the dry dock and/or pier side to complete the work involved.

**4.0 LAY DAYS:****4.1 Description**

This section describes the requirement for "Lay Days."

**4.2 References:**

None

**4.3 Owner Furnished Equipment:**

None

**4.4 Requirements:**

"Lay Days" shall be defined as days when the vessel remain on dry dock, in the Contractor's facility, beyond the period initially anticipated to complete the basic dry-dock related work, to accomplish "Additional Work". The Contractor will not be paid for "Lay Days" to accomplish "Additional Work" that can be done concurrently with any of the work outlined in these Specifications. The Contractor will only be paid "Lay Days" for additional work requiring the vessel to remain on the dry dock, that cannot be accomplished concurrently with the work outlined in this Specifications, and additional work falling under this condition must be explicitly demonstrated, explained to and accepted by, the NCDOT Representative prior to commencement of any "Additional Work". This item is an Each line item and will only be paid if lay day are required, if no lay day are required than no payment can be claimed.

In no event will payment be made for "Lay Days" for Saturdays, Sundays, or other days when no Contractor work is being accomplished, recognized NCDOT holidays, or for additional days required to complete work due to the Contractor's inexcusable delays, failure to prosecute the work diligently during the time available, or for days after the hull work and painting has been completed and dry docking is not necessary to complete remaining items or work, unless specifically authorized by the NCDOT Representative. For the purpose of providing a common proposal for all bidders, and for that purpose only, the NCDOT has estimated the number of days for "Lay Days" and has arbitrarily entered that number in the bid proposal to become a part of the total bid by the Contractor. The Contractor shall not use this estimate to infer a number of anticipated "Lay Days."

**4.5 Tests, Trials and Documentation:**

None

**4.6 Payment**

Payment will be per the contract unit bid price per day for *Generic Miscellaneous Item (Lay Days)*. This item is an Each Line item and will only be paid if lay days are required, Quantities indicated on the bid proposal are estimates and arbitrarily assigned for the purpose of developing a common proposal for all bidders and for that purpose only. The NCDOT will pay for the total days used based on the quoted unit price. If no lay days are required than no payment can be claimed. No further compensation will be made.

## 5.0 **BERTHING DAYS:**

### 5.1 **Description**

This section describes the requirement for "Berthing Days."

### 5.2 **References**

None

### 5.3 **Owner Furnished Equipment**

None

### 5.4 **Requirements**

"Berthing Days" shall be defined as days when the vessel must be tied up pier side, in the Contractor's facility, beyond the period initially anticipated to complete the basic work, to accomplish "Additional Work" that requires the vessel to remain at the Contractor's facility. Berthing days may be used, for example, to keep the vessel tied up while awaiting delivery of equipment or performing pier side maintenance. The Contractor will not be paid for "Berthing Days" to accomplish "Additional Work" that can be done concurrently with any of the work outlined in these Specifications. The Contractor will only be paid "Berthing Days" for additional work requiring the vessel to remain on site, that cannot be accomplished concurrently with the work outlined in this Specifications. Additional work falling under this condition must be explicitly demonstrated, explained to, and accepted by, the NCDOT Representative prior to commencement of any "Additional Work". This item is an Each line item and will only be paid if birthing days are required, if no birthing days are required than no payment can be claimed.

In no event, will payment be made for "Berthing Days" for Saturdays, Sundays, or other days when no Contractor work is being accomplished, recognized NCDOT holidays, or for additional days required to complete work due to the Contractor's inexcusable delays, or failure to prosecute the work diligently during the time available, unless specifically authorized by the NCDOT Representative. For the purpose of providing a common proposal for all bidders, Contractor is to enter a per day Berthing Day fee in the bid sheet.

The Contractor shall provide at least one hundred nineteen [119] working days to complete work on the [M/V Frisco]. Until all of these days are expended, no Berthing Days shall be paid by NCDOT.

"Berthing Days" shall only be paid if the vessel is actively being worked on during the days charged. Days spent waiting for subcontractors, parts, or shipyard personnel shall only be counted as "Berthing Days" if explicitly agreed to in writing, by the NCDOT Representative.

**5.5 Tests, Trials, and Documentation:**

None

**5.6 Payment**

Payment will be per the contract unit bid price per day for *Generic Miscellaneous Item (Berthing Days)*. This item is an Each Line item and will only be paid if berthing days are required, Quantities indicated on the bid proposal are estimates and arbitrarily assigned for the purpose of developing a common proposal for all bidders and for that purpose only. The NCDOT will pay for the total days used based on the quoted unit price. If no berthing days are required than no payment can be claimed. No further compensation will be made.

**6.0 OPEN, CLEAN, AND CERTIFY GAS FREE: BILGES, HOLDS, AND ENCLOSED AREAS:****6.1 Description**

This section describes the requirements to clean and gas free the vessel to accommodate ordered work and inspections.

**6.2 References**

*6.2.1 DWG NC-220-0006- Inboard Profile & Gen. Arrg'ts - Below Main Dk.*

**6.3 Owner Furnished Equipment**

None

**6.4 Requirements**

The Contractor shall open, clean, dewater, if necessary, dry, and gas free the bilges, accessible voids, holds and enclosed areas in way of the hull, as indicated in this section, to facilitate complete inspection of the vessel's structure. The Contractor shall remove all docking plugs (if any) for skegs, rudders, and other inaccessible voids as applicable, and report conditions found.

The Contractor shall utilize a National Fire Protection Association-certified marine chemist to certify the compartments "Safe for Personnel" to accommodate the USCG and NCDOT inspections. Where hot work is anticipated, or indicated by the Contract Documents and Special Provisions, the Contractor shall require the marine chemist to certify the compartments "Safe for Personnel and Safe for Hot work." The Contractor shall maintain gas free certification, for the full term of the performance period or until the NCDOT Representative authorizes closure. Gas free certifications shall be maintained by daily Competent Person inspections, per Title 29 of the Code of Federal Regulations (29 CFR 1915) and in accordance with all conditions and restrictions directed by the marine chemist at the time of initial certification. Copies of all gas free certificates and the daily Competent Person inspection log shall be posted conspicuously on the vessel and a copy shall be provided to the NCDOT

Representative.

Open, ventilate if required and certify gas free and safe for entry, pump dry and clean all accessible voids, holds, pump rooms and machinery spaces under the Main Deck on the vessel. The Contractor shall completely clean the above-specified areas to remove all water, fuel, oil, and grease fouling, then wipe and ventilate the bilges dry. The Contractor shall remove and dispose of bilge slop in all bilges and shaft alleys throughout the vessel. The Contractor shall dispose of all removed materials and waste in accordance with all local, state, and federal regulations. The Contractor shall inspect the vessel before bidding to satisfy himself/herself as to the approximate bilge slop quantity and constituent mixture. NCDOT will make all efforts to deliver the vessels with bilges pumped down to bilge suction. Any bilges quantities found to be above low bilge suction shall be covered under supplemental agreement for additional removal costs. After bilge slop removal, the Contractor shall hot-water-and-detergent clean the bilges and shaft alleys, remove debris, pump dry, and properly dispose of the contaminated cleaning solution and debris. At the completion of all work indicated in the Contract Documents, re-deliver the vessel with the bilges in this clean and dry condition.

The Contractor shall perform gas free testing for tanks, accessible voids, holds, and enclosed areas in way of the hull when directed by the NCDOT Representative at any time such testing is indicated for the protection of the vessel and the safety of personnel. If gas free certification is lost, the affected compartment(s) shall be re-certified by the NFPA-certified marine chemist.

The NCDOT Representative will not accept re-certification by the competent person. If gas free certification is lost due to an act or omission of the Contractor, then additional cleaning, ventilating, and certification shall be accomplished at no cost to the NCDOT.

Compartments that are gas freed and certified per the Contract Documents shall remain in a gas free and certified condition until the Coast Guard and the NCDOT Representative approve closure of the compartment and until all Contractor work in the compartment is complete.

Any gas free activity and certification required by the Contractor to conduct shipyard operations will be at the Contractor's expense and incidental to the various bid items involved.

Any gas free testing work directed by the NCDOT Representative in excess of two times per hold, tank or enclosed area, and that is not required by the Contractor to conduct his/her operations, will be considered and settled by the NCDOT Representative as Additional Work.

All paint work shall be accomplished as detailed in the Special Provision item "Painting – General."

**CHECKPOINT** Contractor shall take care to protect all equipment from overspray. Any equipment damaged by over spraying shall be restored to its original condition at no additional expense to NCDOT.



## 6.5 Tests, Trials, and Documentation

Contractor shall check, update daily, and post at entry points, copies of all certifications and Safe for Entry permits.

## 6.6 Payment

The lump sum contract bid price for *Generic Ferry Item (Open, Clean, and Certify Gas Free: Bilges, Holds, and Enclosed Areas)* shall include all costs for cleaning, painting, ventilation, marine chemist inspections and certifications, competent person inspections and certifications, and certification of all tanks, accessible, and inaccessible voids, holds, and enclosed areas in way of the hull and including disposal of all waste. No further compensation will be made.

## 7.0 MAIN DECK HATCH MAINTENANCE AND REPAIR & MAIN DECK WATERTIGHT DOOR REMOVAL AND REPAIR:

### 7.1 Description

This section describes the requirements to inspect, clean, paint, repair, and test the main deck hatches. Contractor shall take into consideration work associated with “Open, Clean and Certify Gas Free: Bilges, Holds, and Enclosed Areas” of this section and closely coordinate this work. This section also covers the removal of all the watertight doors maintenance and repair on the main deck.

### 7.2 References

- 7.2.1 DWG NC-220-0005 - Outboard Profile & Gen. Arrg'ts.
- 7.2.2 DWG NC-220-0006 - Inboard Profile & Gen. Arrg'ts
- 7.2.3 DWG NC-220-0008 - Hull Structure
- 7.2.4 DWG NC-220-0038 - Miscellaneous Sections and Details
- 7.2.5 DWG NC-220-0056 - Door, Window, Hardware Schedule
- 7.2.6 DWG NC-220-1024 - FWD. End Bottom Deck Scantling Plan
- 7.2.7 DWG NC-220-1026 - AFT. End Bottom Deck Scantling Plan

### 7.3 Owner Furnished Equipment:

None

### 7.4 Hatch Requirements / CHECKPOINT:

The Contractor shall complete the following work on deck hatches:

- a) Contractor shall open and inspect condition of hatch insert rings, hatch gaskets, and hatch operating mechanisms.
- b) Complete inspections and submit a condition found report no later than fifteen (15) working days after taking control of vessel, or within 3 days of opening hatches, whichever comes first Condition found report must include any missing fasteners. Failure to report fasteners will assume fasteners were

damaged or lost by the shipyard and be required to be repaired or replaced at shipyard expense. Clean and paint hatch covers and gasket recess. Close manholes when directed with a new gasket and sealant. Apply never-seize to all fasteners before installing.

- c) Any hatch required to be opened to fulfill the scope of work in the contract must be fitted with a new gasket, and sealed watertight at the contractor's expense. Watertight integrity of all hatches and manholes must be proven to USCG and NCDOT representatives by contractor at contractor's expense. Based on NCDOT's inspection of vessel, **Contractor shall budget to replace [10] ø18" QAWTH gaskets, [4] 15"x23" BPMH gaskets, [1] 75"x54" Machinery Hatch gasket, [1] 75"x42" Machinery Hatch gasket, [2] 47-1/2"x 35-1/2" Steering Gear Access Hatch gaskets** as directed by the NCDOT Representative.
- d) Additional equipment may be recommended to be replaced by Contractor, subject to agreement by NCDOT. These repairs or renewals shall be paid by Supplemental Agreement.

#### **7.5 Watertight Door Removal and Replacement Requirement:**

The contractor shall remove [1] watertight door to Engine Space, [1] weather tight door to the main deck storage area and [1] weather tight door to the Emergency Generator Space. Once doors are removed, the contractor shall inspect, provide a condition found report and perform any routine maintenance of the doors including replacing the gasket, cleaning retaining area, prime and paint, renewing bushings, and pins. Any additional repairs beyond routine maintenance to doors to be covered under Supplemental Agreement. Any steel repairs required to the bulkhead to be covered under "Steel Crop and Renew – Bulkheads" work item.

#### **7.6 Tests, Trials and Documentation**

Following refurbishment and re-installation of all hatches and doors, Contractor shall prove all deck hatches watertight when subjected to low pressure or hose wash. Water test all main deck WTD with USCG present. The main deck watertight doors shall be chalk tested for the USCG. Contractor to deliver Condition Found report.

#### **7.7 Payment**

The lump sum contract price for *Generic Ferry Item (Main Deck Hatch Maintenance and Repair)* shall include all costs associated with repairs and modifications to the various items outlined in this Special Provision in. No further compensation will be made.

The lump sum contract price for *Generic Ferry Item (Remove all Main Deck WTD, Maintenance, Repair, and Reinstall)* shall include all costs associated with repairs and modifications to the various items outlined in this Special Provision in. No further compensation will be made.

## **8.0 SEA CHEST, STRAINER, AND VALVE INSPECTION:**

### **8.1 Description**

This section describes the requirements to remove, disassemble, open, clean and inspect **all** the vessel's valves listed in section 8.5 "Table of Valves" Contractor to also open, clean, and inspect all sea chests and strainers. Written condition found report to be submitted to NCDOT representative within 3 days of inspection. After inspection and approval from NCDOT representative that any needed work is completed, Contractor to reassemble all strainers and sea chests. Contractor shall not reassemble any strainers or sea chests without the approval of NCDOT Representative.

Contractor shall take into consideration work associated with "Sea Water Cooling Systems Inspection and Maintenance" of this section and closely coordinate this work.

Contractor to note the valve Lockout/Tagout procedures described in Take Control and Dry Dock the [M/V Frisco]."

### **8.2 References**

- 8.2.1 DWG NC-220-0017 – Vents, Fills and Sounds
- 8.2.2 DWG NC-220-1041 – Bilge Piping
- 8.2.3 DWG NC-220-1042 – Fuel Oil Piping
- 8.2.4 DWG NC-220-1044B – Generator Engine Cooling Piping
- 8.2.5 DWG NC-220-1044C – Main Engine Cooling Piping
- 8.2.6 DWG NC-220-1047 – Fire Main Piping
- 8.2.7 DWG NC-220-1049 – Potable Water Piping
- 8.2.8 DWG NC-220-1057 – Sewage and MSD Piping

### **8.3 Owner Furnished Equipment:**

See item a) in section 8.4.

### **8.4 Requirements**

The Contractor shall complete the following work on all valves listed in section 8.5 Table of valves.

- a) Disassemble all valves listed in section 8.5, Table of Valves for USCG and NCDOT Representative inspection of the interior valve body, seats, under bonnet, stem, and packing housing. All valves less than 3” condemned by the USCG Inspector or NCDOT Representative shall be replaced by the Contractor at no additional expense. All valves 3” and above condemned by the USCG Inspector or NCDOT Representative shall be replaced or repaired by the NCDOT and returned to the contractor.
- b) The Contractor shall remove all cover plates in the bulkheads for unrestricted access to the valves and the voids, as indicated in the “Open, Clean and Certify Gas Free Holds and Enclosed Areas” section of these Special Provisions.
- c) Blue the seat contact areas of the discs and perform a blue fit check of the valve seats in the presence of the USCG Inspector and NCDOT Representative.

- d) Following approval of the USCG Inspector and NCDOT Representative, clean the valve components, renew the bonnet gasket or seal, lubricate the valve stem, repack the stem gland and reassemble the valves.
- e) Open and inspect sea water system check valves as listed.
- f) Upon completion of valve restoration and prior to installation, hydrostatically test all restored and new valves to the satisfaction of USCG and NCDOT Representative. NCDOT will hydrostatically test all NCDOT provided valves prior to supplying to the contractor.
- g) Reinstall all valves using new Contractor furnished gaskets (Garlock 3760 or equal) and 316 Stainless Steel fasteners.
- h) Complete inspections and submit report no later than thirty (30) working days after dry-docking.
- i) Contractor to open, clean and inspect all sea chests and strainers. Written condition found report to be submitted to NCDOT representative within 3 days of inspection. After inspection and approval from NCDOT representative that any needed work is completed.
- j) Contractor to reassemble all strainers and sea chests. **Note:** Contractor shall not reassemble any strainers or sea chests without the approval of NCDOT Representative.

### 8.5 Table of Valves

No.	Valve Name	Location	Type
1	Sea Chest Main Port	Engine Room	6" Gate Valve
2	Sea Chest STBD	Engine Room	4" Gate Valve
3	Port Fire Pump	Engine Room	2" Butterfly Valve
4	Port Fire Pump	Engine Room	2" Check Valve
5	Starboard Fire Pump	Engine Room	2" Butterfly Valve
6	Starboard Fire Pump	Engine Room	2" Check Valve
7	Bilge Priming Valve	Engine Room	3" Butterfly Valve
8	Bilge Remote	Forepeak	2" Gate Valve
9	Bilge Remote	Steering Void Port	2" Gate Valve
10	Bilge Remote	Steering Void Starboard	2" Gate Valve
11	Port Fuel Tank Vent	Main Deck	2 1/2" Ball Check w/ screens
12	Starboard Fuel Tank Vent	Main Deck	2 1/2" Ball Check w/ screens
13	Stbd Fuel fill	Main Deck	2" Ball Valve
14	Fresh Water Fill	Main Deck	1 1/2" Ball Valve
15	Bilge Manifold Valve Eng. Rm. AFT	Engine Room	2" Drop check Valve
16	Bilge Manifold Valve MSD Void 4	Engine Room	2" Drop check Valve
17	Bilge Manifold Valve Steering Compt. STBD	Engine Room	2" Drop check Valve
18	Bilge Manifold Valve Void 2	Engine Room	2" Drop check Valve
19	Bilge Manifold Valve Void 1	Engine Room	2" Drop check Valve

20	Bilge Manifold Valve Fore Peak	Engine Room	2" Drop check Valve
21	Bilge Manifold Valve Void 5 Port	Engine Room	2" Drop check Valve
22	Bilge Manifold Valve Void 5 Stbd	Engine Room	2" Drop check Valve
23	Bilge Manifold Valve Void 3	Engine Room	2" Drop check Valve
24	Bilge Manifold Valve Steering Compt. PORT	Engine Room	2" Drop check Valve
25	Bilge Independent Eng. Rm. FWD.	Engine Room	3" Butterfly Valve
26	Bilge Independent Eng. Rm. MID.	Engine Room	3" Butterfly Valve
27	Duplex Strainer, Port Sea Chest 6"	Engine Room	
28	Fuel Shutoff Remote Port	Void	2" Gate Valve
29	Fuel Shutoff Remote STBD	Void	2" Gate Valve
30	Duplex Strainer, STBD Sea Chest 4"	Engine Room	

### 8.6 Tests, Trials, and Documentation

As indicated in the "Requirements" section above.

Following reassembly of all valves, Contractor shall prove watertight at operating pressure.

### 8.7 Payment

The lump sum contract price for *Generic Ferry Item (Sea Chest, Strainer, and Valve Inspections)* shall include all costs associated with repairs and modifications to the various items outlined in this Special Provision in. No further compensation will be made.

## 9.0 ZINC ANODE REPLACEMENTS :

### 9.1 Description

This section describes the requirements to remove and replace with new identified zinc anodes on the hull and rudders.

### 9.2 References

*9.2.1 DWG NC-220-0022 - Docking Plan*

### 9.3 Owner Furnished Equipment

None

### 9.4 Requirements

The Contractor shall renew all anodes on the vessel. Vessel is equipped with an estimated total of:

- Fifty-seven (57) 23-24 lb. zincs:
  - o Fifty-three (53) weld on ZHS-23 or equal (on hull)
  - o Four (4) bolt on ZHC-23 or equal (inside the sea chest)
- Twenty (20) 12 lb. rectangular shape weld on zincs, ZSS-12 or equal on the keel cooler guards.

All welding on the hull is to be accomplished prior to cleaning, prepping, and painting in the bilge areas. Repaint disturbed areas with anti-corrosive and anti-fouling paint in way of the zinc strap welds. Painting shall be as specified in the "Painting & Blasting Hull Below DLWL" section of these Special Provisions. All anodes shall be properly masked off when the surrounding areas are being painted. Compensation for the renewal of all anodes shall be paid under this work item.

**NOTE:** Keel cooler bolt on zinc anodes (specific to protecting the keel coolers themselves) shall be replaced in accordance with this work item and in accordance with the requirements of Section 21. "ENGINE WATER COOLING, INSPECTION, AND MAINTENANCE."

## 9.5 Tests, Trials, and Documentation

None

## 9.6 Payment

The unit contract bid price per each for *Generic Miscellaneous Items Zinc Anode Replacements: - (Vessel Hull/ 23-24 LB.)* and *Generic Miscellaneous Items Zinc Anode Replacements: - (Keel Cooler Guards / 12 LB)*. Shall include labor and materials to remove and then install (1) zinc anode. Separate unit pricing shall be provided for each zinc size. Quantities indicated on the bid proposal are estimated and arbitrarily assigned for the purpose of developing a common proposal for all bidders and for that purpose only. The NCDOT will count installed zincs and pay only for the number of installed zincs, based on the quoted unit price.

## 10.0 SEWAGE SYSTEM - CLEAN, INSPECT, PERFORM MAINTENANCE:

### 10.1 Description

This section describes the requirement to empty and clean the ferry's MSD.

### 10.2 References

*10.2.1 DWG NC-220-0006 – Inboard Profile & Gen. Arrg'ts – Below Main Dk.*

*10.2.2 DWG NC-220-1057 Sewage & MSD Piping*

### 10.3 Owner Furnished Equipment

GREEN MARINE (CrapZapper)<sup>®</sup> Packaged Mix (for kick starting microbial digestion of sewage)

### 10.4 Requirements MSD Cleaning

Vessel is equipped with two (2) RED FOX RF-350-FP-FG MSD Units: [Two Tank @ 350 gallons per day]

**WARNING:** MSD will contain some amount of sludge, and should be considered **HAZARDOUS**; as the sludge may contain harmful bacteria and emit poisonous & flammable gasses. Contractor is required to handle, remove and dispose of all residual water, sludge, or any liquid in the MSD, in accordance with all local, state, and federal laws.

Inspect all restrooms, urinals and toilets to ensure that no waste is present. If waste is present, flush all waste into the MSD, prior to and rinse Close and secure all restrooms. Contractor is to assume that MSD's will be 95% full when the vessel arrives at the shipyard. Prior to working on the units, MSD electrical power and valves are to be secured in accordance with shipyard lock out procedures. Open and pump out all waste in every chamber of the MSD.

Pressure wash (low to medium pressure as required) with a Clorox and water mixture, to disinfect and flush the MSD.

Contractor to remove the bolt down top access covers to wash and inspect the inside of the tanks. NCDOT and Contractor are to perform a visual inspection to determine the condition of internal coatings, fittings, and piping, and overall condition of the tanks and cover plates. Any deficiencies found by NCDOT or contractor will be repaired or renewed and paid by a Supplemental Agreement.

**CHECKPOINT:** NCDOT Representative is to witness both the MSD inspection, and visually inspect the condition of the MSD prior to closing the units up.

Prior to closing MSD tank, contractor shall clean and preserve all disturbed areas, replace all gaskets and test for leaks using fresh potable water. Test shall consist of filling the tank  $\frac{3}{4}$  of full capacity for at least 15 minutes. Any leaks are to be identified, corrections made, and retested by the contractor. **CHECKPOINT:** NCDOT Representative is to witness the MSD leak test.

Once there are no leaks, Contractor is to pump out and dispose to 50% of the MSD tank capacity and secure the unit against use for the remainder of the shipyard availability.

Within 24 hours of the vessel leaving the shipyard, Contractor is too unsecure the RED FOX TANK Unit and unsecure all lavatories and heads, making them available for use.

Contractor is to also add a GREEN MARINE (CrapZapper)<sup>®</sup> MSD packaged mix. The potable water and "mix" will initiate biological action inside the unit.

## 10.5 Tests, Trials, and Documentation

Conduct MSD closeout inspection and final tightness and leak tests. Inform NCDOT Representative and the USCG inspector to provide a witness for MSD closeout. Contractor to supply written condition report of MSD tank.

## 10.6 Payment

The lump sum contract bid price for *Generic Ferry Item (Sewage System – Clean, Inspect, and Perform Maintenance)* shall include all costs for cleaning all parts of the MSD tank, disposal, testing, replacement parts and inspections by qualified personnel. No further compensation will be made.

## **11.0 PAINTING – GENERAL:**

### **11.1 Description**

These general requirements apply to all paint performance and activity ordered by the Contract Documents.

### **11.2 References**

*11.2.1 Visual Standard for Abrasive Blast Cleaned Steel [SSPC-VIS-1-89] forms a part of this Contract and will be used to judge the adequacy of the surface preparation.*

*11.2.2 Visual Standard for Power and Hand Tool cleaned Steel [SSPC-VIS-3] forms a part of this Contract and will be used to judge the adequacy of the surface preparation.*

*11.2.3 Steel Structures Painting Manual, Volume 2, Systems and Specifications [Fifth Edition] Chapter 2, titled Surface Preparation Specifications, shall be used to define the degree of surface preparation as required by the Specifications.*

*11.2.4 SSPC-SP 12/NACE5 Surface Preparation and Cleaning of Steel and Other Hard Materials by High-and Ultrahigh-Pressure Water jetting Prior to Recoating.*

### **11.3 Owner Furnished Equipment**

Owner will provide replacement signs and name boards as required.

### **11.4 Requirements**

Surface preparation specified to be SSPC-SP10, "Near-White Blast Cleaning" shall be to SSPC Surface Preparation Specification No. 10 as defined in Chapter 2 of SSPC Volume 2.

Surface preparation specified to be SSPC-SP6, "Commercial Blast Cleaning," shall be to SSPC Surface Preparation Specification No. 6, as defined in Chapter 2 of SSPC Volume 2.

Surface preparation specified to be SSPC-SP7, "Brush-off Blast Cleaning," shall be to SSPC Surface Preparation Specification No. 7, as defined in Chapter 2 of SSPC Volume 2.

Surface preparation specified to be SSPC-SP3, "Power Tool Cleaning," shall be to SSPC Surface Preparation Specification No 3, as defined in Chapter 2 of SSPC Volume 2.

Surface preparation specified to be SSPC-SP11, "Power Tool Cleaning to Bare Metal," shall be to SSPC Surface Preparation Specification No. 11, as defined in Chapter 2 of SSPC Volume 2.



The Contractor shall grit blast the hull, decks, superstructure and failed blocking areas to a SSPC-SP10 "Near-White Blast Cleaning". Grit blasted surfaces shall have a profile depth of 2 to 4 mils. Immediately after grit blasting, clean affected spaces and surfaces of blasting material and residue.

Upon completion of blasting and before inspection of a blasted area, all grit shall be removed from the inspection area by blowing down with air or other means. Upon completion of inspection and acceptance of blasted area by the NCDOT Representative, and before paint application, all blasting media shall be removed from all surfaces. Decks shall be broom clean.

The blasted areas shall be coated the same day with paint to hold the blast. If the blasted areas cannot be coated before the surface remains exposed overnight, sand sweep to remove rust bloom prior to applying the paint. Care must be exercised to see that dust and grit are not imbedded in soft paint in the areas adjacent to the blasting.

Ensure that prior to beginning superstructure blasting, the edges of the stripe on the curtain plates and the stacks are measured for applying paint to proper location.

Carefully mask and protect machinery, motors, electrical panels and boxes, wiring, ventilation ducts, tank vents, void vents, name plates, identification labels, valve stems, fire hoses, bright work, glass trim, windows, wiring, light fixtures, navigation lights, public address system speakers, radar and other such items and materials which could be damaged by water, abrasive blasting, dust associated with the process, or other surface preparation techniques, or which could have their function and appearance degraded by blasting or paint over-spray. If removal is required, note, and map the location of all items removed and provide to NCDOT representative. Upon completion of painting, all items removed shall be re-installed in their original locations and shall be restored to their pre-removal form, appearance, and function. When reinstalling removed items replace non stainless hardware with 316 grade stainless hardware, ensure all bolt holes in brackets have fasteners installed. If fasteners are stripped or broken, they shall be replaced with 316 fasteners.

Ventilation fans shall be sealed and protected prior to surface preparation work in the immediate vicinity. They shall be unsealed upon completion and acceptance of all application of paint. Care shall be taken to ensure that blasting media does not enter vents, and louvers are not damaged during grit blasting. Vent screens installed in vent bells shall be protected against blasting and painting. Any damage shall be renewed to like new condition at no cost to the department.

All plastic and brass signs in affected work areas shall be removed and provided to NCDOT representative prior to painting or grit blasting. Note and map the location of signs and provide locations to NCDOT representatives. Upon completion of final paint coating, all signs will be supplied by NCDOT and shall be re-installed by the Contractor in their original location, using new 316 Stainless Steel fasteners where applicable. Installation workmanship of all signs is to match the location, levelness, cleanliness, neatness, and overall quality of the original installation, and shall be to

satisfaction of the NCDOT Representative. Sign installation workmanship not meeting these requirements shall be removed and re-installed at no cost to NCDOT.

Fire station boxes, fire ax boxes, fire extinguisher brackets, fire hoses, life ring holders, vessel name placards, safety and restricted area signs, low-clearance and height signs, and any other signs shall be removed from affected work areas before grit blasting. Upon completion of painting, all items removed shall be re-installed in their original locations. All painted stencils and markings affected by grit blasting or painting shall be re-painted upon completion of final paint coating in their proper color and location. Any damage signage shall be reported immediately to NCDOT representative.

All windows shall be protected from blasting or painting by a protective covering, using plywood or other means determined to be satisfactory by the NCDOT Representative. Affected windows shall be water hose tested upon completion of paintwork. Upon completion of cleaning and painting, all windows affected by the work shall be washed. Care shall be taken when washing or blasting doors to prevent warping or any damage to doors or the surrounding area. Doors leading to passenger spaces shall be repainted to their proper color as required.

Deck drains on all deck levels shall be plugged prior to blasting. When all work is complete all deck drains shall be clear of obstructions, and proper operation shall be demonstrated to the NCDOT Representative before re-delivery.

Rescue-boat launching apparatus shall be protected during painting and/or blasting to prevent blasting, media from damaging equipment or grit contaminating great areas. Piping insulation shall be removed or protected before blasting. If removed or damaged, it shall be renewed using new insulation at the Contractor's expense.

**NOTE:** The NCDOT Representative will inspect all prepared surface areas upon completion of preparation, and before any paint is applied on prepared surfaces. Upon completion of each paint coat, the NCDOT Representative will inspect painted area for proper paint application before the next coat is applied. It is the responsibility of the Contractor to ensure that all required inspections are completed before continuing work.

**NOTE:** It is incumbent upon the Contractor to provide the NCDOT Representative with timely notification in order to preclude delays in required inspections. Failure to obtain the NCDOT Representative's approval, where required, may require re-preparation and coating, wholly at the expense of the Contractor.

**CHECKPOINT:** The following tests shall be conducted by the contractor and the results given to the NCDOT representatives prior to painting.

- a) Surface profile gage readings.
- b) Wet and dry film thickness gage readings.
- c) Holiday inspection, using a high or low voltage holiday detector.

- d) Surface temperature gauge readings.
- e) Dry film thickness gauge readings using a Tooke gauge.
- f) Surface contamination.

NCDOT may enlist the services of the paint manufacturer's representative to assist the NCDOT Representative in overseeing the preparation of the surfaces and paint application.

Contractor shall have approval of both the NCDOT Representative and the Paint Manufacturer's Representative prior to painting. Painting work, except touch up, shall be accomplished under the supervision of the Paint Manufacturer's Representative who will approve surface preparation, acceptable atmospheric conditions, and coating application. Runs, over spray, roughness and signs of improper applications shall be repaired or recoated at the Contractor's expense.

The Contractor shall prepare surfaces and apply paint products in strict accordance with the manufacturer's instructions and as specified in the Contract Documents. Surfaces shall be prepared for painting in accordance with guidelines from the Steel Structure Painting Council (SSPC) or as called out specifically in the body of this section. Where "other equivalent standards" are permitted by the Specifications, Contractor recommended "other equivalent standards" for surface preparation shall be affirmatively endorsed by the Paint Manufacturer's Representative, in writing, before submittal to the NCDOT Representative for approval. Where the Specifications conflict with the manufacturer's instructions, the manufacturer's instructions shall prevail. Promptly notify the NCDOT Representative when the Contract Documents conflict with the manufacturer's instructions.

Prior to coating application, ensure that all surfaces are dry and free of foreign matter. Surface Preparation and Paint Coating applications are to be in accordance with the Paint Manufacturer's Specifications and using either airless spray or conventional spray equipment. The back sides of angles, edges of structural shapes, and areas that are incapable of being properly covered by using conventional or airless spray equipment shall be hand-brushed to ensure that the minimum dry film thickness is obtained. Deck coating may be applied by roller or other means recommended by the manufacturer.

Dry Film Thickness (DFT), where specified, is the minimum dry film thickness in mils. Where both film thickness and number of coats is specified, both requirements must be fully met. Instruments used to measure film thickness shall have been recently calibrated and shall be routinely re-calibrated if requested by the NCDOT Representative.

Thinning shall not be done unless authorized by the NCDOT Representative. Solvents used for thinning and cleaning shall be in strict accordance with the coating manufacturer's recommendations, and shall be handled, stored, and disposed of in strict accordance with current laws, rules, or regulations, whether local, State, or Federal, pertaining to toxic and/or hazardous waste.

All painting shall be done under conditions of temperature and relative humidity specified by the Paint Manufacturer. Particular attention shall be paid to the temperature and humidity conditions at the time of application. Keep surfaces clean and moisture-free during the coating process and during the curing period. The Contractor shall not paint in wet, windy or high humidity weather unless the work is well protected from such conditions. During inclement weather, provide surface protection (tarpaulins, plastic sheeting, etc.) heaters and dehumidification equipment as necessary to achieve proper surface temperature and dew point spread, per manufacturers' application instructions.

Prior to the application of any follow-on coat, thoroughly clean and build up any bare or lightly covered spots in the previous coat to the required thickness. Dirt, drips, runs, and sags are to be removed prior to follow-on coating application.

The finish coat is to completely obscure the undercoat, and be free of surface imperfections such as dirt, drips, runs, sags, dry spray and other imperfections. The finish coat is to have a smooth and glossy appearance when dry, except for areas requiring otherwise, i.e. Navigation Light screens.

Where any coating has been damaged by welding, burning, or other causes, or other requirements of the Contract Documents, the damaged area shall be prepared for and repainted to the satisfaction of the NCDOT representative. Care shall be taken when preparing surface by blasting or power sanding, ensuring that edges are feathered to make a smooth visual appearance to existing coating and that no rough or sharp edges can be seen between existing and newly applied paint; and no sanding swirls or other marks will remain after the final coat is applied.

Clean affected spaces and surfaces of paint over-spray immediately. Care shall be taken to prevent damage to such items. Decks and equipment in area of painting shall be protected in order to prevent paint over-spray. All over-spray shall be removed upon completion of painting.

The Contractor shall restore all superstructure markings, labels, stencils, and decals precisely as existed when the Contractor took control of the ferry. Paint for stencils and labels shall be compatible with the underlying paint system and shall be approved by the Manufacturer's Representative for the underlying paint system. All car deck, above car deck, and any disturbed valve handles shall be painted in their proper colors:

- Fire Main – Red
- Potable Water – Blue
- Fuel/Oil – Yellow
- Compressed Air – Orange
- Bilge System – Black
- Hydraulics – Purple
- Sea Water – Green
- Sewage – Gray.

All protective covering shall be removed upon completion of final paint coating.

All other work under these Specifications shall be coordinated with this paintwork to ensure a complete and proper coating system, and to prevent damage to "tight" existing coatings, and re- work.

The Contractor shall provide all necessary safety equipment as recommended by the manufacturer and regulatory authorities for the safe handling of each of the products used during this project. The Contractor is cautioned that the paint products may be hazardous during the painting process and the Contractor's employees must be protected accordingly.

### **11.5 Tests, Trials, and Documentation**

None

### **11.6 Payment**

Include all costs involved in this Special Provisions in the various contract bid prices for work involving painting.

## **12.0 HIGH-PRESSURE WATER WASH – HULL BELOW DLWL:**

### **12.1 Description**

This section describes the requirements to clean, by high-pressure water wash, the ferry hull below the design load waterline (DLWL) to prepare the ferry for painting, as detailed in these Special Provisions.

### **12.2 References**

None

### **12.3 Owner Furnished Equipment**

None

### **12.4 Requirements**

The Contractor shall clean the rudders, propellers, struts, and hull to approximately 12" above the DLWL to and including the bottom of the keel, by high-pressure water wash at a minimum pressure of 3000 psi. Remove all marine growth, soft fouling and hard fouling on the ferry hull. Start this wash within four hours of raising the vessel in the dry dock and continue until completed.

The Contractor shall perform a freshwater wash of the subject area using Prep #88 cleaner. Dilute 3 to 1 (1 part #88 / 3 parts water). Allow to stand on surface 10-15 minutes. Fully rinse off all traces with fresh water.

**12.5 Tests, Trials, and Documentation**

None

**12.6 Payment**

The lump sum contract bid price for *Generic Ferry Item (High-Pressure Water Wash – Hull Below DLWL)* shall include all costs associated with high-pressure water wash as detailed in this Special Provisions. No further compensation will be made.

**13.0 HIGH-PRESSURE WATER WASH – HULL ABOVE DLWL:****13.1 Description**

This section describes the requirements to clean, by high-pressure water wash, the ferry hull above the design load waterline (DLWL) to prepare the ferry for painting, as detailed in these Special Provisions.

**13.2 References**

None

**13.3 Owner Furnished Equipment**

None

**13.4 Requirements**

The Contractor shall perform a freshwater wash of the subject area using Prep #88 cleaner. Dilute 3 to 1 (1 part #88 / 3 parts water). Allow to stand on surface 10-15 minutes. Fully rinse off all traces with fresh water. The Contractor shall clean the hull freeboard above the DLWL to the top of the guard plate with a high-pressure water wash at the minimum pressure of 3000 psi.

Pressure wash, as described above, may start at any time, but must precede the blasting and painting called out in these Special Provisions.

**13.5 Tests, Trials, and Documentation**

None

**13.6 Payment**

The lump sum contract bid price for *Generic Ferry Item (High-Pressure Water Wash – Hull Above DLWL)* shall include all costs associated with the solvent and high-pressure water wash detailed in this Special Provisions. No further compensation will be made.

**14.0 HIGH-PRESSURE WATER WASH–SUPERSTRUCTURE:****14.1 Description**

This section describes the requirements to clean, by high-pressure water wash, the ferry exterior superstructure as detailed in these Special Provisions.

**14.2 References**

None

**14.3 Owner Furnished Equipment**

None

**14.4 Requirements**

The Contractor shall clean the entire exterior superstructure between top of the stack and the car deck (not including the car deck itself), including but not limited to pilot house sides, pilothouse roof, pilot house eyebrow, stack, handrails (w/existing paint), curtain plates, exterior machinery casings, house sides, bulwarks, curbs, exterior decks, ladders, stairs, stack, car deck overhead, stanchions, lockers, and rails.

The Contractor shall perform a freshwater wash of the subject area using Prep #88 cleaner. Dilute 3 to 1 (1 part #88 / 3 parts water). Allow to stand on surface 10-15 minutes. Fully rinse off all traces with fresh water. The Contractor shall clean the entire superstructure by a high- pressure water wash at the minimum pressure of 3000 psi.

Pressure wash, as described above, may start at any time, but must precede the blasting and painting called out in these Special Provisions.

The Contractor shall protect all equipment adjacent to and attached to the structures to be washed from damage by solvent and high-pressure water. Such equipment includes, but is not limited to, light fixtures, cables, piping, sprinkler heads, antennas, horns, loudspeakers, cameras, screens, windows, door hardware, elevator equipment, louvers, bells, wire penetrations, and life rings.

**14.5 Tests, Trials, and Documentation**

None

**14.6 Payment**

The lump sum contract bid price for *Generic Ferry Item (High-Pressure Water Wash-Superstructure)* shall include all costs associated with the solvent and high-pressure water wash detailed in this Special Provision. No further compensation will be made.

**15.0 BLASTING AND PAINTING - HULL BELOW DLWL:****15.1 Description**

This section describes the requirements for blasting and painting the ferry hull (underwater body), from the keel to 12" above the design load waterline.

After high-pressure water washing of the hull, as outlined in the "High-Pressure Water Wash – Hull Below DLWL" section, the Contractor shall blast and paint the hull below the DLWL.

**15.2 References**

*15.2.1 "General Painting Instructions" as part of these Special Provisions*

**15.3 Owner Furnished Equipment**

None

**15.4 Requirements**

The Contractor shall blast the hull below the DLWL by abrasive blast to a SSPC-SP-10 "Near-White Blast Cleaning". Contractor shall mechanically or by hand SSPC-SP-11 all areas that are not accessible by blasting.

After surface preparation, dry the area with clean dry compressed air. The Contractor shall assure that the areas to be painted are free of dust, dirt, salt, loose paint, moisture, and other contaminants before painting.

Anti-corrosive paint at the perimeter of the blasted areas shall be feathered or otherwise made tight to eliminate paint failure points and present a clean mechanically etched surface for a secure bond with new Primer applied to the blasted surfaces. Coat all bare metal areas the same day they are exposed by blasting. Apply anti-corrosive paint by conventional industrial airless spray or compressed air spray equipment, contractor may utilize brush application for small touch up jobs.

The Contractor shall confirm the Manufacturer's minimum and maximum "dry to self-re-coat" criteria and apply the second anti-corrosive coat inside this window. The anti-corrosive coating system in these selected areas shall be:

- Primer Coat 1 - Epoxy: Amercoat 370 light buff applied @ 4.0-6.0 Mils DFT
- Primer Coat 2 - Epoxy: Amercoat 370 oxide red applied @ 4.0-6.0 Mils DFT
- Stripe Coat - Epoxy: Amercoat 370 pearl gray applied @ 4.0-6.0 Mils DFT
- Third Coat - Antifouling: ABC #3 black applied @ 4.0-6.0 Mils DFT
- Finish Coat – Antifouling: ABC #3 red applied @ 4.0-6.0 Mils DFT



**15.5 Tests, Trials, and Documentation**

None

**15.6 Payment**

The lump sum contract bid price for *Generic Ferry Item (Blast & Paint – Hull Below the DLWL)* shall include all costs for blasting and painting to the hull below DLWL. Lump Sum prices shall be the total compensation for all labor, equipment, tools, and materials to accomplish the work detailed in this Special Provisions. No further compensation will be made.

**16.0 BLASTING AND PAINTING – HULL ABOVE DLWL:****16.1 Description**

After high-pressure water washing of the hull, as outlined in the "High-Pressure Water Wash – Hull Above DLWL" section, the Contractor shall blast and paint the hull above the DLWL.

**16.2 References**

*16.2.1 "General Painting Instructions" as part of these Special Provisions*

**16.3 Owner Furnished Equipment**

None

**16.4 Requirements**

The Contractor shall blast the hull above the DLWL by abrasive blast to a SSPC-SP-10 "Near-White Blast Cleaning". Contractor shall mechanically or by hand SSPC-SP-11 all areas that are not accessible by blasting.

After surface preparation, dry the area with clean dry compressed air. The Contractor shall assure that the areas to be painted are free of dust, dirt, salt, loose paint, moisture, and other contaminants before painting.

Anti-corrosive paint at the perimeter of the blasted areas shall be feathered or otherwise made tight to eliminate paint failure points and present a clean mechanically etched surface for a secure bond with new Primer applied to the blasted surfaces. Coat all bare metal areas the same day they are exposed by blasting. Apply anti-corrosive paint by conventional industrial airless spray or compressed air spray equipment contractor may utilize brush application for small touch up jobs.

The Contractor shall confirm the Manufacturer's minimum and maximum "dry to self-re-coat" criteria and apply the second anti-corrosive coat inside this window.

The anti-corrosive coating system in these selected areas shall be:

- Primer Coat 1 - Epoxy: Amercoat 370 light buff applied @ 4.0-6.0 Mils DFT
- Primer Coat 2 - Epoxy: Amercoat 370 oxide red applied @ 4.0-6.0 Mils DFT
- Stripe Coat - Epoxy: Amercoat 370 pearl gray applied @ 4.0-6.0 Mils DFT
- Third Coat - Epoxy: Amercoat 370 black applied @ 4.0-6.0 Mils DFT
- Finish Coat - Polysiloxane: PSX One black applied @ 2.0-3.0 Mils DFT

Area in way of main engine and generator exhaust piping, including exposed piping and surrounding doubler/wear plate, to be coated with the following system.

- Primer Coat 1 - HI TEMP 1027 gray applied @ 7.0-8.0 Mils DFT
- Topcoat 1 - HI TEMP 500 black applied @ 1.0-2.0 Mils DFT

The paint specified in this Special Provision item shall be applied to the selected areas in addition to the paint detailed in the Special Provision item "Painting – Hull Above DLWL".

#### **16.5 Tests, Trials, and Documentation**

None

#### **16.6 Payment**

The lump sum contract bid price for *Generic Ferry Item (Blast & Paint – Hull Above DLWL)* shall include all costs for blasting and painting to the hull above DLWL. Lump Sum prices shall be the total compensation for all labor, equipment, tools and materials to accomplish the work detailed in this Special Provisions. No further compensation will be made.

**17.0 BLASTING AND PAINTING – SUPERSTRUCTURE:****17.1 Description**

This section describes the requirements for preparing and painting the following areas and installations including but not limited to the following:

- a) Superstructure, including Curtain plates and Bulwark, Rescue Boat Davit, Masts, Car Deck Overhang.
- b) Doors and door frames
- c) Rails and stanchions
- d) Pilot House Visor
- e) Ladders and Stairs
- f) Anchor shall be removed blasted and painted and fitted with new shackles.

Paint for this work shall be selected, provided and applied per these Special Provisions and the directives of the Paint Manufacturer's Representative.

**17.2 References**

*17.2.1 "General Painting Instructions" as part of these Special Provisions*

**17.3 Owner Furnished Equipment**

None

**17.4 Requirements**

The Contractor shall blast the Superstructure by abrasive blast to a SSPC-SP-10 "Near-White Blast Cleaning". Contractor shall mechanically or by hand SSPC-SP-11 all areas that are not accessible by blasting. Superstructure includes but not limited to:

- Curtain plates and bulwarks
- Rescue boat davit
- Masts
- Inboard and outboard faces.
- Pilot House Shade Structure, Visor & Top
- Doors and Door Frames

- Stairs and Ladders
- Anchor and Anchor Chain box

In all the above items, the structure attached to the stated and other appropriate areas shall be included with the item. Superstructure painting does not include decks and curbs.

After surface preparation, dry the area with clean dry compressed air. The Contractor shall assure that the areas to be painted are free of dust, dirt, salt, loose paint, moisture, and other contaminants before painting.

All equipment and components shall be protected from water, blasting grit and overspray as detailed in "Painting – General". The Contractor shall inspect all areas of the vessel to be painted to assess coating condition and surface areas prior to finalizing the bid price.

Paint at the perimeter of the blasted areas shall be feathered or otherwise made tight to eliminate paint failure points and present a clean mechanically etched surface for a secure bond with the new Primer applied to the blasted surfaces. After surface preparation, dry the area with clean dry compressed air. Before coating application, the areas shall be free of all dust, debris, salt, moisture, and other contaminants which may have been introduced following the high-pressure water wash. The surface preparation and cleaning shall be inspected and approved by the Paint Manufacturer's Representative before the final coats are applied. Paint shall be applied by conventional industrial airless spray or compressed air spray equipment in accordance with the paint manufacturer's recommendations.

The anchor and anchor chain to be removed. Anchor and anchor chain box to be blasted and painted. Anchor and anchor chain to be reassembled with new hardware.

The coating system for bulkheads, inboard and outboard faces, and the car deck overhead shall be:

- Primer Coat 1 - Epoxy: Amercoat 370 light buff applied @ 4.0-6.0 Mils DFT
- Primer Coat 2 - Epoxy: Amercoat 370 oxide red applied @ 4.0-6.0 Mils DFT
- Stripe Coat - Epoxy: Amercoat 370 pearl gray applied @ 4.0-6.0 Mils DFT
- Third Coat - Epoxy: Amercoat 370 white applied @ 4.0-6.0 Mils DFT
- Finish Coat - Polysiloxane: PSX One white applied @ 2.0-3.0 Mils DFT

After washing, blasting and cleaning; Contractor shall apply a fresh finish coat over the entire super structure. New top coat shall match exactly the existing paint schematic on the vessel. Contractor shall remove all existing signage, outdoor

seating, and protect all windows, equipment and other sensitive areas from overspray prior to applying the top coat. Once top coat is fully applied and dried, Contractor shall restore all signage to its original condition.

The work outlined in this Special Provision item shall be coordinated with the other Special Provision items.

### **17.5 Tests, Trials, and Documentation**

None

### **17.6 Payment**

The lump sum contract bid price for *Generic Ferry Item (Blast & Paint – Superstructure)* shall include all costs for blasting and painting to the superstructure, Lump Sum prices shall be the total compensation for all labor equipment, tools, and materials to accomplish the work detailed in this Special Provisions. No further compensation will be made.

## **18.0 BLASTING AND PAINTING – ALL DECKS:**

### **18.1 Description**

This section describes the work required to paint and blast all the exterior decks of the vessel.

### **18.2 References**

*18.2.1 "General Painting Instructions" as part of these Special Provisions*

### **18.3 Owner Furnished Equipment**

None

### **18.4 Requirements**

The Contractor shall blast the Main Deck and superstructure decks by abrasive blast to a SSPC-SP-10 "Near-White Blast Cleaning". Contractor shall mechanically or by hand SSPC-SP-11 all areas that are not accessible by blasting. This includes the curb – structures and passenger stairs on the main deck.

The contractor shall also remove all outdoor seating and binocular viewer prior to painting and blasting all the deck and reinstall after completion of painting. No further compensation will be made for interference removal or reinstallation.

On all decks, between the third coat and finish coat, Contractor shall apply by broadcast method non-skid of a quantity and profile suitable for wet or icy conditions. **CHECK POINT:** NCDOT representatives shall witness the application of the non-skid process.

After all decks have received a fresh top coat; Contractor shall repaint all existing lines and safety markings on the car deck per Reference 18.2.1. All line paint repair shall be accomplished after the completion of non-skid repair and any other painting

work to take place on the super structure. Line paint should be applied in accordance with the paint manufacturer's instructions. If line paint is damaged or obscured by other work items prior to delivery of vessel, Contractor shall re-paint line paint and safety markings at no additional expense to NCDOT.

All Car Deck and above Car Deck valve handles shall be painted in their proper colors, as applicable and detailed in "Painting-General"

All paint shall be applied in accordance with the paint manufacturer's directions. Dry Film Thickness (DFT), where specified, is the minimum dry film thickness in mils.

The coating system for Car Deck and other exposed decks shall be:

- Primer Coat 1 - Epoxy: Amercoat 370 oxide red applied @ 4.0-6.0 Mils DFT
- Stripe Coat - Epoxy: Amercoat 370 light buff applied @ 4.0-6.0 Mils DFT
- Third Coat - Epoxy: Amercoat 370 pearl gray applied @ 4.0-6.0 Mils DFT
- Non-Skid: GreenGrit 10/40 crushed glass – hand broadcast
- Finish Coat - Epoxy: Amercoat 229T gray applied @ 2.0-4.0 Mils DFT

Line paint shall be applied to restore the vessel's car and safety lines to their original condition. Line paint schedule is as follows:

- Line Paint: One coat Amercoat 229T yellow applied @ 2.0-4.0 Mils DFT

### **18.5 Tests, Trials, and Documentation**

None

### **18.6 Payment**

The lump sum contract bid price for *Generic Ferry Item (Blast & Paint – All Decks)* shall include all costs for blasting and painting all the decks. Lump Sum prices shall be the total compensation for all labor, equipment, tools and materials to accomplish the work detailed in this Special Provisions, including testing and all time necessary in dry dock to complete the work involved, No further compensation will be made.

**19.0 RUDDER AND RUDDER STOCK REMOVALS AND INSPECTIONS:****19.1 Description**

This section describes the requirements to remove, inspect, line bore, and re-install both rudders, rudder stocks (2 total), rudder stock bearings, and steering gear systems (not including the hydraulic, feedback, or rudder control systems).

**19.2 References**

*19.2.1 DWG NC-220-0012 - Rudder & Rudder Ports*

**19.3 Owner Furnished Equipment**

NCDOT furnished rudder stocks and rudder stock nuts. All other materials shall be contractor furnished.

**19.4 Requirements**

While in dry dock, the Contractor shall first exactly determine and mark positioning of the tiller arms when the rudder is at zero angle position. A durable mark parallel to rudder centerline shall be stamped on the tiller arm or upper end of the rudder stock and adjoining structure.

Alternatively, a fixed rigid removable alignment indicator with a mark at zero rudder angle shall be installed from adjoining structure. The zero-alignment indicator and the reference mark on the tiller or upper end of the rudder stock shall allow accurate lineup and viewing for determination as to when the rudder is in its zero-angle position. The alignment indicator shall be bolted in place and removable to facilitate rudder or tiller removal. Removal and reinstallation of the alignment indicator shall not cause loss of the zero-angle reference. The alignment indicator shall be rigid enough not to be bent or loss of zero angle reference from knocks from normal maintenance of the rudder and steering gear. Where new steel is installed or existing paint was damaged by the work performed under this requirement, the areas shall be prepared for and painted to the satisfaction of the NCDOT Representative.

**19.4.1 REMOVE AND INSPECT RUDDER, RUDDER STOCK, AND RUDDER TUBE**

- a) Unbolt rudders from the rudder stock palm flange. Lower and block up both rudders on the dry dock floor with the palms accessible for inspection. Clean each rudder, exterior rudder stock, flange and rudder stiffeners. Inspect rudder palm and stiffener welds for cracks/wear. Inspect anodes for wastage. Check rudder blade for any deformations, bends, or wear. Report findings to NCDOT representatives.
- b) Unbolt and disconnect all steering gear, angle indicator transmitters, and linkages from the tillers and retain for reuse. Remove the rudder tube seals and stuffing box. Thoroughly clean all surfaces in the tillers.
- c) Measure and record initial upper carrier bearing clearances and lower bushing clearances. Submit findings to NCDOT withing 24hrs of taking readings.

- d) Set aside the parts and protect them for re-installation or return to NCDOT if being replaced. Mark the matched rudders, tillers and rudder stocks, indexed to their corresponding ends of the ferry.
- e) Suspend, or otherwise support both rudders stock then, remove the lock plates, thrust washers, bearing keepers, and separate the tillers from the rudder stocks.
- f) Lower the rudder stocks from the ship and transport to an inside machine shop for inspection and measurement.
- g) Protect the carrier bearings with temporary cover.
- h) Using telescoping bore gauges, inspect bearings and bushings in rudder tube. Measurements are to be taken at four quadrants, in three separate locations along the length of the bearings and bushings (both ends and the middle). Provide a written report with photos on the condition of the vessels' rudder stock bearings to the NCDOT Representative.
- i) Contractor shall remove the lower bushing and upper carrier bearing and thoroughly descale the rudder tubes.
- j) Using telescoping bore gauges Rudder Tube Measurements are to be taken at four quadrants every 1' along the rudder tube. Provide a written report with photos on the condition of the vessels' rudder stock tube to the NCDOT Representative
- k) Inspect and measure the wear down on rudder stock at all bearing surface wear down areas. All wear down readings to be taken at three locations along the length of each journal or bearing, and at four circumferential quadrants of each journal, bearing, or bushing.
- l) Thoroughly clean both rudder stocks, mount in a lathe and check by dial indicator or laser methods, for straightness (TIR). Inspect palm welds for cracks. Contractor shall provide a written report measurements of the conditions of the rudder stocks, rudders, and carrier bearing to NCDOT withing 24hours of taking measurements.
- m) Tiller arm connection points to be inspected for wear, and renewed if necessary, as determined by NCDOT representative.
- n) Rudder blade to be repaired, if needed. After repair, rudder blade to be blasted and painted in accordance with Paint section of these specs. Anodes to be renewed after painting. Anodes to be paid under Special Provision "Zinc Anode".

**NOTE:** If the ship's structure is to be used to handle the rudder stocks, the Contractor shall demonstrate to the NCDOT Representative that the structure will support the load. The Contractor may temporarily stiffen the structure to handle the rudders stocks, at the Contractor's discretion and risk, but shall restore the structure and coatings to the as found condition, or better, upon completion of this work item.



**CHECK POINT – REVIEW FINDINGS WITH NCDOT.** NCDOT Representative shall review rudder inspection report. NCDOT Representative shall either approve the existing rudder and rudder stock for reinstallation on the vessel, or order that a new rudder or rudder stock be installed. If a new rudder stock is required, it shall be supplied by NCDOT.

**19.4.2 LINE BORE RUDDER TUBES**

- a) Contractor will line bore rudder tubes, in way of lower bushing, until at least 85% of tube is skimmed down to clean metal, as approved by NCDOT, to ensure a good seat with the new lower bushing.
- b) After line boring is complete, contractor will measure again and document the new rudder tube inner diameters with telescoping bore gauge provided report to NCDOT representative.

**CHECKPOINT:** NCDOT Representative to confirm sufficient clean metal prior to taking measurements and installing new bushings.

- c) All lower bushing and the upper carrier bearings to be replaced with new. Rudder lower bushing shall be fitted with Duramax Dura Blue rudder bushing material and installed in accordance with manufacturer's instructions based on newly bored rudder tube inner diameter measurements, ensuring an interference fit as required by the Manufacturer.

**19.4.3 REINSTALL RUDDER, RUDDER STOCK**

- a) **NOTE: Contractor shall not reinstall existing rudder without express, written direction to do so by the NCDOT Representative.**
- b) Reassemble the rudder stocks and tillers to the steering gear in the reverse order of disassembly. Renew the lock plate bolts with SAE Grade 8. Tack weld lock plate.
- c) Lubricate rudder carrier bearings and the carrier, by hand packing, before stock installation. Remove the existing grease fittings and replace them all with new stainless-steel fittings. Renew the upper rudder stock O-rings seals with the same type and size as removed. Secure all loose gland studs and double-nut the studs or use Nylock nuts after installation and adjusting of new O-rings seals. Check and lubricate the bearings again, through installed fittings and cavities prior to trials. Cycle the rudders from side to side and lubricate until grease extrudes from the bearing vents.
- d) Measure and record final upper carrier bearing clearances and lower bushing clearances. Submit findings to NCDOT withing 24hrs of taking readings.
- e) Replace Rudder Stock seal with new contractor furnished seal.

- f) Hang the rudders and make them up to the rudder stocks in the reverse order of disassembly. Renew all rudder palm bolts with SAE Grade 5 fitted fasteners. Tack weld palm nuts to the bolt. Tack weld straps to secure palm connection.
- g) Re-install any rope guards removed with new Contractor furnished rope guards.

### **19.5 Tests, Trials, and Documentation**

Contractor to provide all written reports as outlined in the "Requirements" section of this work item and shall provide all necessary reports to the NCDOT Representative.

Provide NCDOT Representative with target bolt torque for rudder palm bolts, prior to tightening. Measure and report the torque applied to the rudder palm bolts to the NCDOT Representative.

Contractor shall perform all tests and inspections as outlined in the "Requirements" section of this work item and shall provide all necessary reports to the NCDOT Representative and USCG Inspector.

### **19.6 Payment**

The lump sum contract bid price for *Generic Ferry Item (Rudder Removals and Inspections)* shall be the total compensation for all labor, equipment, tools, and materials to accomplish the work detailed in this Special Provisions for both rudders, including testing and trials and all time necessary in dry dock to complete the work involved. No further compensation will be made.

## **20.0 PROPELLER AND TAILSHAFT INSPECTION:**

### **20.1 Description**

This section describes the requirements to remove, inspect, and re-install both propellers and tailshafts.

### **20.2 References**

*20.2.1 DWG NC-220-0011 Shafting, Bearings, & Stern Tubes*

*20.2.2 DWG NC-220-0062 Stern Tube Circulating Diagram (Shaft Cooling)*

### **20.3 Owner Furnished Equipment**

NCDOT furnished tail shaft and propellers, if needed as determined by NCDOT representative. All other materials shall be contractor furnished.

### **20.4 Requirements**

This work must be coordinated with the rudder and rudder stock removal. While in dry dock, the Contractor shall first mark Port and STBD propellers to ensure correct location on reinstall. Remove and inspect propellers for damage. Contractor to provide report on propeller measurements. Repairs may be covered by supplemental agreement. If major damage is found, NCDOT representative shall make decision if new owner furnished propellers will be installed.

Tailshaft wear down readings to be taken at all accessible locations. Written reports with findings will be submitted to NCDOT representative withing 24hours of collecting readings. Tailshafts to be removed, cleaned, and inspected. Stern Tube to be cleaned and inspected. All to be reassembled.

Where new steel is installed or existing paint was damaged by the work performed under this requirement, the areas shall be prepared for and painted to the satisfaction of the NCDOT Representative.

#### **20.4.1 REMOVE AND INSPECT PROPELLER, TAILSHAFT, STERN TUBE, AND BEARINGS**

- a) Remove both Propellers. Clean and inspect for cracks, chips, dings, bends, twists, and other damages. Written report of condition to be submitted to NCDOT representative with 24hrs of removal.
- b) Remove Stern Shaft Seal. **NOTE:** Stern shaft seal is Wartsilla TM-PSE-04-1 mechanical Shaft Seal.
- c) Measure and record bearing clearance readings between Aft and Forward Stern Tube Bearings and tail shaft, and split roller bearing and tailshaft. Submit findings to NCDOT representative.
- d) Remove both Tailshafts.
- e) Using telescoping bore gauges, inspect all bearings in stern tube and split roller bearing in engine room. Measurements are to be taken at four quadrants, in three separate locations along the length of the bearings (both ends and the middle). Provide a written report on the condition of the vessels' tail shaft bearings to the NCDOT Representative.
- f) Contractor shall remove the FWD and AFT cutlass bearings thoroughly descale the stern tubes.
- g) Using telescoping bore gauges inspect stern tubes. Measurements are to be taken at four quadrants every 3' along the stern tube and every 2" in way of cutlass bearings. Provide a written report on the condition of the vessels' stern tube to the NCDOT Representative
- h) Inspect and measure the wear down on tailshaft at all bearing surface/sleeve wear down areas. All wear down readings to be taken at three locations along the length of each journal or bearing, and at four circumferential quadrants of each journal or bearing.
- i) Thoroughly clean both tailshafts, mount in a lathe and check by dial indicator or laser methods, for straightness (TIR). Inspect and measure sleeves for wear. Contractor shall provide a written report measurements of the conditions of the tailshafts, sleeves, and bearings to NCDOT withing 24hours of taking measurements.

**NOTE:** If the ship's structure is to be used to handle the tailshafts, the Contractor shall demonstrate to the NCDOT Representative that the structure will support the load. The Contractor may temporarily stiffen the structure to handle the tailshafts, at the Contractor's discretion and risk, but shall restore the structure and coatings to the as found condition, or better, upon completion of this work item.

**CHECK POINT – REVIEW FINDINGS WITH NCDOT.** NCDOT Representative shall review tailshaft and stern tube inspection report. NCDOT Representative shall either approve the existing tailshaft for reinstallation on the vessel, or order that a new tailshaft be installed. If a new tailshaft is required, it shall be supplied by NCDOT. If new tailshafts are installed, then a blue fit with propellers will be required to the USCG satisfaction. **Contractor shall not reinstall existing tailshaft without express, written direction to do so by the NCDOT Representative.**

#### **20.4.2 TAILSHAFT AND PROPELLERS REINSTALL**

- a) Contractor to supply and install new Forward Stern Tube Cutlass Bearing, new Aft Stern Tube Cutlass Bearing, and new Line Shaft Split Roller Pillow Block Bearing. **Note:** Cutlass bearings flange bolt patterns to be drilled to match existing, including tapping jacking bolt locations for future cutlass bearing removal.
- b) Reassemble the tailshaft, new mechanical seals, rope guards, and keeper tabs in the reverse order of disassembly. All hardware to be replaced with new contractor supplied as called out in the referenced drawing.
- c) Measure and record final bearing clearances. Submit findings to NCDOT within 24hrs of taking readings.
- d) Replace tailshaft seals with new contractor furnished Wartsilla TM-PSE-04-1 mechanical Shaft Seals as called out in the referenced drawing. Contractor to return old mechanical seal to NCDOT.
- e) Reinstall propellers. If new tailshafts are used, propellers will be required to be blue fit to the USCG satisfaction. Contractor to cover costs for up to four fits on each tailshaft. If any additional fit ups needed to be covered by Supplemental Agreement.

#### **20.5 Tests, Trials, and Documentation**

Contractor shall perform all tests and inspections as outlined in the "Requirements" section of this work item and shall provide all necessary reports to the NCDOT Representative and USCG Inspector.

#### **20.6 Payment**

The lump sum contract bid price for *Generic Ferry Item (Propeller and Tailshaft Inspections)* shall be the total compensation for all labor, equipment, tools and materials to accomplish the work detailed in this Special Provisions for both propellers, including testing and trials and all time necessary in dry dock to complete the work involved. No further compensation will be made.

## **21.0 ENGINE WATER COOLING SYSTEM INSPECTION AND MAINTENANCE:**

### **21.1 Description**

This section describes the requirements to open, clean, inspect, repair, modify, seal, renew, test and reassemble as indicated, the vessel's sea water cooling system, including but not limited to:

- Removable pipe spool pieces
- Keel Coolers

Contractor shall take into consideration work associated with "Sea Chest, Strainers and Valves" of this section and closely coordinate this work.

Attention is made to the Contractor to note the valve Lockout/Tagout procedures described in "Take Control and Dry Dock the [M/V Frisco]."

### **21.2 References**

*21.2.1 DWG NC-220-1044B Generator Engine Cooling Piping*

*21.2.2 DWG NC-220-1044C Main Engine Cooling Piping*

*21.2.3 D1000U-5 – Gridcooler Installation Dimensions*

*21.2.4 D1400U-5 – Gridcooler Installation Dimensions*

*21.2.5 GRIDCOOLER Keel Cooler Installation and Maintenance Manual*

### **21.3 Owner Furnished Equipment**

Replacement Keel Cooler, if needed.

### **21.4 Requirements**

Drain and dispose of FW cooling fluid from all engine installations. Approximately 275 gallons. Unbolt and remove keel coolers from the hull. Thoroughly scrape clean and remove all mussels, clams, and other bio-fouling organisms and residue from all external keel cooler surfaces. Perform radiator flush with Muriatic Acid, according to manufacturer's recommendation to clean the interior of the Keelcooler. After flush, neutralize acid with a Baking Soda flush, and then freshwater flush. Using clean fresh water, hydro test the vessel's keel coolers to 35 psi, being careful not to exceed manufacturers recommendation of no more than 35 psi. A thorough inspection for leaks to be performed while at pressure.

### **NCDOT Representative is also to witness the hydro test of all keelcoolers.**

Two (2) each main engine keel coolers, Fernstrum model D1445U.

Two (2) each main engine keel coolers, Fernstrum model D1087U

Two (2) each generator engine keel coolers, Fernstrum model D890U

Contractor is to provide NCDOT representative a copy of the keel cooler hydro test results, including pressure tested at and if any leaks were identified, along with recommendations on the day of the tests. If hydro test reveals any keel cooler needs replacement or repair, NCDOT will supply replacement keel cooler from NCDOT inventory, within two (2) working days of receipt of hydro test report. NCDOT is responsible for all shipping arrangements and costs associated with owner furnished keel coolers.

Contractor shall renew all keel cooler anodes, bonding straps, gaskets, and fasteners. Items a) through e) below are included in this work scope:

- a) Renew all bolt-on Fernstrum keel cooler zinc anodes.
- b) Renew all keel cooler zincs. Zinc anode renewal shall be done as described in the work item "Zinc Anode Replacement." The price of the replacement of keel cooler anodes shall be included in that bid item.
- c) Renew all keel cooler bonding straps. Bonding straps shall be 1/8" diameter stainless steel cable with crimped eyes on each end. Additionally, Contractor shall renew 3/8" stainless steel studs and nuts on hull for bonding connection.

#### **CHECK POINT**

NCDOT Representative is to inspect and approve installation of all grounding straps immediately following completion of their installation and during the final walk around prior to undocking the vessel. Within 24 hours of completion of this task, Contractor is to schedule NCDOT inspection of the keel cooler bonding straps.

- a) Re-install coolers with new gaskets appropriate for the intended service.

#### **CHECK POINT**

Prior to purchase and installation of new gaskets, Contractor is to provide NCDOT Representative with cut sheets of proposed gaskets for approval.

- a) Refill Generator cooling systems with mixture of demineralized water and NALCOOL 2000, mixed to manufacturer's instructions (typically 1:32 for concentrate). Approximately 75 of total liquid required for both Generator systems
- b) Refill Main Engine cooling systems with Caterpillar Extended Life Coolant (ELC). Approximately 200 gallons are required for both main engines.

#### **CHECK POINT**

After fit up of keel coolers but prior to vessel launch, Contractor shall pressure test all keel coolers and FW piping up to the machinery connections. NCDOT Representative shall be present for these tests. Any leaks discovered during this test shall be repaired by the Contractor at no additional expense to the NCDOT.

**21.5 Tests, Trials, and Documentation**

Upon completion of renewals, repairs, and pressure tests, Contractor is to electrically test the isolation (should be "0") between keel coolers and hull, to ensure that they are electrically bonded. Contractor to supply NCDOT Representative with Hydro Test and Condition reports.

**CHECK POINT**

NCDOT Representative is to witness the bonding test for all keel coolers. Testing shall be to the satisfaction of the NCDOT Representative.

**21.6 Payment**

Include all costs associated with repairs and modifications to the various items outlined in this Special Provision in the lump sum contract price for *Generic Ferry Item (Engine Water Cooling System Inspection and Maintenance)*. No further compensation will be made.

**22.0 SPOT PREP AND PAINT VOIDS, TANK ROOMS, STEERING COMPARTMENT, AND ENGINE ROOM BILGES:**

**22.1 Description**

This section describes the requirement to prepare and paint location in the various bilge areas.

**22.2 References**

*22.2.1 DWG NC-220-1066 – Engine Room & MSD Deck Plates*

**22.3 Owner Furnished Equipment**

None

**22.4 Requirements**

The NCDOT Representative and Contractor will identify locations in the bilge areas to be addressed up to 4000 square feet. Locations include: (NOTE extra SF include for additional prep and paint as needed)

<u>Space</u>	<u>Area (Ft^2)</u>
Forepeak	100
Void 1	310
Void 2	500
Void 3	590
Void 4	545
Engine Room	840
Void 5	410
Steering Compt.	250

**Total 3,545 + 12% = 4,000.0ft^2**

Contractor shall mechanically or by hand surface prep, and paint to correct color, refer to Section 11 “Painting-General Special Provisions”.

Paint schedule for Voids Bilges shall be as follows:

- Primer Coat 1 - Epoxy: Amercoat 370 oxide red applied @ 4.0-6.0 Mils DFT
- Finish Coat - Epoxy: Amercoat 370 Off White applied @ 2.0-4.0 Mils DFT

Paint schedule for Engine Room Bilges shall be as follows:

- Primer Coat 1 - Epoxy: Amercoat 370 Off White applied @ 4.0-6.0 Mils DFT
- Finish Coat - Epoxy: Amercoat 370 Red Oxide applied @ 2.0-4.0 Mils DFT

### **22.5 Test, Trials, and Documentation**

Provide sketch detailing dimensions and locations for areas worked in each space.

### **22.6 Payment**

The contract unit bid price per square foot (SF) for *Generic Miscellaneous Item (Spot Prep and Paint Voids, Tank Rooms, Steering Compartment, and Engine Room Bilges)* shall be the total compensation for removal and replacement of all deck plates, all labor, equipment, tools, and new materials to accomplish the work detailed in this Special Provisions, including testing and trials. Quantities indicated on the bid proposal are estimates and arbitrarily assigned for the purpose of developing a common proposal for all bidders and for that purpose only. No further compensation will be made.

## **23.0 RESCUE BOAT DAVIT – INSPECTION AND RESTORATION & RESCUE BOAT GATE REPAIR:**

### **23.1 Description**

Rescue Boat Davit to be inspected, cleaned, painted, repaired, and tested. The Contractor shall perform a weight test with a satisfactory result. Repair Rescue Gate keeper pins, preserve and satisfactory operation of gate.

### **23.2 Owner Furnished Equipment**

Davit Cable Wire Rope  
Thern Winch – Model 4WP2H if needed as determined by NCDOT representative.

### **23.3 References**

- 23.3.1 NC-220-0036 – Bulwark & Details*
- 23.3.2 NC-220-0085– Hatteras Class Ferry Std. 1500# Cap. Davit*
- 23.3.3 4WP2D Series Thern Owner’s Manual*
- 23.3.4 Tech Data – Thern Series 4WP2D*



### 23.4 Requirements

**NOTE:** Before the Contractor begins work on the Davit, Contractor will coordinate with NCDOT to remove the rescue boat. The rescue boat will be refurbished by NCDOT and returned to the Contractor. Contractor will re-install returned rescue boat after all work in this technical specification and all painting work is complete.

The contractor shall inspect davit, cable, winch, brakes, and sheeves and provide a condition found report to NCDOT Representative. Inspection shall include pedestal/foundation frame, column, slewing gear, davit arm, sheaves, winch, brakes, electrical systems, hydraulic systems, wire rope, hook, lashing and boat chocks.

Contractor shall remove old wire rope. Contractor shall clean, repair, and prep for paint, and paint the Davit, Column, and Foundation. Painting requirements are covered under specification "Blasting and Painting – Superstructure" and "Painting – General". The sheeves shall be opened, cleaned, inspected, re-bushed by the contractor and reinstalled. All grease fittings, lines, and ports to be cleaned and renewed. **CHECKPOINT**

The winch motor and brakes shall be inspected and replaced if necessary. If replacement is needed, NCDOT will provide a complete winch and brake system. Minor winch/brake repairs may be covered under supplemental agreement.

Contractor to replace Davit cable, check proper operation of Thern Winch and Davit movement. Contractor to perform slewing and lowering test under 110% of SWL. SWL is 1,500 lbs. Test to be completed with 1,650 lbs. Certified test results to be provided to NCDOT Representative. **CHECKPOINT**

After inspection and restoration is completed, contractor shall protect Davit assembly from overspray.

Contractor shall also inspect and repair rescue boat gate and rescue boat gate keeper pins to allow proper, safe, gate operation. **CHECKPOINT**

### 23.5 Tests, Trials, and Documentation:

Contractor shall ensure proper operation of 1500# Capacity Rescue Boat Davit and Rescue Gate with NCDOT representative present. Contractor shall load test davit slewing and lowering to 110% SWL in presence of NCDOT representative and USCG and provide certified results of load test.

### 23.6 Payment

The lump sum contract bid price for *Generic Miscellaneous Item (Rescue Boat Davit- Inspection, Restoration, and Rescue Gate Repair)* shall be the total compensation for all labor, equipment, tools, and materials to accomplish the work detailed in this Special Provisions, including inspecting, restoring, repairing, and testing and trials. No further compensation will be made.

**24.0 RENEW WINDOWS GASKETS:****24.1 Description**

This section describes the requirement to remove and renew all non-bolted windows and gaskets. Including the Passenger Lounge, Crew Deck and Wheelhouse.

**24.2 References**

*24.2.1 DWG NC-220-0056 – Door, Window, Hardware Schedule*

**24.3 Owner Furnished Equipment**

None

**24.4 Requirements**

The Contractor shall remove all non-bolted windows and gaskets. (Bolted windows do not need to be removed). The Contractor shall clean, weld out and renew the metal around the existing windows to prevent further leaking.

Contractor shall budget to replace up to 5 sq ft of steel under this line item. Any steel work beyond 5 sq ft is to be covered under a supplemental agreement.

Passenger lounge windows to be tinted to 25% with UV protection. Once accomplished the contractor shall use the existing windows and reinstall with new gaskets and new stainless-steel hardware and hurricane clips. Fit all Wheelhouse windows with roll-up polyester film window shades with smoke tint and reflective coating. Provide metal clips at bottom of windows for shade restraint.

**NOTE:** Care shall be taken to prevent any outside elements from entering the areas while work is being performed. This work shall be accomplished prior to or after blasting but not in conjunction with blasting.

Contractor shall mechanically or by hand surface prep, and paint to correct color as the superstructure, in accordance with Section 11 “Painting-General Special Provisions”.

**24.5 Test, Trials, and Documentation**

None

**24.6 Payment**

The Lump sum contract bid price for *Generic Miscellaneous Item (Renew Window Gaskets)* shall be the total compensation for removal and replacement of all window gaskets, welding, labor, equipment, tools and new materials to accomplish the work detailed in this Special Provisions, including testing and trials. No further compensation will be made.

## **25.0 HVAC MODIFICATIONS:**

### **25.1 Description**

Remove AC Chill Water system and associated piping, pumps, electrical, and crop and insert all penetrations. Install new mini-split heat pumps and evaporators.

### **25.2 References**

*25.2.1 DWG NC-220-0020 Elementary Wiring Diagram Rev 12*

*25.2.2 DWG NC-220-1048 Heating & Air Conditioning Rev C*

*25.2.3 DWG NC-220-1048 Heating and Air Conditioning Rev E*

### **25.3 Owner Furnished Equipment**

NCDOT to supply the following Mini Split Heat Pumps and Fan Units.

- 1x Air Temp GXH 24 (7.0) FMK4DH Multizone Heat Pump
- 1x Air Temp GCH 18 (5.3) FMK4DH Console
- 1x Air Temp GCH 09 (2.6) FMK4DH Console
- 1x Air Temp GXH 36 (10.6) FMK4DH Multizone Heat Pump
- 1x Air Temp GHH 18 (5.3) LUK4DH High Wall
- 1x Air Temp GHH 24 (7.0) LUK4DH High Wall
- 1x Fujitsu AOU15LFF – 15F High Heat 23SR Heat Pump
- 1x Fujitsu AGU 15RLF 20SR HP Floor Mount

Contractor to supply all electrical wires, circuit breakers, copper tubing, hardware, foundations, drain piping, and condensate pumps, and any other equipment and materials needed for the installation.

### **25.4 Requirements**

Remove AC Chill Water system and Associated piping, electrical, and seal all penetrations.

- Chiller Unit to be removed
- Electrical circuits from main switchboard to be made as a spare. Associated wiring to be removed.
- All associated chilled water piping and pumps to be removed.
- All Chill Water Fan Coil Units to be removed.
- Seal all bulkhead penetrations – Crop and Insert
- Install gate valve and blanked flange at all sea chest connections for the old chilled water system raw water inlet.

Install new Owner Furnished Mini-Split Heat Pumps to manufacturers specifications. Fabricate and install all required deck penetrations, electrical cable runs, and coolant lines.

Any joiner and insulation work required is at the Contractors expense. Any joiner or insulation damaged during the installation shall be replaced at no additional cost to NCDOT.

**Pilot House - Panel 2** – Pilot house fan coil units and FWD Passenger lounge air handlers to be removed. Aft and fwd passenger lounge, and pilot house heat strips to be removed.

- Pilot house & FWD passenger lounge air handler circuit to be refit with new 2 pole breaker sized to match the Heat Pump, and re-purposed for Pilot House Heat Pump
- Aft Passenger lounge heat strip to be fitted with new 2 pole breaker sized to match the Heat Pump, and re-purposed for EOS Heat Pump.
- FWD passenger lounge heat strip to be fit with new 2 pole breaker sized to match the Heat Pump, and repurposed for Passenger Lounge Heat Pump
- Any additional heat strips to be removed to be designated as a Spare.

**EOS – Panel 3** – AC Cooling pump circuit to be removed and designated as a Spare. EOS Aux Heat Strip to be removed and designated as a Spare.

**MSD – Panel 4** – EOS air conditioner & air handler to be removed and designated as a Spare. Pilothouse AC unit to be removed and designated as a spare. Passenger Lounge AC unit to be removed and designated as a spare.

Contractor may propose to NCDOT Representative reuse existing electrical wires, coolant copper tubing. NCDOT representative reserves the final right to approve or deny any proposal to reuse existing equipment. All electrical wiring must meet ABS and USCG requirements.

All indoor units to be fitted with contractor furnished condensate pumps. Field fit new drain lines to overboard. Allow for gravity feed when possible. Any exposed condensate pumps or lines to have a cover fabricated to match existing joiner or bulkhead material. Fan Units to be mounted to ensure proper condensate drainage.

Charge systems to manufacturers specifications. Test each system heating and cooling.

NCDOT reserves the right to keep any removed components. NCDOT representative will make decision based on condition after removal. Any items not claimed by NCDOT to be disposed of at the contractor's expense. As provided in Vessel Special Provision “Disposal of Surplus Material”

## **25.5 Test, Trials, and Documentation**

All units to be tested to the satisfaction of NCDOT representatives as soon as work is completed.

## 25.6 Payment

The Lump sum contract bid price for *Generic Miscellaneous Item (HVAC Modifications)* shall be the total compensation for removal and replacement of all Chiller and Heat Pump Systems, welding, labor, equipment, tools and new materials to accomplish the work detailed in this Special Provisions, including testing and trials. No further compensation will be made.

## 26.0 STEEL CROP AND RENEW:

### 26.1 Description

This section describes the requirement to crop and renew steel bulkheads and deck plating and hull plating.

### 26.2 References

- 26.2.1 DWG NC-220-008 Hull Structure
- 26.2.2 DWG NC-220-1010 WT Bulkheads
- 26.2.3 DWG NC-220-0021 Insulation & Fire Boundary Diagram
- 26.2.4 DWG NC-220-1024 Fwd End Bottom and Deck Scantlings
- 26.2.5 DWG NC-220-1025 Fwd End Longitudinal and Transverse Sections
- 26.2.6 DWG NC-220-1026 Aft End Bottom and Deck Scantlings
- 26.2.7 DWG NC-220-1027 Aft End Longitudinal and Transverse Sections
- 26.2.8 DWG NC-220-0032 Lower House Structure
- 26.2.9 DWG NC-220-0033 Upper House Structure
- 26.2.10 DWG NC-220-0036 Bulwarks and Details
- 26.2.11 DWG NC-220-0038 Misc Sections and Details

### 26.3 Owner Furnished Equipment

None

### 26.4 Requirements

Bulkhead - Contractor to crop and renew superstructure bulkhead plating and stiffeners as required up to 75 sqft.

Deck - Contractor to crop and renew deck plating and stiffeners as required up to 25 sqft.

Hull – Contractor to crop and renew hull plating and stiffeners up to 150 sqft.

All disturbed or new steel to be painted in line with applicable “Blast and Paint” requirement. All steel repairs shall be fit and/or scribed as appropriate to existing structure and plating in accordance with Regulatory standards. All welding to be double continuous. Clean tank and surrounding area after all work is complete. Remove and reinstall all interferences as necessary to accomplish all work.

**26.5 Test, Trials, and Documentation**

All fit ups to be called out and inspected by NCDOT representative and USCG prior to welding. All final welds to be called out and inspected by NCDOT representative and USCG.

Provide drawing detailing dimensions and locations of each insert.

**26.6 Payment**

The contract unit bid price per square foot (SF) for *Generic Miscellaneous Item (Crop and Renew Steel – Bulkhead Plate)* shall be the total compensation for removal and replacement of all wasted metal, welding, labor, equipment, tools, and new materials to accomplish the work detailed in this Special Provisions, including testing and trials. No further compensation will be made. If no replacement is required, then no payment can be claimed.

The contract unit bid price per square foot (SF) for *Generic Miscellaneous Item (Crop and Renew Steel – Deck)* shall be the total compensation for removal and replacement of all wasted metal, welding, labor, equipment, tools, and new materials to accomplish the work detailed in this Special Provisions, including testing and trials. No further compensation will be made. If no replacement is required, then no payment can be claimed.

The contract unit bid price per square foot (SF) for *Generic Miscellaneous Item (Crop and Renew Steel – Hull Plate)* shall be the total compensation for removal and replacement of all wasted metal, welding, labor, equipment, tools, and new materials to accomplish the work detailed in this Special Provisions, including testing and trials. No further compensation will be made. If no replacement is required, then no payment can be claimed.

**27.0 CLEAN AND CLEAR ALL DECK DRAINS:****27.1 Description**

This section describes the requirement to clean and clear all deck drains.

**27.2 References**

*27.2.1 DWG NC-220-1058 – Flushing Water Lavatory & Deck Drains*

**27.3 Owner Furnished Equipment**

None

**27.4 Requirements**

The Contractor shall inspect all deck drains on the vessel. They shall remove all interferences and mechanically or by hand clean and clear all debris from the inside of the drain piping to ensure all drains are in working condition. Any drain piping that cannot be cleared to be replaced as determined by NCDOT representative. Any pipe replacement to be covered by Supplemental Agreement.

**27.5 Test, Trials, and Documentation**

Contractor shall prove to NCDOT representatives the drains are in working condition.

**27.6 Payment**

The Lump sum contract price for *Generic Miscellaneous Item (Clean and Clear All Deck Drains)* shall be the total compensation for cleaning, inspecting, and clearing all debris from the deck drains, all labor, equipment, tools, and new materials to accomplish the work detailed in this Special Provisions, including testing and trials. No further compensation will be made.

**STANDARD SPECIAL PROVISION****AVAILABILITY OF FUNDS – TERMINATION OF CONTRACTS:**

(5-20-08)(Rev. 1-16-24)

Z-2

*General Statute 143C-6-11. (h) Highway Appropriation* is hereby incorporated verbatim in this contract as follows:

(h) Amounts Encumbered. – Transportation project appropriations may be encumbered in the amount of allotments made to the Department of Transportation by the Director for the estimated payments for transportation project contract work to be performed in the appropriation fiscal year. The allotments shall be multiyear allotments and shall be based on estimated revenues and shall be subject to the maximum contract authority contained in *General Statute 143C-6-11(c)*. Payment for transportation project work performed pursuant to contract in any fiscal year other than the current fiscal year is subject to appropriations by the General Assembly. Transportation project contracts shall contain a schedule of estimated completion progress, and any acceleration of this progress shall be subject to the approval of the Department of Transportation provided funds are available. The State reserves the right to terminate or suspend any transportation project contract, and any transportation project contract shall be so terminated or suspended if funds will not be available for payment of the work to be performed during that fiscal year pursuant to the contract. In the event of termination of any contract, the contractor shall be given a written notice of termination at least 60 days before completion of scheduled work for which funds are available. In the event of termination, the contractor shall be paid for the work already performed in accordance with the contract specifications.

Payment will be made on any contract terminated pursuant to the special provision in accordance with Subarticle 108-13(D) of the *Standard Specifications*.

**BIDS OVER LIMIT:**

(08-01-16)

SPD 01-400

In accordance with GS 136-28.1(b), if the total bid amount of the contract exceeds \$5.0 million, the bid will not be considered for award.

**DIVISION LET CONTRACT PREQUALIFICATION:**

(07-01-14)(12-1-16)

SPD 01-410

Any firm that wishes to bid as a prime contractor shall be prequalified as a Bidder or PO Prime Contractor prior to submitting a bid. Information regarding prequalification can be found at: <https://connect.ncdot.gov/business/Prequal/Pages/default.aspx>.

Prior to performing the work, the prime contractor and/or subcontractor(s) shall be prequalified in the work code(s) which are identified as work items in the prime contractor's construction progress schedule that they will complete themselves. Any contractor identified as working outside their expertise may be considered in default of contract.



**CONTRACTOR CLAIM SUBMITTAL FORM:**

(2-12-14)

104-3

SPD 01-440

If the Contractor elects to file a written claim or requests an extension of contract time, it shall be submitted on the *Contractor Claim Submittal Form (CCSF)* available through the Construction Unit or at <https://connect.ncdot.gov/projects/construction/Pages/Construction-Resources.aspx> as Form CCSF under Construction Forms.

Any claims for additional compensation and/or extensions of the completion date shall be submitted to the Division Engineer in writing, with detailed justification, prior to submitting the final invoice payment. Once an invoice is received and accepted that is marked as “Final”, the Contractor shall be barred from recovery.

**PERSONAL PROTECTIVE EQUIPMENT (PPE):**

All personal protective equipment required for the Contractor’s employees shall be furnished by the Contractor. Personal protective equipment includes, but is not limited to safety vests, eye protection, ear protection, hard hats, steel-toed shoes, gloves, etc.

**ERRATA**

(1-16-24)

Z-4

Revise the *2024 Standard Specifications* as follows:

**Division 16**

**Page 16-3, Article 1609-2 MATERIALS, after line 26,** replace "Type 4" with "Type 4a".

**Page 16-25, Article 1644-2 MATERIALS, after line 22,** replace "Type 4" with "Type 4a".

**PLANT AND PEST QUARANTINES:**

**(Imported Fire Ant, Gypsy Moth, Witchweed, Emerald Ash Borer, Guava Root Knot Nematode, And Other Noxious Weeds)**

(3-18-03) (Rev. 5-21-19)

Z-04a

**Within Quarantined Area**

This project may be within a county regulated for plant and/or pests. If the project or any part of the Contractor's operations is located within a quarantined area, thoroughly clean all equipment prior to moving out of the quarantined area. Comply with federal/state regulations by obtaining a certificate or limited permit for any regulated article moving from the quarantined area.

**Originating in a Quarantined County**

Obtain a certificate or limited permit issued by the N.C. Department of Agriculture/United States Department of Agriculture. Have the certificate or limited permit accompany the article when it arrives at the project site.

**Contact**

Contact the N.C. Department of Agriculture/United States Department of Agriculture at 1-800-206-9333, 919-707-3730, or <https://www.ncagr.gov/plantindustry/Plant/quaran/table2.htm> to determine those specific project sites located in the quarantined area or for any regulated article used on this project originating in a quarantined county.

**Regulated Articles Include**

1. Soil, sand, gravel, compost, peat, humus, muck, and decomposed manure, separately or with other articles. This includes movement of articles listed above that may be associated with cut/waste, ditch pulling, and shoulder cutting.
2. Plants with roots including grass sod.
3. Plant crowns and roots.
4. Bulbs, corms, rhizomes, and tubers of ornamental plants.
5. Hay, straw, fodder, and plant litter of any kind.
6. Clearing and grubbing debris.
7. Used agricultural cultivating and harvesting equipment.
8. Used earth-moving equipment.
9. Any other products, articles, or means of conveyance, of any character, if determined by an inspector to present a hazard of spreading imported fire ant, gypsy moth, witchweed, emerald ash borer, guava root knot nematode, or other noxious weeds.

**MINIMUM WAGES:**

(7-21-09)

Z-5

**FEDERAL:** The Fair Labor Standards Act provides that with certain exceptions every employer shall pay wages at the rate of not less than SEVEN DOLLARS AND TWENTY FIVE CENTS (\$7.25) per hour.

**STATE:** The North Carolina Minimum Wage Act provides that every employer shall pay to each of his employees, wages at a rate of not less than SEVEN DOLLARS AND TWENTY FIVE CENTS (\$7.25) per hour.

The minimum wage paid to all skilled labor employed on this contract shall be SEVEN DOLLARS AND TWENTY FIVE CENTS (\$7.25) per hour.

The minimum wage paid to all intermediate labor employed on this contract shall be SEVEN DOLLARS AND TWENTY FIVE CENTS (\$7.25) per hour.

The minimum wage paid to all unskilled labor on this contract shall be SEVEN DOLLARS AND TWENTY FIVE CENTS (\$7.25) per hour.

This determination of the intent of the application of this act to the contract on this project is the responsibility of the Contractor.

The Contractor shall have no claim against the Department of Transportation for any changes in the minimum wage laws, Federal or State. It is the responsibility of the Contractor to keep fully informed of all Federal and State Laws affecting his contract.

## **TITLE VI AND NONDISCRIMINATION**

(6-28-77) (Rev 6/19/2018)

Z-6

Revise the *2018 Standard Specifications* as follows:

Replace Article 103-4(B) with the following:

The North Carolina Department of Transportation is committed to carrying out the U.S. Department of Transportation's policy of ensuring nondiscrimination in the award and administration of contracts. The provisions of this section related to United States Department of Transportation (US DOT) Order 1050.2A, Title 49 Code of Federal Regulations (CFR) part 21, 23 United States Code (U.S.C.) 140 and 23 CFR part 200 (or 49 CFR 303, 49 U.S.C. 5332 or 49 U.S.C. 47123) are applicable to all North Carolina Department of Transportation (NCDOT) contracts and to all related subcontracts, material supply, engineering, architectural and other service contracts, regardless of dollar amount. Any Federal provision that is specifically required not specifically set forth is hereby incorporated by reference.

### **(1) Title VI Assurances (USDOT Order 1050.2A, Appendix A)**

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

#### **(a) Compliance with Regulations**

The contractor (hereinafter includes consultants) shall comply with the Acts and the Regulations relative to Nondiscrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration (FHWA), as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

#### **(b) Nondiscrimination**

The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

#### **(c) Solicitations for Subcontractors, Including Procurements of Materials and Equipment**

In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Nondiscrimination on the grounds of race, color, or national origin.

(d) Information and Reports

The contractor shall provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the FHWA to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor shall so certify to the Recipient or the FHWA, as appropriate, and shall set forth what efforts it has made to obtain the information.

(e) Sanctions for Noncompliance:

In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it and/or the FHWA may determine to be appropriate, including, but not limited to:

- (i) Withholding payments to the contractor under the contract until the contractor complies; and/or
- (ii) Cancelling, terminating, or suspending a contract, in whole or in part.

(f) Incorporation of Provisions

The contractor shall include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor shall take action with respect to any subcontract or procurement as the Recipient or the FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

**(2) Title VI Nondiscrimination Program (23 CFR 200.5(p))**

The North Carolina Department of Transportation (NCDOT) has assured the USDOT that, as a condition to receiving federal financial assistance, NCDOT will comply with Title VI of the Civil Rights Act of 1964 and all requirements imposed by Title 49 CFR part 21 and related nondiscrimination authorities to ensure that no person shall, on the ground of race, color, national origin, limited English proficiency, sex, age, or disability (including religion/creed or income-level, where applicable), be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any programs, activities, or services conducted or funded by NCDOT. Contractors and other organizations under contract or agreement with NCDOT must also comply with Title VI and related authorities, therefore:

- (a) During the performance of this contract or agreement, contractors (e.g., subcontractors, consultants, vendors, prime contractors) are responsible for complying with NCDOT's Title VI Program. Contractors are not required to prepare or submit Title VI Programs. To comply with this section, the prime contractor shall:
  - 1. Post NCDOT's Notice of Nondiscrimination and the Contractor's own Equal Employment Opportunity (EEO) Policy in conspicuous locations accessible to all employees, applicants and subcontractors on the jobsite.
  - 2. Physically incorporate the required Title VI clauses into all subcontracts on federally-assisted and state-funded NCDOT projects, and ensure inclusion by subcontractors into all lower-tier subcontracts.

3. Required Solicitation Language. The Contractor shall include the following notification in all solicitations for bids and requests for work or material, regardless of funding source:

“The North Carolina Department of Transportation, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award. In accordance with other related nondiscrimination authorities, bidders and contractors will also not be discriminated against on the grounds of sex, age, disability, low-income level, creed/religion, or limited English proficiency in consideration for an award.”
  4. Physically incorporate the FHWA-1273, in its entirety, into all subcontracts and subsequent lower tier subcontracts on Federal-aid highway construction contracts only.
  5. Provide language assistance services (i.e., written translation and oral interpretation), free of charge, to LEP employees and applicants. Contact NCDOT OCR for further assistance, if needed.
  6. For assistance with these Title VI requirements, contact the NCDOT Title VI Nondiscrimination Program at 1-800-522-0453.
- (b) Subrecipients (e.g. cities, counties, LGAs, planning organizations) may be required to prepare and submit a Title VI Plan to NCDOT, including Title VI Assurances and/or agreements. Subrecipients must also ensure compliance by their contractors and subrecipients with Title VI. (23 CFR 200.9(b)(7))
- (c) If reviewed or investigated by NCDOT, the contractor or subrecipient agrees to take affirmative action to correct any deficiencies found within a reasonable time period, not to exceed 90 calendar days, unless additional time is granted by NCDOT. (23 CFR 200.9(b)(15))
- (d) The Contractor is responsible for notifying subcontractors of NCDOT’s External Discrimination Complaints Process.
1. Applicability

Title VI and related laws protect participants and beneficiaries (e.g., members of the public and contractors) from discrimination by NCDOT employees, subrecipients and contractors, regardless of funding source.
  2. Eligibility

Any person—or class of persons—who believes he/she has been subjected to discrimination based on race, color, national origin, Limited English Proficiency (LEP), sex, age, or disability (and religion in the context of employment, aviation, or transit) may file a written complaint. The law also prohibits intimidation or retaliation of any sort.
  3. Time Limits and Filing Options

Complaints may be filed by the affected individual(s) or a representative and must be filed no later than 180 calendar days after the following:

    - (i) The date of the alleged act of discrimination; or
    - (ii) The date when the person(s) became aware of the alleged discrimination; or

(iii) Where there has been a continuing course of conduct, the date on which that conduct was discontinued or the latest instance of the conduct.

Title VI and related discrimination complaints may be submitted to the following entities:

- North Carolina Department of Transportation, Office of Civil Rights, Title VI Program, 1511 Mail Service Center, Raleigh, NC 27699-1511; toll free 1-800-522-0453
- Federal Highway Administration, North Carolina Division Office, 310 New Bern Avenue, Suite 410, Raleigh, NC 27601, 919-747-7010
- US Department of Transportation, Departmental Office of Civil Rights, External Civil Rights Programs Division, 1200 New Jersey Avenue, SE, Washington, DC 20590; 202-366-4070

#### 4. Format for Complaints

Complaints must be in writing and signed by the complainant(s) or a representative, and include the complainant's name, address, and telephone number. Complaints received by fax or e-mail will be acknowledged and processed. Allegations received by telephone will be reduced to writing and provided to the complainant for confirmation or revision before processing. Complaints will be accepted in other languages, including Braille.

#### 5. Discrimination Complaint Form

Contact NCDOT Civil Rights to receive a full copy of the Discrimination Complaint Form and procedures.

#### 6. Complaint Basis

Allegations must be based on issues involving race, color, national origin (LEP), sex, age, disability, or religion (in the context of employment, aviation or transit). "Basis" refers to the complainant's membership in a protected group category.

**TABLE 103-1  
COMPLAINT BASIS**

Protected Categories	Definition	Examples	Applicable Nondiscrimination Authorities
Race and Ethnicity	An individual belonging to one of the accepted racial groups; or the perception, based usually on physical characteristics that a person is a member of a racial group	Black/African American, Hispanic/Latino, Asian, American Indian/Alaska Native, Native Hawaiian/Pacific Islander, White	Title VI of the Civil Rights Act of 1964; 49 CFR Part 21; 23 CFR 200; 49 U.S.C. 5332(b); 49 U.S.C. 47123. ( <i>Executive Order 13166</i> )
Color	Color of skin, including shade of skin within a racial group	Black, White, brown, yellow, etc.	
National Origin ( <i>Limited English Proficiency</i> )	Place of birth. Citizenship is not a factor. ( <i>Discrimination based on language or a person's accent is also covered</i> )	Mexican, Cuban, Japanese, Vietnamese, Chinese	
Sex	Gender. The sex of an individual. <i>Note: Sex under this program does not include sexual orientation.</i>	Women and Men	1973 Federal-Aid Highway Act; 49 U.S.C. 5332(b); 49 U.S.C. 47123.

Age	Persons of any age	21-year-old person	Age Discrimination Act of 1975 49 U.S.C. 5332(b); 49 U.S.C. 47123.
Disability	Physical or mental impairment, permanent or temporary, or perceived.	Blind, alcoholic, para-amputee, epileptic, diabetic, arthritic	Section 504 of the Rehabilitation Act of 1973; Americans with Disabilities Act of 1990
Religion (in the context of employment) <i>(Religion/ Creed in all aspects of any aviation or transit-related construction)</i>	An individual belonging to a religious group; or the perception, based on distinguishable characteristics that a person is a member of a religious group. In practice, actions taken as a result of the moral and ethical beliefs as to what is right and wrong, which are sincerely held with the strength of traditional religious views. <b>Note:</b> Does not have to be associated with a recognized religious group or church; if an individual sincerely holds to the belief, it is a protected religious practice.	Muslim, Christian, Sikh, Hindu, etc.	Title VII of the Civil Rights Act of 1964; 23 CFR 230; FHWA-1273 Required Contract Provisions. <i>(49 U.S.C. 5332(b); 49 U.S.C. 47123)</i>

### (3) Pertinent Nondiscrimination Authorities

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest agrees to comply with the following non-discrimination statutes and authorities, including, but not limited to:

- (a) Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- (b) The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- (c) Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- (d) Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability) and 49 CFR Part 27;
- (e) The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- (f) Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- (g) The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- (h) Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as

- implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- (i) The Federal Aviation Administration's Nondiscrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
  - (j) Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures Nondiscrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
  - (k) Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
  - (l) Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).
  - (m) Title VII of the Civil Rights Act of 1964 (42 U.S.C. § 2000e et seq., Pub. L. 88-352), (prohibits employment discrimination on the basis of race, color, religion, sex, or national origin).

**(4) Additional Title VI Assurances**

*\*\*The following Title VI Assurances (Appendices B, C and D) shall apply, as applicable*

**(a) Clauses for Deeds Transferring United States Property (1050.2A, Appendix B)**

The following clauses will be included in deeds effecting or recording the transfer of real property, structures, or improvements thereon, or granting interest therein from the United States pursuant to the provisions of Assurance 4.

NOW, THEREFORE, the U.S. Department of Transportation as authorized by law and upon the condition that the North Carolina Department of Transportation (NCDOT) will accept title to the lands and maintain the project constructed thereon in accordance with the North Carolina General Assembly, the Regulations for the Administration of the Federal-Aid Highway Program, and the policies and procedures prescribed by the Federal Highway Administration of the U.S. Department of Transportation in accordance and in compliance with all requirements imposed by Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the U.S Department of Transportation pertaining to and effectuating the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252; 42 U.S.C. § 2000d to 2000d-4), does hereby remise, release, quitclaim and convey unto the NCDOT all the right, title and interest of the U.S. Department of Transportation in and to said lands described in Exhibit A attached hereto and made a part hereof.

**(HABENDUM CLAUSE)**

TO HAVE AND TO HOLD said lands and interests therein unto the North Carolina Department of Transportation (NCDOT) and its successors forever, subject, however, to the covenants, conditions, restrictions and reservations herein contained as follows, which will remain in effect for the period during which the real property or structures are used for a purpose for which Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits and will be binding on the NCDOT, its successors and assigns.



The NCDOT, in consideration of the conveyance of said lands and interests in lands, does hereby covenant and agree as a covenant running with the land for itself, its successors and assigns, that (1) no person will on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination with regard to any facility located wholly or in part on, over, or under such lands hereby conveyed [,] [and]\* (2) that the NCDOT will use the lands and interests in lands and interests in lands so conveyed, in compliance with all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations and Acts may be amended [, and (3) that in the event of breach of any of the above-mentioned nondiscrimination conditions, the Department will have a right to enter or re-enter said lands and facilities on said land, and that above described land and facilities will thereon revert to and vest in and become the absolute property of the U.S. Department of Transportation and its assigns as such interest existed prior to this instruction].\*

(\*Reverter clause and related language to be used only when it is determined that such a clause is necessary in order to make clear the purpose of Title VI.)

(b) Clauses for Transfer of Real Property Acquired or Improved Under the Activity, Facility, or Program (1050.2A, Appendix C)

The following clauses will be included in deeds, licenses, leases, permits, or similar instruments entered into by the North Carolina Department of Transportation (NCDOT) pursuant to the provisions of Assurance 7(a):

1. The (grantee, lessee, permittee, etc. as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree [in the case of deeds and leases add "as a covenant running with the land"] that:
  - (i.) In the event facilities are constructed, maintained, or otherwise operated on the property described in this (deed, license, lease, permit, etc.) for a purpose for which a U.S. Department of Transportation activity, facility, or program is extended or for another purpose involving the provision of similar services or benefits, the (grantee, licensee, lessee, permittee, etc.) will maintain and operate such facilities and services in compliance with all requirements imposed by the Acts and Regulations (as may be amended) such that no person on the grounds of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.
2. With respect to licenses, leases, permits, etc., in the event of breach of any of the above Nondiscrimination covenants, the NCDOT will have the right to terminate the (lease, license, permit, etc.) and to enter, re-enter, and repossess said lands and facilities thereon, and hold the same as if the (lease, license, permit, etc.) had never been made or issued. \*
3. With respect to a deed, in the event of breach of any of the above Nondiscrimination covenants, the NCDOT will have the right to enter or re-enter the lands and facilities thereon, and the above described lands and facilities will there upon revert to and vest in and become the absolute property of the NCDOT and its assigns. \*

(\*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

- (c) Clauses for Construction/Use/Access to Real Property Acquired Under the Activity, Facility or Program (1050.2A, Appendix D)

The following clauses will be included in deeds, licenses, permits, or similar instruments/agreements entered into by the North Carolina Department of Transportation (NCDOT) pursuant to the provisions of Assurance 7(b):

1. The (grantee, licensee, permittee, etc., as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds and leases add, "as a covenant running with the land") that (1) no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over, or under such land, and the furnishing of services thereon, no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, (3) that the (grantee, licensee, lessee, permittee, etc.) will use the premises in compliance with all other requirements imposed by or pursuant to the Acts and Regulations, as amended, set forth in this Assurance.
2. With respect to (licenses, leases, permits, etc.), in the event of breach of any of the above Non-discrimination covenants, the NCDOT will have the right to terminate the (license, permit, etc., as appropriate) and to enter or re-enter and repossess said land and the facilities thereon, and hold the same as if said (license, permit, etc., as appropriate) had never been made or issued. \*
3. With respect to deeds, in the event of breach of any of the above Nondiscrimination covenants, the NCDOT will there upon revert to and vest in and become the absolute property of the NCDOT and its assigns. \*

(\*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

### **ON-THE-JOB TRAINING**

(10-16-07) (Rev. 4-21-15)

Z-10

#### **Description**

The North Carolina Department of Transportation will administer a custom version of the Federal On-the-Job Training (OJT) Program, commonly referred to as the Alternate OJT Program. All contractors (existing and newcomers) will be automatically placed in the Alternate Program. Standard OJT requirements typically associated with individual projects will no longer be applied at the project level. Instead, these requirements will be applicable on an annual basis for each contractor administered by the OJT Program Manager.

On the Job Training shall meet the requirements of 23 CFR 230.107 (b), 23 USC – Section 140, this provision and the On-the-Job Training Program Manual.

The Alternate OJT Program will allow a contractor to train employees on Federal, State and privately funded projects located in North Carolina. However, priority shall be given to training employees on NCDOT Federal-Aid funded projects.

### **Minorities and Women**

Developing, training and upgrading of minorities and women toward journeyman level status is a primary objective of this special training provision. Accordingly, the Contractor shall make every effort to enroll minority and women as trainees to the extent that such persons are available within a reasonable area of recruitment. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

### **Assigning Training Goals**

The Department, through the OJT Program Manager, will assign training goals for a calendar year based on the contractors' past three years' activity and the contractors' anticipated upcoming year's activity with the Department. At the beginning of each year, all contractors eligible will be contacted by the Department to determine the number of trainees that will be assigned for the upcoming calendar year. At that time the Contractor shall enter into an agreement with the Department to provide a self-imposed on-the-job training program for the calendar year. This agreement will include a specific number of annual training goals agreed to by both parties. The number of training assignments may range from 1 to 15 per contractor per calendar year. The Contractor shall sign an agreement to fulfill their annual goal for the year.\

### **Training Classifications**

The Contractor shall provide on-the-job training aimed at developing full journeyman level workers in the construction craft/operator positions. Preference shall be given to providing training in the following skilled work classifications:

Equipment Operators	Office Engineers
Truck Drivers	Estimators
Carpenters	Iron / Reinforcing Steel Workers
Concrete Finishers	Mechanics
Pipe Layers	Welders

The Department has established common training classifications and their respective training requirements that may be used by the contractors. However, the classifications established are not all-inclusive. Where the training is oriented toward construction applications, training will be allowed in lower-level management positions such as office engineers and estimators. Contractors shall submit new classifications for specific job functions that their employees are performing. The Department will review and recommend for acceptance to FHWA the new classifications proposed by contractors, if applicable. New classifications shall meet the following requirements:

Proposed training classifications are reasonable and realistic based on the job skill classification needs, and

The number of training hours specified in the training classification is consistent with common practices and provides enough time for the trainee to obtain journeyman level status.

The Contractor may allow trainees to be trained by a subcontractor provided that the Contractor retains primary responsibility for meeting the training and this provision is made applicable to the subcontract. However, only the Contractor will receive credit towards the annual goal for the trainee.

Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. The number of trainees shall be distributed among the work classifications on the basis of the contractor's needs and the availability of journeymen in the various classifications within a reasonable area of recruitment.

No employee shall be employed as a trainee in any classification in which they have successfully completed a training course leading to journeyman level status or in which they have been employed as a journeyman.

### **Records and Reports**

The Contractor shall maintain enrollment, monthly and completion reports documenting company compliance under these contract documents. These documents and any other information as requested shall be submitted to the OJT Program Manager.

Upon completion and graduation of the program, the Contractor shall provide each trainee with a certification Certificate showing the type and length of training satisfactorily completed.

### **Trainee Interviews**

All trainees enrolled in the program will receive an initial and Trainee/Post graduate interview conducted by the OJT program staff.

### **Trainee Wages**

Contractors shall compensate trainees on a graduating pay scale based upon a percentage of the prevailing minimum journeyman wages (Davis-Bacon Act). Minimum pay shall be as follows:

60 percent	of the journeyman wage for the first half of the training period
75 percent	of the journeyman wage for the third quarter of the training period
90 percent	of the journeyman wage for the last quarter of the training period

In no instance shall a trainee be paid less than the local minimum wage. The Contractor shall adhere to the minimum hourly wage rate that will satisfy both the NC Department of Labor (NCDOL) and the Department.

**Achieving or Failing to Meet Training Goals**

The Contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and who receives training for at least 50 percent of the specific program requirement. Trainees will be allowed to be transferred between projects if required by the Contractor's scheduled workload to meet training goals.

If a contractor fails to attain their training assignments for the calendar year, they may be taken off the NCDOT's Bidders List.

**Measurement and Payment**

No compensation will be made for providing required training in accordance with these contract documents.

County: DARE

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
<b>ROADWAY ITEMS</b>						
0001	0000820000-N	SP	GENERIC MISCELLANEOUS ITEM (BERTHING DAYS)	8 DAY		
0002	0000820000-N	SP	GENERIC MISCELLANEOUS ITEM (LAY DAYS)	8 DAY		
0003	0000950000-E	SP	GENERIC MISCELLANEOUS ITEM (CROP AND RENEW STEEL - BULKHEAD PLATE)	75 SF		
0004	0000950000-E	SP	GENERIC MISCELLANEOUS ITEM (CROP AND RENEW STEEL - DECK)	25 SF		
0005	0000950000-E	SP	GENERIC MISCELLANEOUS ITEM (CROP AND RENEW STEEL - HULL)	150 SF		
0006	0000950000-E	SP	GENERIC MISCELLANEOUS ITEM (SPOT PREP & PAINT VOIDS, TANK RMS., STEERING COMPARTMENT, AND ENGINE RM. BILGES)	4,000 SF		
0007	0001020000-N	SP	GENERIC MISCELLANEOUS ITEM (ZINC ANODE REPLACEMENTS (VESSEL HULL / 23-24 LB.)	57 EA		
0008	0001020000-N	SP	GENERIC MISCELLANEOUS ITEM (ZINC ANODE REPLACEMENTS KEEL COOLERS GUARDS / 12 LB)	20 EA		
0009	0005000000-N	SP	GENERIC FERRY ITEM (BLAST & PAINT - ALL DECKS)	Lump Sum	L.S.	
0010	0005000000-N	SP	GENERIC FERRY ITEM (BLAST & PAINT - HULL ABOVE DLWL)	Lump Sum	L.S.	
0011	0005000000-N	SP	GENERIC FERRY ITEM (BLAST & PAINT - HULL BELOW DLWL)	Lump Sum	L.S.	
0012	0005000000-N	SP	GENERIC FERRY ITEM (BLAST & PAINT - SUPERSTRUCTURE)	Lump Sum	L.S.	
0013	0005000000-N	SP	GENERIC FERRY ITEM (CLEAN AND CLEAR ALL DECK DRAINS)	Lump Sum	L.S.	
0014	0005000000-N	SP	GENERIC FERRY ITEM (ENGINE WATER COOLING SYSTEM INSPECTION AND MAINTENANCE)	Lump Sum	L.S.	
0015	0005000000-N	SP	GENERIC FERRY ITEM (HIGH-PRESSURE WATER WASH - HULL ABOVE DLWL)	Lump Sum	L.S.	

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0016	0005000000-N	SP	GENERIC FERRY ITEM (HIGH-PRESSURE WATER WASH - HULL BELOW DLWL)	Lump Sum	L.S.	
0017	0005000000-N	SP	GENERIC FERRY ITEM (HIGH-PRESSURE WATER WASH - SUPERSTRUCTURE)	Lump Sum	L.S.	
0018	0005000000-N	SP	GENERIC FERRY ITEM (HVAC MODIFICATION)	Lump Sum	L.S.	
0019	0005000000-N	SP	GENERIC FERRY ITEM (MAIN DECK HATCH MAINTENANCE AND REPAIR)	Lump Sum	L.S.	
0020	0005000000-N	SP	GENERIC FERRY ITEM (OPEN, CLEAN, AND CERTIFY GAS FREE: BILGES, HOLDS, AND ENCLOSED AREAS)	Lump Sum	L.S.	
0021	0005000000-N	SP	GENERIC FERRY ITEM (PROPELLER AND TAILSHAFT INSPECTION)	Lump Sum	L.S.	
0022	0005000000-N	SP	GENERIC FERRY ITEM (REMOVE ALL MAIN DECK WTD, MAINTENANCE, REPAIR, AND REINSTALL)	Lump Sum	L.S.	
0023	0005000000-N	SP	GENERIC FERRY ITEM (RENEW WINDOWS GASKETS)	Lump Sum	L.S.	
0024	0005000000-N	SP	GENERIC FERRY ITEM (RESCUE BOAT DAVIT - INSPECTION, RESTORATION, AND RESCUE GATE REPAIR)	Lump Sum	L.S.	
0025	0005000000-N	SP	GENERIC FERRY ITEM (RUDDER REMOVALS & INSPECTIONS)	Lump Sum	L.S.	
0026	0005000000-N	SP	GENERIC FERRY ITEM (SEA CHEST, STRAINER, AND VALVE INSPECTION)	Lump Sum	L.S.	
0027	0005000000-N	SP	GENERIC FERRY ITEM (SEWAGE SYSTEM - CLEAN, INSPECT, AND PERFORM MAINTENANCE)	Lump Sum	L.S.	
0028	0005000000-N	SP	GENERIC FERRY ITEM (SHIPYARD SERVICES)	Lump Sum	L.S.	
0029	0005000000-N	SP	GENERIC FERRY ITEM (STARTUP, DOCK TRIALS, AND SEA TRIALS)	Lump Sum	L.S.	

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0030	0005000000-N	SP	GENERIC FERRY ITEM (TAKE CONTROL AND DRY DOCK THE M/V FRISCO)	Lump Sum	L.S.	

1040/Nov21/Q4365/D117480000/E30

Total Amount Of Bid For Entire Project :



**Execution of Contract**

**Contract No: DA00596**

**County: Dare**

ACCEPTED BY THE DEPARTMENT

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**Contract Officer**

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Date