

REQUEST FOR QUOTATIONS <i>(THIS IS NOT AN ORDER)</i>		THIS RFQ <input checked="" type="checkbox"/> IS <input type="checkbox"/> IS NOT A SMALL BUSINESS SET-ASIDE			PAGE 1 OF 65 PAGES	
1. REQUEST NO. N69450-16-Q-3223	2. DATE ISSUED 29-Feb-2016	3. REQUISITION/PURCHASE REQUEST NO.	4. CERT. FOR NAT. DEF. UNDER BDSA REG. 2 AND/OR DMS REG. 1	RATING DO-C2		
5a. ISSUED BY NAVFAC SOUTHEAST SOUTH TEXAS AREA PWD CORPUS CHRISTI/PWD INGLESIDE 8851 OCEAN DRIVE, BLDG 19 CORPUS CHRISTI TX 78419-5525			6. DELIVER BY (Date) SEE SCHEDULE			
5b. FOR INFORMATION CALL: (Name and Telephone no.)(No collect calls) JOEL OVERSON 361-961-3397			7. DELIVERY <input checked="" type="checkbox"/> FOB DESTINATION <input type="checkbox"/> OTHER (See Schedule)			
8. TO: NAME AND ADDRESS, INCLUDING ZIP CODE			9. DESTINATION (Consignee and address, including ZIP Code) PWD CORPUS CHRISTI INSPECTOR OF RECORD 8851 OCEAN DR, BLDG. 19 CORPUS CHRISTI TX 78419-5525 TEL: 361-961-3397 FAX:			
10. PLEASE FURNISH QUOTATIONS TO THE ISSUING OFFICE IN BLOCK 5a ON OR BEFORE CLOSE OF BUSINESS: (Date) 01-Apr-2016						
IMPORTANT: This is a request for information, and quotations furnished are not offers. If you are unable to quote, please so indicate on this form and return it to the address in Block 5a. This request does not commit the Government to pay any costs incurred in the preparation of the submission of this quotation or to contract for supplies or services. Supplies are of domestic origin unless otherwise indicated by quoter. Any representations and/or certifications attached to this Request for Quotations must be completed by the quoter.						
11. SCHEDULE (Include applicable Federal, State, and local taxes)						
ITEM NO. (a)	SUPPLIES/ SERVICES (b)		QUANTITY (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)
SEE SCHEDULE						
12. DISCOUNT FOR PROMPT PAYMENT	a. 10 CALENDAR DAYS	b. 20 CALENDAR DAYS	c. 30 CALENDAR DAYS	d. CALENDAR DAYS		
	%	%	%	No.	%	
NOTE: Additional provisions and representations <input type="checkbox"/> are <input type="checkbox"/> are not attached.						
13. NAME AND ADDRESS OF QUOTER (Street, City, County, State, and ZIP Code)			14. SIGNATURE OF PERSON AUTHORIZED TO SIGN QUOTATION		15. DATE OF QUOTATION	
			16. NAME AND TITLE OF SIGNER (Type or print)		TELEPHONE NO. (Include area code)	

STATEMENT OF WORK

GENERAL INFORMATION:

Document Type: Combined Synopsis/Solicitation Notice

Solicitation Number: N69450-16-Q-3223

Set Aside: 100% Total Small Business

NAICS Code: 238290, Size standard in Millions: \$15.0

DESCRIPTION / SCOPE OF WORK: Contractor is to provide all Labor, Materials, equipment, Tools, Transportation and Management necessary to replace the hoist at bldg. 100 at NAS Corpus Christi, TX.

This announcement constitutes the only solicitation; no separate written solicitation will be issued.

BASIS FOR AWARD: AWARD WILL BE BASED ON LOWEST PRICE.

Target Price Range is less than \$50K

Anticipated award date: 5 days after close of solicitation

Quotes are to be received no later than 5:00 p.m. central standard time on 01 April 2016. Proposals should be emailed to joel.overson@navy.mil

Any changes to the solicitation or RFI's will be posted on FEDBIZOPS (www.fbo.gov) for the mutual benefit of all bidders.

ADDITIONAL INFORMATION:

Solicitation document shall be signed by bidders and all applicable Certifications and Representations shall be completed. Offer should be in sufficient detail to ensure that the technical team can determine the offer complies with the Statement of Work (SOW).

Be advised that all interested parties must be registered in the System for Award Management (SAM) Database in order to receive payment for products/services rendered to the Government as the result of an award. If you are not registered you may request an application at (334) 206-7828 or through the SAM website at <https://sam.gov>.

Rapid Gate Information: The Navy has implemented a new security access program for the Corpus Christi and Kingsville Naval Air Stations. This program, called Rapid gate,

will reduce expenses, reduce risk, and insure quicker access for people coming to the installation. You must either call 1-877-727-4342 or go online to <http://rapidgate.com> Once the company is enrolled, your employees can register at the installation. If your company employees have been authorized the common access card (CAC), it is not necessary to enroll in the rapid gate program.

SITE VISIT INFORMATION:

1. One site visit will be held to ensure all potential offerors have uniform information in order to make an accurate proposal.
2. Site visit will be conducted on **11 March 2016 at 09:00 a.m. central time at NAS Corpus Christi, TX**. All potential offerors are encouraged to attend the site visit to perform an inspection of the size and current layout.
3. Offerors are expected to satisfy themselves as to the general and local conditions that may affect the cost of the performance of the work to the extent that such information is reasonably obtainable. It is considered impractical to determine, without inspection, the exact nature of the work and site conditions under which the work is to be performed.
4. To attend please contact the site visit POC:

Site Visit POC:
Julian Reyes
julian.reyes@navy.mil
361-961-2830

5. Interested parties are advised to arrive an hour early in order to receive security passes and clearance.
6. The contractor may require, and should have, their own ear plugs, safety glasses and safety shoes to have access to the work site.

STATEMENT OF WORK

4,000 lbs. CAPACITY HOIST REPLACEMENT FOR BUILDING H-100, NAS
CORPUS CHRISTI, TX

1. **GENERAL DESCRIPTION:** The Contractor shall provide all supervision, transportation, labor, materials; equipment and incidental work necessary to install a 4,000 lbs. crane and associated items as specified in Attachment B.

2. **LOCATION:** The work is located at the Naval Air Station Health Clinic, Building H-100 Corpus Christi, Texas. See Attachment A for project location.
3. **PERIOD OF PERFORMANCE:** The period of performance is 30 calendar days. The period of performance starts when the contract/task order is awarded, and ends when the work is completed and accepted by the Government. The period of performance includes pre-construction submittals, material/equipment lead-time, and all construction activities up to final acceptance. The period of performance is negotiable; hence, if the contractor believes a different/longer period of performance is needed, they should negotiate this with the Contract Specialist prior to task order/contract award.
4. **EXAMINATION OF SITE:** Bidders are expected to visit the site, take their own measurements, inspect carefully the work area and satisfy themselves as to the character and amount of work to be done. Site visit will be scheduled in advance. Arrangements to visit the site may be made by contacting the Contracting Officer's Representative. See site visit information above.
5. **WORK RESTRICTIONS:** The following work restrictions apply to this project:
 - 5.1 **Schedule hours:** The work shall be so scheduled as to cause a minimum of interference to the normal operations of the tenants. Work shall be accomplished between the hours of 7:30 A.M. and 4:30 P.M., Monday through Friday. If the Contractor desires to work on Saturday, Sunday, holidays, or outside of the Station's regular hours, an application may be submitted to the Contracting Officer for approval.
 - 5.2 **RAPID Gate:** All contractor and subcontractor personnel shall obtain a RAPID Gate pass to gain access to NAS Corpus Christi. Please allow three days for processing of all RAPID Gate applications. See <http://www.rapidgate.com> for additional information and costs. Costs incurred to obtain base access credentials are not directly reimbursable. No equitable adjustment in contract cost/price or schedule shall be allowed on account of the contractor participating in any program to obtain installation access.
 - 5.3 **Flight Line Pass:** All contractor and subcontractor personnel working on airfield or flight line shall obtain flight a line pass. The flight line pass is offered at no costs to the contractor, but requires up to three days to process. Once the individual's application is processed, he/she shall proceed to the pass and tag office to have the flight line pass issued.
 - 5.4 **Airfield Vehicle Operators License:** For projects located on the flight line or airfield, contractor or subcontractor personnel operating vehicles must also obtain one of two levels of licenses: (1) the Area 1 license (controlled movement areas), or (2) the Area 2 (aprons, non-runway/taxiway area). This license is required so ensure that all drivers are familiar with the airfield, its safety rules and radio protocols when operating vehicles where aircraft are present. The license must be obtained before the flight line pass. The license must be presented when obtaining the flight line pass in order to properly code the flight line pass to allow the driver to pass through the airfield access gate. Licenses are offered at no cost to the contractor.

5.4.1 Area 2 License - Area 2 includes all parking aprons, hangars, and associated facilities. To obtain an Area 2 license, vehicle operators must attend a one-hour class conducted on Tuesdays.

5.4.2 Area 1 License - Area 1 includes all runways, taxiways, and the perimeter road. To operate a vehicle in Area 1, the driver must attend an 8-hour class that is offered on Thursdays and continues into the next day(s). To obtain an Area 1 license, the operator must attend the class, pass a written test, and complete a day and nighttime practical test. An Area 1 license enables the driver the ability to drive on the entirety of the airfield, but the Area 2 license does not grant access to drive beyond the aprons.

5.5 Material deliveries: Material delivery trucks do not necessarily require RAPID Gate passes, flight line passes, or ramp passes. However, Government personnel must escort any material delivery driver that does not have a RAPID Gate pass. To properly plan for Government escort availability, three (3) working days' notice is required for all material deliveries. Any material delivery driver that possesses a RAPID Gate pass does not require Government escort or advance notification unless the material is to be delivered on the flight line or airfield.

5.6 Time-Sensitive Material Deliveries: Time-sensitive material deliveries such as asphalt or concrete require pre-arrangement by NAS Security personnel to ensure expedited access at the entrance gate. Seven (7) calendar days' notice is required for time-sensitive material deliveries.

6. PROTECTION OF EXISTING WORK: Existing work to remain shall be protected from damage. Work damaged by the Contractor shall be repaired to original condition at no additional cost to the Government.

7. NAS FIRE REGULATIONS: "Hot work" permits are issued to the Contractor by the Fire Prevention Inspectors by calling 961-4151 or 961-4983. Permits are issued on a daily basis only and from start of work until finished. Permits are required for all "hot work" and before entering buildings. ("Hot work" includes all welding, cutting, soldering/brazing, blowtorches, etc.)

8. SAFETY REQUIREMENTS: The Contractor shall comply with the safety rules and regulations pertaining to the activity, and shall govern employees according to, and in compliance with applicable OSHA Regulations and U.S. Army Corps of Engineers Safety and Health Manual EM 385-1-1. The Contractor shall maintain an accurate record of exposure data on all accidents incidental to work performed under this contract resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment. The Contractor shall report this data in the manner prescribed by the Contracting Officer. A written safety plan, outlining all

Contractor Safety Procedures, will be required for all work under this contract, and is subject to acceptance by PWD Corpus Christi FEAD prior to commencement of work.

8.1 Lock out/ Tag out Policy:

- a. Combination locks shall not be used for lockout;
- b. No two (2) lockout devices (locks) shall be keyed alike;

- c. No more than two (2) keys shall exist for any lock. The worker shall maintain one key, and the supervisor shall maintain the other in a location readily accessible in the event of an emergency;
- d. Both lockout and tag-out devices shall indicate the identifier of the employee applying the device(s). Tag-out devices shall include the cognizant shop (or code), the telephone number where the employee can be reached during working hours, name of his/her supervisor, date the device was applied, and the machine, equipment, or system component that is de-energized.

9. **ASBESTOS AND LEAD:** There is no known asbestos containing material (ACM) and/or lead based paint on this project. If additional materials are encountered, this may contain ACM and/or lead, **DO NOT TOUCH THE MATERIAL, IMMEDIATELY NOTIFY THE CONTRACTING OFFICER IN WRITING.** Within a reasonable time, the Government will perform tests to determine if asbestos or lead is present. If the materials are determined not to contain ACM or lead, the Contractor shall proceed without change. If it is determined that ACM and/lead are present and must be disturbed, the Contracting Officer may direct a change accordingly.

10. **WEIGHT HANDLING EQUIPMENT (WHE):** The provision of NAVFAC Publication P-307 apply to all civilian, military, and contractor personnel who operate weight handling equipment and use crane related rigging gear on board Naval Air Station Corpus Christi, Texas.

11. **EXCAVATIONS AND OUTAGES:** Any excavation greater than 6 inches below grade requires an excavation permit. Any utility or HVAC outage affecting inhabited workspace, inhabited living space, or exit from an inhabited work space/living space requires an Outage Permit. For Excavation and Outage, contact the government point of contact listed in paragraph 13.3.

12. **ATTACHMENTS:** The following sketches are a part of this specification and shall not be used for any purpose other than that contemplated by this contract:

Attachment	Title
A	Project Location
B	4,000 lbs. Capacity Hoist Replacement

13.0 SCOPE OF WORK: Install crane in Building H-100 per the attachment titled: 4,000 lbs. CAPACITY HOIST REPLACEMENT SCOPE OF WORK FOR BUILDING H-100 as written and prepared by Jesse Evans, NAVFAC Southeast BSVE WHE Group. Existing hoist will be removed and placed on a pallet for proper disposal by Naval Clinic Facility Maintenance personnel.

13.1 The contractor shall conduct his own survey of the site to determine existing features, conditions, and measurements. The contractor shall report any discrepancy between the statement of work and existing conditions prior to the commencement of work.

13.2 The contractor shall coordinate with the FEAD Department approximately three working days in advance of start of work to let the occupant of the building know when the construction is to take place so that they may notify their personnel to remain clear of the jobsite and to not affect scheduled work hours.

13.3 All work under this Contract is to be accomplished with FEAD Department oversight. The contractor shall coordinate with the FEAD Point of Contact site visit access. The contractor shall give notice to the FEAD Point of Contact prior to accomplishment of any work. The Point of Contact will be determined by the Contracting Officer.

13.4 Keep the jobsite clean at all times, and remove all debris from the station.

13.5 Submittals: Submittals shall be provided and approved as per Attachment B prior to the purchase and delivery to the job site. If submittals contain information for more than one product type, clearly indicate which product type is being submitted for approval. Provide submittals for the following materials to be furnished and delivered under this contract to the Contracting Officer for approval prior to installation.

13.6 Work Schedule: Submit schedule of work to include start date and end date of all major activities.

14. PRODUCTS: Products shall be new, manufacturer's standard products, and commonly available from manufacturer's stock.

15. TERMS OF PAYMENT: Refer to contract clauses and amendments for payment terms and conditions.

16. ORAL MODIFICATIONS: No oral statement of any person other than the Contracting Officer or his/her representative, as provided in the contract clause entitled "Changes" shall in any manner or degree modify or otherwise affect the terms of this contract.

17. CLEANUP: The premises shall be kept free at all times from the accumulation of waste material and/or rubbish resulting from the work. Combustibles shall be removed daily, and upon completion of the work, all debris, tools, and other surplus materials shall be removed and the premises left in approved condition.

18. ENVIRONMENTAL REQUIREMENTS: Take no action or inaction that exposes the Government to liability for non-compliance or other findings or damages, penalties or fines related thereto. In the event a regulatory agency assesses either a monetary or non-monetary fine or penalty for Contractor's noncompliance, the Contractor shall reimburse the Government for all associated cost. Remove all hazardous material and waste upon completion of the contract. Abandoned waste shall be managed as "unknown waste", and the contractor shall bear the cost of any analytical, disposal, or other costs incurred.

18.1 Regulated Waste: Regulated waste is defined as (1) hazardous waste as defined in EPA Regulations 40 CFR 261, (2) universal waste as defined in EPA Regulations 40 CFR 273, and (3) Class 1 industrial waste as defined in Texas Commission on Environmental Quality Regulations 30 Texas Administrative Code Parts 335 and 503. Manage all regulated waste and used oil in accordance with applicable federal, state, and local regulations, Navy and NASCC policies and instructions. All regulated waste shall be manifested through PWD Corpus Christi Environmental Division.

Before generating regulated waste, obtain approval for storage from the Environmental Division. Application for approval shall include including location and type of storage (i.e. Satellite Accumulation Point or <90-day Storage Area). Contractor shall provide immediate access to PWD Corpus Christi Environmental Division to inspection any locked units. Contractor shall inspect their regulated waste storage areas and provide weekly inspection reports to the Government POC.

PWD Corpus Christi Hazardous Waste Commodity Branch (HWCB) provides comprehensive regulated waste disposal services. If the contractor chooses to dispose of regulated waste through the HWCB, contractor shall establish a line of credit with the HWCB and provide required waste stream information before generating any waste. If contractor chooses not to dispose of regulated waste through the HWCB, the contractor shall provide funding to the HWCB for manifesting services. For FY 16 the rate is \$68 per manifest. The contact phone number for the HWCB is 361-961-3760. Contractor shall contact the HWCB before make any arrangements to remove regulated waste from the installation.

18.2 Solid Waste Disposal: All waste not covered under paragraph 18.1 must be tracked by NASCC whether directly disposed in a landfill or recycled. Contractor shall recycle waste to the greatest extent feasible. The solid waste tracking form is included in Attachment B. Contractor shall provide the filled out form to the Government POC at the close of the project.

18.3 Storm Water Containment: Block solids in storm water runoff to all nearby storm sewers with silt screen. Secure all loose dirt by using temporary berm to avoid discharge to storm inlet. Storm water best management practices must be implemented in accordance with station's storm water management plan. PWD Corpus Christi Environmental Division POC is Mr. Dilip Shaw at 961-5365 or Mr. Ross Ybarra at 961-2170.

19. PMI INVENTORY CARD: **(Not applicable to this project)** Contractor shall provide a completed PMI Equipment Inventory Card included as Attachment C for each piece of dynamic equipment containing a serial number. This requirement is in addition to any other operation and

maintenance information required in the Submittals paragraph.

20. ACCEPTANCE: The work shall be accepted as a result of a final inspection conducted by a representative of the Facility Engineering and Acquisition Division, Public Works Department Corpus Christi.

21. WARRANTY: All workmanship and materials and/or equipment shall be warranted for a period of not less than one year under normal wear and tear or the normal standard warranty should it extend beyond one year.

*** END OF SPECIFICATIONS ***

ATTACHMENT B

Maximo # BL447V

**4,000 lbs. CAPACITY HOIST REPLACEMENT SCOPE OF WORK
FOR BUILDING H-100
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
CORPUS CHRISTI, TEXAS**

January 2016

**PREPARED BY:
NAVFAC SOUTHEAST
BSVE WHE Group
103 Ranger Road, NAS JAX
Jacksonville, FL 32212**

Introduction

This specification is for the procurement/replacement of a 4,000 pound capacity hoist and all associated components, and electrical equipment in building 100, Mechanical room, located at NAS Corpus Christi, Corpus Christi Texas for Naval Facilities Engineering Command. Structural drawings for the building may be provided upon request.

TABLE OF CONTENTS

- 1 General
 - 1.1 References
 - 1.2 Verification of Dimensions
 - 1.3 Trade Coordination
 - 1.4 Submittals
 - 1.5 Quality Assurance
 - 1.5.1 Manufacturer Qualification
 - 1.5.2 Certifications
 - 1.5.3 Drawings: Monorail System
 - 1.5.4 Design Data: Load and Sizing Calculations
 - 1.5.5 Welding Qualifications and Procedure
 - 1.5.6 Pre-Erection Inspection
 - 1.6 Delivery, Storage, and Handling
 - 1.6.1 Delivery and Storage
 - 1.6.2 Handling
 - 1.7 Maintenance
 - 1.8 Warranty
 - 1.9 Training
- 2 Products
 - 2.1 Hoist
 - 2.1.1 Power Characteristics
 - 2.1.2 Capacity
 - 2.1.3 Speeds and Crane Control Parameter Settings
 - 2.1.4 Load Block
 - 2.1.5 Hook and Hook Nut
 - 2.1.5.1 Non-Destructive Testing
 - 2.1.6 Wire Rope
 - 2.1.7 Hoist Brake
 - 2.1.8 Trolley
 - 2.1.8.1 Trolley Drive
 - 2.1.8.2 Trolley Brake
 - 2.2 Structural
 - 2.2.1 Welding
 - 2.2.2 Structural Bolted Connections
 - 2.3 Mechanical
 - 2.3.1 Threaded Fasteners
 - 2.3.2 Bumpers and stops
 - 2.4 Electrical
 - 2.4.1 Pendant Control
 - 2.4.2 AC Controls
 - 2.4.3 Protection
 - 2.4.4 Limit Switches

- 2.4.5 Hoist overload limiting device
- 2.4.6 Overload Protection
- 2.4.7 Enclosures
- 2.4.8 Electrification
- 2.5 Crane Painting
- 2.6 Identification Plates

3 Execution

- 3.1 Erection and Installation
- 3.2 Erection Services
- 3.3 Field Quality Control
 - 3.3.1 Post-Erection Inspection
 - 3.3.2 Field Testing

1. General

This specification is for the procurement/replacement of a 4,000 pound capacity, electrically powered chain hoist with a manual trolley. The existing hoist and trolleys shall be removed from the trolley girder and replaced with the new hoist in an existing building (Bldg. H-100) at NAS Corpus Christi, Corpus Christi, Texas. The removed hoist and trolley shall be set on pallets ensuring the units are not damaged. The required lift of the new hoist is a minimum of 21ft (actual distance from floor to bottom of trolley girder is 20' 9").

1.1 References (Contractor to utilize current versions as applicable)

- AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)
 - AISC 325 Manual of Steel Construction
- AMERICAN WELDING SOCIETY (AWS)
 - AWS D1.1/D1.1M Structural Welding Code – Steel
 - AWS D14.1/D14.1M Welding Industrial and Mill Cranes and Other Material Handling Equipment
- ASME INTERNATIONAL (ASME)
 - ASME B30.11 Monorails and Underhung Cranes
 - ASME B30.16 Overhead Hoists (Underhung)
 - ASME B30.17 Overhead and Gantry Cranes (Top Running Bridge, Single Girder, Underhung Hoist)
 - ASME HST-1 Performance Standard for Overhead Electric Chain Hoists
- Society of Automobile Engineers (SAE) International
 - SAE J123 Surface Discontinuities on Bolts, Screws, and Studs in Fatigue Applications
- ASTM INTERNATIONAL (ASTM)
 - ASTM A 275/A 275M Standard Test Method for Magnetic Particle Examination of Steel Forgings
 - ASTM A 668/A 668M Standard Specification for Steel Forgings, Carbon and Alloy, for General Industrial Use

- ASTM A 1023/A 1023M Standard Specification for Stranded Carbon Steel Wire Ropes for General Purposes
- CRANE MANUFACTURERS ASSOCIATION OF AMERICA (CMAA)
CMAA # 74 Specifications for Top Running & Underrunning Single Girder Electric Overhead Traveling Cranes Utilizing Under Running Trolley Hoist
- MATERIAL HANDLING INDUSTRY OF AMERICA INC (MHIA)
MHI MH27.1 Specifications for Underhung Cranes and Monorail Systems
- NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
NEMA ICS 8 Industrial Control and Systems Crane and Hoist Controllers
NEMA MG 1 Standard for Motors and Generators
- UNDERWRITERS LABORATORIES (UL)
UL 1004 Electric Motors
- NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
NFPA 70 National Electrical Code (NEC)
- NAVAL FACILITIES ENGINEERING COMMAND (NAVFAC)
NAVCRANECENINST 11450.2 Design of Navy Shore Weight Handling Equipment
NAVFAC P-307 Management of Weight Handling Equipment
N3258A-07-004 Standing Crane Alteration for replacement of Electric Chain Hoists
- Unified Facilities Guide Specifications
UFGS 41 22 23.19, Monorail Hoists

1.2 Verification of Dimensions

The crane contractor is responsible for the coordination and proper relation of his work to the building structure and to the work of all trades and sub-contractors. Verify dimensions of the building that relate to installation of the monorail system and notify the contracting officer of any discrepancy before finalizing the crane order.

1.3 Trade Coordination

The crane contractor is responsible for the coordination of his work with the work of all trades involved and as it relates to the building structure and crane rail. Verify all building and rail dimensions that relate to installation of the monorail system and notify the contracting officer of any discrepancy prior to ordering the bridge systems.

1.4 Submittals

The contractor shall submit to the contracting officer all items of technical documentation listed hereinafter. Government approval is required for all submittals. The contractor shall ensure that all submittals are entirely legible and suitable for reproduction. Compliance with the requirements of this specification will be determined by a review of the design and construction submittals by the contracting officer and by field inspection.

SD-01 Preconstruction Submittals

Within 21 days of contract award, submit an initial crane milestone schedule developed by the

crane contractor which identifies key milestone events in the design and installation of the hoist/s. At a minimum, the schedule shall include the following:

- a. General Arrangement and Design Submittals
- b. Fabrication Initiation
- c. Fabrication Complete
- d. Crane Delivery
- e. Crane Installation
- f. Field Acceptance Test
- g. Crane Acceptance
- h. Completion of Warranty

SD-02 Drawings

SD-02.G General Arrangement Drawings

The hoist shall be shown in plan, elevation, and end views to demonstrate proper interface with the facility building. All major features of the monorail crane systems shall be shown including: clearances, lifts, hook approaches on both sides, and maximum wheel loads. In addition, estimated weights shall be shown for the completely assembled crane.

SD-02.E Electrical Drawings

These drawings shall show the electrical layout of the crane including, but not limited to, fuse ratings, transformer ratings, and motor horsepower.

SD-02.M Mechanical Drawings

These drawings shall show the list of materials and fabrication details.

SD-02.S Structural Drawings

These drawings shall show the list of materials and fabrication details including all weldments, fastener joint details, and size of all structural members.

SD-03 Product Data

Manufacturer's catalog data shall be provided for all major components of the hoist. The catalog cuts shall be marked-up or supplemented with additional sheets to clearly identify the model or size, selected options, features, and/or modifications to demonstrate compliance with specification requirements. Catalog cuts which show modifications beyond the standard options and all supplemental pages shall bear original signatures and dates of the equipment manufacturer's authorized representative. Each catalog cut and each supplemental sheet shall clearly identify the item to which it applies. All catalog cuts shall be submitted in files viewable in Adobe Acrobat. The contractor shall submit for approval the catalog cuts listed below (as applicable):

SD-03.M Mechanical Product Data

- | | |
|----------|--|
| SD-03.M1 | Complete hoist/trolley units |
| SD-03.M2 | Brakes, including (as applicable) torque and air gap setting ranges (with minimum and maximum tolerances) and brake minimum lining thickness |
| SD-03.M3 | Hooks and load blocks |

SD-03.E Electrical Product Data

- | | |
|----------|-----------------------------|
| SD-03.E1 | Pendant push-button station |
|----------|-----------------------------|

SD-03.S Structural Product Data

Not applicable for this specification

SD-04 Samples

Not applicable for this specification.

SD-05 Design Data

These calculations shall demonstrate compliance with all design requirements. Design data will not be approved if their evaluation/review is dependent on data or information not previously approved. All variables shall be listed and defined at the beginning of each calculation section; variables shall be in accordance with required references. The design data shall include sufficient information so that they may be approved without reference to detail (shop) drawings.

SD-05S Structural Calculations

SD-05M Mechanical Calculations

SD-05E Electrical Calculations

SD-05.E1 Electrical schematics including layout and sizing information

SD-06 Test Reports

SD-06.T1 Hook Non-Destructive Test (NDT) Report
Refer to section 2.1.4.2 for hook NDT requirements

SD-07 Certificates

All certifications shall be dated and shall bear the original signature (above the printed name) of the authorized representative of the contractor or the manufacturer of the items or equipment being certified. Each certification shall clearly identify the hoist, drives, components, and location (as applicable) to which it applies.

SD-07.1 Chain

The contractor shall provide the chain manufacturer's certification that the chain applicable standards for size, strength, and testing. Certification shall be traceable to the crane.

SD-07.2 Testing

The contractor shall certify the crane and support systems are capable of being load tested semi-annually up to 131.25% of the rated capacity without any detrimental effects.

SD-07.3 Loss of Power Test

The contractor shall certify that the crane may be tested annually for loss of power (i.e. while hoisting the load, the power shall be removed from the crane) without detrimental effect.

SD-07.4 Welding Certifications

Not applicable for this specification

SD-07.5 Design Review by Professional Engineer

Not applicable for this specification.

SD-8 Manufacturer's Instructions

SD-08.1 Crane Installation Plan

The contractor shall submit a plan detailing the logistics involved in the removal and installation of the hoist. The plan shall include, as a minimum, detailed sequence of lifts, rigging sketch(s) with details of rigging equipment's and methods of attachment to the component being lifted for installation. The plan shall be submitted by the contractor, for review by the Contracting Officer a minimum of 30 days prior to mobilization. The construction crane and rigging gear shall comply with OSHA requirements and any local requirements. Lifts of all major components for hoist installation are considered to be critical lifts and include any lifts performed by equipment such as forklifts and jacks. Actual locations of center of gravity and location of lifting points for components shall be provided with the crane installation plan.

NOTE: On site changes of the plan are not allowed without Government review.

SD-08.2 Training Course Outline

The contractor shall prepare and submit to the Contracting Officer for approval, a training course outline. The outline shall contain enough detail for the Government to determine that all topics are adequately covered as prescribed in section 1.9 of this specification.

SD-09 Manufactures Tests

SD-09.1 Field Testing

The contractor shall perform testing as described further in this scope. Should the contractor be P-307 qualified (highly recommended) then the contractor shall sign all applicable inspection and testing forms for inspector and test director. Copies of contractor personnel qualified to P-307 shall be provided for file retainment. Any deviations to the field test required by the contractor must be approved by the Contracting Officer.

SD-10 Operation and Maintenance Data

The contractor shall submit crane maintenance requirements, including, but not limited to weekly, monthly, semi-annual, and annual required maintenance items.

1.5 Quality Assurance

1.5.1 Manufacturer Qualification

Hoist, including sub-system components manufactured by vendors, must be designed and manufactured by a company with a minimum of 5 years of specialized experience in designing and manufacturing the type of overhead crane required to meet requirements of the contract documents and conforming to ASME B30.17.

1.5.2 Certifications

- a. Semi-annual overload/safe for testing certification that the hoist, hook, and trolley systems are safe to test on a semi-annual basis with a load test of 131.25% (125% +5% -0%) of rated capacity with no detrimental effects.
- b. Submit a loss of power (panic test) certificate stating that a test may be performed in which power is removed from the crane while the hoist, bridge and trolley are in operation to simulate a loss of power.

1.5.3 Drawings: Monorail System

Submit shop drawings showing the general arrangement of all components in plan, elevation, and end views; hook approaches on both sides, clearances and principal dimensions, assemblies of hoist, and trolley drives, motor nameplate data, overcurrent protective device ratings, and electrical schematic drawings. Include weights of components and maximum trolley wheel loads and spacing.

Shop drawing quality must be equivalent to the contract drawings. Drawings must be reviewed, signed and sealed by a licensed professional engineer.

Provide integral schedule of crane components on each drawing. Provide maximum wheel loads (without impact) and spacing imparted to the monorail beam. Indicate the trolley speeds along the monorail beam and the hoist lifting speeds; all speeds indicated are speeds with hoist loaded with rated crane capacity load.

1.5.4 Design Data: Load and Sizing Calculations

Not applicable for this specification.

1.5.5 Welding Qualifications and Procedure
Not applicable for this specification.

1.5.6 Pre-Erection Inspection
Before erection, the Contractor shall inspect the trolley and hoist systems and components at the job site to determine compliance with specifications and manufacturer's data and shop drawings as approved. Notify the contracting officer 14 days before the inspection. Provide written notice of compliance to the contracting officer before proceeding to erection.

1.6 Delivery, Storage, and Handling

1.6.1 Delivery and Storage

Inspect material delivered to the site for damage, unload and store with minimum handling. Store materials on-site in enclosures or under protective coverings. Protect materials not suitable for outdoor storage to prevent damage or corrosion during periods of inclement weather, including subfreezing temperatures, precipitation, and high winds. Store materials susceptible to deterioration by direct sunlight under cover and avoid damage due to high temperatures. Do not store materials directly on the ground. When special precautions are required, prominently and legibly stencil instructions for such precautions on outside of equipment or its crating.

1.6.2 Handling

Handle materials in such a manner as to ensure delivery to final location in undamaged condition. Make repairs to damaged materials at no cost to Government.

1.7 Maintenance

Submit hoist and trolley system maintenance requirements to Contracting Officer.

1.8 Warranty

Provide a one year warranty period for all parts and labor on all installed equipment with an effective start date of the acceptance date of the monorail crane by the government.

1.9 Training

Provide on-site training class for up to 5 personnel with training supplies and hands-on training. Government shall provide classroom space and any audio/video equipment required. Notify contracting officer 14 days before the training class. Training shall include operation of hoist and trolley, maintenance requirements, and general troubleshooting.

2 Products

2.1 Hoist

Provide one 4,000 lbs. rated capacity Coffing BEWN2-10232-RT22D2-11450.2 or equivalent electrically driven hoist with manual trolley to ASME HST-4 H3 Duty Class C for indoor service except as modified and supplemented in this section. Hoist shall be controlled by pendant style push button controller, shall be a chain hoist and shall be equipped with a hoist monitor card. Monitor car with ability for Bluetooth functionality in the future without replacement is preferred.

Chain hoist shall utilize welded link load chain. A chain stop or dead end connection shall be provided to prevent the load chain from running out of the hoist at its fully extended position

Reference in publications to the "authority having jurisdiction" means the "Contracting Officer."

The hoist shall be designed to operate in an indoor environment with an ambient temperature of 80 degrees Fahrenheit. Operation of the hoist/s shall not appreciably increase ambient noise level and shall in no case exceed 90 dB from the operator's location when loaded at rated capacity and unloaded.

2.1.1 Power Characteristics

Provide crane operating from a 208/240 VAC, 30 Amp, 60 Hz single-phase power source.

2.1.2 Capacity

Provide one hoist with a rated capacity of 4,000 pounds. Mark the rated capacity in pound units with two sets of markings located on each side of the hoist body. Capacity marks must be clearly legible to the operator at ground level. Mark the rated capacity in pounds on both sides of the hook block.

2.1.3 Speeds and Crane Control Parameter Settings

Provide two speeds (dual speed) for hoist motions within the ranges as shown below.

- a. Hoist – dual speed hoist with a speed of 22/7.33 feet per minute (fpm) (fast speed/slow speed)

Feet per minute speeds above are based off part number provided. Equivalent hoist speeds may be different. Provided max and min speeds outside above shall be adjustable to prevent hard starts and skewing.

Motors shall be a minimum of 60 minute duty rated motors.

Motor insulation shall be Class F minimum

Motors shall be equipped with thermal overload protection and overcurrent protection.

Motors shall be energized at a frequency not exceeding 60 Hz at the highest speed.

A suspension hook, connecting the hoist unit to the trolley, shall not be used.

2.1.3.1 Load Block

Construct the load block so that the hook and hook nut may be removed from the load block without disassembly of the block. Provide hook and hook nut forged from steel conforming to ASTM A 668/A 668M. The hook shall rotate freely with 131.25% of rated load.

Mark hoist capacity in pounds on both sides of the load block.

2.1.3.2 Hook and Hook Nut

The hook shall be single barb forged carbon steel. The hook nut shall be secured to the hook by a commercial standard removable and reusable means (tack-welding is prohibited). The hook shall be provided with a safety latch and be capable of a smooth 360 degree rotation with test load. The hook and hook nut shall be uncoated. The hook shall be uniquely marked in a permanent fashion that is traceable to the NDT certification. The nut shall be marked to match with the hook. The markings shall be visible when the hook and hook nut are assembled

on the hook block. Documentation of hook material shall be provided to the Contracting Officer.

An easily removable and reusable means shall be provided to positively secure the hook nut to the hook shank. Shank and nut threads shall have a Class 2 fit, per ASME B1.1.

Hooks shall have a means to prevent an attached item from coming free under a slack condition.

Hooks shall not be welded, except by the original hook manufacturer prior to heat treatment

Hooks and nuts shall be proof tested as an assembly in accordance with the hook proof test requirements of ASME B30.10

A suspension hook, connecting the hoist unit to the trolley, shall not be used.

Hooks shall be non-destructively tested (NDT) in accordance with NAVFAC P-307. Inspect each hook over the entire surface area by magnetic particle inspection IAW NAVFAC P-307.

- a. Procedure: Conduct magnetic particle inspection in accordance with ASTM A 275/A 275M with the following restrictions:
 1. DC yokes (including switchable AC/DC yokes used in the DC mode) and permanent magnet yokes must not be used.
 2. Do not use automatic powder blowers or any other form of forced air other than from a hand-held bulb for the application or removal of dry magnetic particles.
 3. Remove all arc strikes.
 4. Equipment ammeters must have an accuracy of +/- 5 percent of full scale (equipment ammeter accuracy other than that stated is acceptable provided the MT procedure states that a magnetic field indicator is used to establish and verify adequate field strength for all aspects of the inspection.)

Conduct this inspection at the factory of the hook or hoist manufacturer. It is recommended to utilize Crosby or Gunnebo Johnson hooks as these manufacturer's procedures are approved by the Navy Crane Center and require only the inspection report from these companies. Alternately, a recognized independent testing lab may conduct the inspections if equipped and competent to perform such a service, and if approved by the Contracting Officer. The performing organization must provide a written statement of certification to ASTM E 543, have the procedures used for testing of the hook reviewed and approved by an independent Level III examiner, and submit the approved procedures and certification along with copies of the certifications of the Level II and Level III examiners to the Contracting Officer with the test report.

- a. Acceptance Criteria: Defects found on the hook will result in rejection of defective items for use on furnished hoist. For this inspection, a defect is

defined as a linear or non-linear indication for which the largest dimension is greater than 1/16 inch. Acceptance criteria for external hook threads may be based on the acceptance criteria in SAE standard J123.

- b. Test Report: Provide a test report of the magnetic particle inspection of each hook and submit to and secure approval from the contracting officer prior to final acceptance of hoist installation. Test reports must be certified by the testing organization.
- c. Weld Repair: Weld repairs for defects on hooks or hook nuts are not acceptable.

2.1.3.3 Chain

Chain should be stainless steel

Chain shall have welded link load chain

A Chain bucket shall be provided designed for the hoist by the OEM

2.1.3.4 Hoist Brake

Provide both a mechanical load brake and an electro-mechanical brake (shoe or disc). The mechanical load brake and the electro-mechanical brake must each, independently, stop and hold 131.25% of rated capacity. The electro-mechanical brake must be adjustable to 50% of its rated capacity, and must have an externally accessible, self-return to ON means of manual release. Procedures for manually releasing the electro-mechanical brake from the OEM shall be provided to the Contracting Officer

2.1.4 Trolley

Configure trolley such that the trolley has an extended wrap-around trolley frame that prevents the trolley from dropping more than one inch in the event of an axle or wheel failure. No hollow stamped steel wheels are permitted. The weight of the new trolley and wheel spacing shall not increase the shear or moment in the existing bridge beam (and the existing wheel spacing and maximum wheel loads shall be provided)

2.1.4.1 Trolley Drive

Trolley shall be manual

2.1.4.2 Trolley Brake

Not applicable for this specification

2.2 Structural

2.2.1 Welding

Not applicable for this specification.

2.2.2 Structural Bolted Connections

Major structural bolted connections shall be designed and installed in accordance with RCSC Specification for structural joints using high-strength bolts.

2.3 Mechanical

2.3.1 Threaded Fasteners

All base-mounted and flange-mounted components and all mechanical connections subjected to calculable loads shall be fastened with SAE J429, Grade 5 or Grade 8

fasteners, ASTM F436 washers, and SAE J995 Grade 5 or Grade 8 nuts. Mounting fasteners from flange-mounted components, including keeper bars, may be installed into tapped holes provided that adequate thread engagement is provided to develop the full tensile strength of the fastener. All nuts shall have a minimum of one thread pitch of the bolt protruding above the nut top surface.

2.3.2 Bumpers and stops
Not applicable for this specification

2.4 Electrical

The design, selection, rating, and installation of the electrical portions of the hoist and its accessories must conform to the requirements of NEMA ICS 8, ASME HST-1, NFPA 70, and other requirements specified herein.

NFPA 70, the National Electrical Code (NEC), CMAA #74, ASME HST-4, SAE J1292, and various CFRs, prescribe the criteria that apply to virtually all electrical components of cranes. Other criteria beyond those are addressed herein. Some elements of those design criteria are recommendations (“should” statements), but are considered mandatory by this scope.

Electrical connections shall be installed in accordance with NFPA 70 sections 110.14 or 430.9, as applicable, or as recommended by the device manufacturer.

All electrical components are required to be located so they are easily accessible for inspection and maintenance.

The crane contractor must furnish and install all electrical equipment on the crane conforming to NEMA ICS 8, including motors, electrically released brakes, switches, crane controllers, panels, operating station, wiring system, cables, and monorail electrification up to and including the crane disconnect switch as applicable.

Provide Visual indicating panel assembly with lights sized and positioned to be visible from the ground. LED type lights shall be used for all indicator lights. Provide a white light to indicate that power is available on the load side of the crane disconnect and a blue light to indicate that the main contactor is energized. A red motor over temperature pilot light is required if there is a motor over temperature device. This informs the operator the motor got too hot and is the reason the hoist is not hoisting (until the motor cools down). It is a light that triggered by the thermal overload device. Voltage of the lights must be 115 VAC. Provide nameplates that are legible from ground level. The name plates may be posted on a tag above the pendant. The nameplates must read, in their respective order, "POWER AVAILABLE" and "CRANE ENERGIZED". Energization of the "POWER AVAILABLE" light must be supplied by a separate, fused transformer

For hoists utilizing brake failure detection, a dedicated indicating light shall be provided to alert the operator of a brake failure.

Provide for lockout/tagout of all hazardous energy sources.

A separate grounding wire, sized in accordance with Section 250-122 of NFPA 70, shall be routed with all ungrounded conductors. All wiring shall be numbered or tagged at all connection points.

2.4.1 Pendant Control

Mainline contactor along with the Stop-Start, Off-On, or Power Off-Power-On circuitry is designed to remove power from the drive motors, brakes, and control circuit. The control circuit shall not be capable of being operated unless the On button, Power On button or Start button is depressed.

Provide a festoon or cable reel system to provide power to the hoist from the disconnect.

For Festoon systems:

Cable loops for festoon systems shall not extend low enough to come into contact with any obstructions.

Twenty percent of the control conductors included in a new festoon conductor system or cable carrier system should be spares.

Conductors used in a festooned or cable carrier system shall be designed to be used in these types of electrification systems.

A method of strain relief shall be provided with all pendant pushbutton stations to protect the electrical conductors from strain. Method shall be stainless steel wire rope strain lead having a diameter of 1/8 inch (minimum) or an internal strain relief cable built into the multiconductor cable.

The minimum wire size of multiconductor flexible cords for pendant pushbutton stations shall be #16 AWG.

For lightning protection the ground conductor in electrification system and the runway electrification system shall be sized to be 2/0 AWG (minimum) for cable reel systems, festoon systems, and cable carrier systems

Pendant pushbutton stations shall have a grounding conductor between a ground terminal in the station and the crane.

The pendant pushbutton station shall be rated appropriately by NEMA for the environment in which it will be used in with the exterior being made of non-conductive material.

Pendant pushbuttons shall be spring return to the OFF position.

Stepped control and stepped pushbuttons for hoist functions shall be provided.

The maximum voltage in pendant pushbutton stations shall be 150 Volts AC or 300 volts DC.

2.4.2 AC Controls

Provide dynamic braking for all electric drives. Speed control must be of the two-step fixed speed type for the hoist and trolley functions. The hoist brakes must set only after the associated controller decelerates the motor to a controlled stop.

The use of definite purpose contactors is prohibited. All contactors must be NEMA rated. Feed control circuits from a single phase, air cooled, double wound transformer with a grounded metal screen between the primary and secondary windings of the transformer.

2.4.3 Protection

Protection must not be less than that required by NFPA 70.

Under voltage protection shall be provided for all motor control systems

2.4.4 Limit Switches

Geared upper (primary) and lower limit switches shall be provided for the hoist electric drives (rope guided actuated limit switches are not acceptable).

When the geared upper (primary) limit is reached, the operator shall still be able to lower the block out of the geared upper limit switch. Lowering of the block shall automatically reset the geared upper (primary) limit switch.

When the lower limit is reached, the operator shall still be able to raise the block. Raising of the block shall automatically reset the limit switch.

The primary upper limit switch shall be set at the maximum practical hook height but not lower than high hook position shown in the contract drawings. The lower limit switch shall be set at a position such that the hook is approx. 18" above the highest grade of the lowest floor.

2.4.5 Hoist overload limiting device

Provide hoist overload limiting device that is adjustable between 80 and 150 percent of hoist capacity, initially set to 100% of rated capacity.

Provide a maintained keyed bypass switch on the control panel for bypassing the overload limiting device for annual load testing.

Hoist drive shall be equipped with a motor overtorque limit to lock out the hoist and prevent gross overload of the hoist. The overtorque limit should be set such that an overload test can be performed without tripping the overtorque fault.

2.4.6 Overload Protection

Provide overload protection in the form of circuit breakers or fuses for each motor, motor controller, and branch circuit conductor in accordance with the NEC.

2.4.7 Enclosures

Provide enclosures for control panels, controls, and brakes in accordance with NEMA 250 Classification Type 12.

Provide a non-resettable hour meter, readable from the exterior of the main control panel, to indicate the elapsed number of hours the hoist is energized.

2.4.8 Electrification

Pendant and cable reel/festoon system shall have at least 20% spare wires available.

2.5 Crane Painting

Factory paint electrical and mechanical equipment in accordance with the manufacturer's best standard practice (for the specified environment). The monorail beam runs indoors in a mechanical room and outdoors under a roof in a loading dock area.

2.6 Identification Plates

Provide non-corrosive metal identification plates with clearly legible permanent lettering giving the manufacturer's name, model number, serial number, capacity in pound units, and other essential information or identification.

Execution

2.7 Removal and Installation

Remove and install the hoist, complete in accordance with the approved submittals and in condition to perform the operational and acceptance tests.

2.8 Erection Services

Provide supervisory erection services from the hoist system manufacturer if available.

2.9 Field Quality Control

2.9.1 Post-Installation Inspection

After installation, the crane contractor, the contracting officer, and a representative of the activity crane maintaining organization shall jointly inspect the hoist and components to determine compliance with specifications and approved submittals. Notify the contracting officer 14 days before the inspection. NAVFAC P-307 Annual Maintenance, Inspection and Specification Record shall be documented with all applicable checks for the entire crane as part of acceptance prior to the allowance of testing. A list of deficient items, including a determination of criticality will be provided to the crane contractor for corrective action. Outstanding items shall be noted for correction during the inspection. Items considered critical (load bearing, load controlling, or operational safety devices) shall be corrected prior to further testing. Upon correction, provide a report of the inspection indicating the bridge systems are considered ready for operational tests.

2.9.2 Field Testing

After installation and inspection, load test the hoist and trolley systems as specified in enclosure 1. Load testing shall be directed by government crane maintaining organization personnel. Test the system in service to determine that each component of the system operates as specified, is properly installed and adjusted, and is free from defects in material, manufacturing, installation, and workmanship. Rectify all deficiencies disclosed by testing and retest the system or component to prove the monorail system is operational.

Furnish operating personnel, instruments, and all other necessary apparatus. The government shall furnish to the crane contractor certified test weights and rigging gear for load testing.

Testing shall include a no-load operational test, 100% (+0%, -5%) load test, and a 125% (+5%, -0%) overload test. Record any deficiencies found during any testing. Secure from testing if deficiencies to load bearing, load controlling, or operational safety devices are found.

ENCLOSURE 1): Field Testing Report for BridgeCrane

Supported Command: _____ Date of Inspection: _____
Contract No.: _____
Crane USN: _____

Names and Titles of Participating Government, Supported Command, and Contractor Representatives:

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

General instructions

The crane and supporting structure shall be tested in accordance with the applicable paragraphs of this guide. Assure that all components and features that affect load bearing, load controlling, or operational safety devices of the cranes are properly tested. Perform all the tests described below along with any other tests required to verify that the crane meets the contract requirements including any contract modifications. The sequence of testing is at the option of the contractor's test director except that the no-load test shall be performed first. Determine the tools, meters, measuring devices, etc. that are required to perform the test and have them available at the site.

Inspection Codes: SAT = Satisfactory, meets specification and/or design requirements
UNSAT = Unsatisfactory, does not meet specification and/or design requirements

Equipment monitoring

During testing, check for the proper operation and condition of safety devices, electrical components, mechanical equipment, and structural assemblies. Immediately report any observed defects critical to continuing testing to the test director, who shall suspend the testing until the deficiency is corrected.

Hooks

Record hook serial number. Install two tram points on hook throat and measure the distance between these tram points (+/- 1/64 inch). Record this base dimension. Measure the distance between tram points before and after load test. An increase in the throat opening from the base measurement is cause for rejection. Ensure hook safety latches are functioning correctly.

Load Hook Unique Identification Number _____

Load Hook Nut Unique Identification Number _____

Load Hook Tram Measurement - Before Load Testing _____

Load Hook Safety Latches () SAT () UNSAT

Preparing for load test

-Select a safe test area and clear all traffic, unauthorized personnel, and equipment from test area. This test area shall be roped off or otherwise secured to prevent entry of unauthorized personnel and equipment.

-All rigging used in crane load testing shall conform to NAVFAC P-307 requirements. Note that test loads INCLUDE the weight of rigging used to connect them to the load block.

-Ensure brakes are set within OEM parameters

-Ensure all gearboxes are adequately filed with lubrication and other components (wire rope, bearings, etc) are adequately lubricated.

Precautions during load testing

- 0 Observe extreme caution at all times.
- 0 Personnel shall remain clear of suspended loads and areas where they could be struck in the event of component failure. At no time shall personnel be under any suspended load.
- 0 Raise test load only to a height sufficient to perform the test.
- 0 Check entire operating envelope to ensure there are no obstructions.

No-Load Test

Raise and lower the hook through the full range of normal travel at slow speed for two complete cycles. Verify hoist operating speeds are within specification ranges

Raise and lower the hook through the full range of normal travel at fast speed for two complete cycles. Verify hoist operating speeds are within specification ranges

Hoist fast speed _____ fpm Hoist slow speed _____ fpm

Verify proper operation of hoist limit switches including bypassing primary upper limit switches and testing function of secondary upper limit switch.

Lower Limit Switch () SAT () UNSAT
 Primary Upper Limit Switch () SAT () UNSAT
 Secondary Upper Limit Switch () SAT () UNSAT

Operate the trolley in each direction the full distance between end stops using both slow and fast speed. Perform one complete cycle to check various speeds and verify proper brake operation. Verify satisfactory performance of the bumpers and the alignment of the bumpers with the end stops by contacting the trolley bumpers with their end stops in slow speed.

Trolley fast speed _____ fpm Trolley slow speed _____ fpm
 Trolley bumpers () SAT () UNSAT

Ensure all indicator lights function properly. () SAT () UNSAT

Hoist and trolley function:

Hoist () SAT () UNSAT
 Trolley () SAT () UNSAT

Hoist Load Testing**100% of rated capacity (+0%, -5%) load test**

Record the actual load test weight (including rigging gear): _____ lbs.

Hoist functionality test

Operate the hoist the full lift height for 5 minutes using both hoist speeds stopping at least once in each direction to verify proper brake operation.

SAT UNSAT

Trolley functionality test

Operate the trolley function the full distance of the bridge girder in both directions for two cycles (two runs in each direction) using both trolley speeds stopping at least once in each direction to verify proper brake operation. Observe for any binding and verify proper brake operation.

SAT UNSAT

125% of rated capacity (+5%, -0%) load test

Record the actual load test weight (including rigging gear): _____ lbs.

Hoist overload limiting device

Attempt to lift the test load and ensure hoist overload limiting device does not allow load to be lifted. Bypass hoist overload limiting device.

SAT UNSAT

Dynamic test

Raise and lower test load and visually observe smooth control. Stop the load during hoisting and lowering to verify that the brakes stop and hold the load.

SAT UNSAT

Hoist brake test

Raise the test load approximately one foot and hold for 10 minutes. Ensure there is no vertical movement of the load. Rotate load and hook 360 degrees clockwise and 360 degrees counterclockwise to check bearing operation.

SAT UNSAT

Raise test load approximately 5 feet. With neither pushbutton depressed, release (by hand) the electro-mechanical brake. The mechanical load brake shall hold the test load. Again with the electro-mechanical brake in the released position, start the test load down (slow speed) and then release the pushbutton as the test load lowers. The mechanical load brake must prevent the test load from accelerating.

SAT UNSAT

Reset the primary holding brake

SAT UNSAT

Hoist Loss of Power (Panic Test) Certificate

Raise the test load to approximately 5 feet. While slowly lowering the test load, disconnect the crane's power source. Verify that the test load does not lower and that the electro-mechanical brake is set.

SAT UNSAT

Section 00010 - Solicitation Contract Form

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001	H-100 HOIST REPLACEMENT FFP REPLACE HOIST IN HOSPITAL BUILDING 100 AT NAS CORPUS CHRISTI, TX. PERIOD OF PERFORMANCE WILL BE A TOTAL OF 60 CALENDAR DAYS INCLUDING DESIGN, DESIGN APPROVAL, AND CONSTRUCTION. FOB: Destination	1	Job		

NET AMT

INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

CLIN	INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
0001	Destination	Government	Destination	Government

DELIVERY INFORMATION

CLIN	DELIVERY DATE	QUANTITY	SHIP TO ADDRESS	UIC
0001	20-JUN-2016	1	PWD CORPUS CHRISTI INSPECTOR OF RECORD 8851 OCEAN DR, BLDG. 19 CORPUS CHRISTI TX 78419-5525 361-961-3397 FOB: Destination	N44215

Section 00100 - Bidding Schedule/Instructions to Bidders

CLAUSES INCORPORATED BY FULL TEXT

52.215-1 INSTRUCTIONS TO OFFERORS--COMPETITIVE ACQUISITION (JAN 2004)

(a) Definitions. As used in this provision--

“Discussions” are negotiations that occur after establishment of the competitive range that may, at the Contracting Officer's discretion, result in the offeror being allowed to revise its proposal.

“In writing or written” means any worded or numbered expression which can be read, reproduced, and later communicated, and includes electronically transmitted and stored information.

“Proposal modification” is a change made to a proposal before the solicitation's closing date and time, or made in response to an amendment, or made to correct a mistake at any time before award.

“Proposal revision” is a change to a proposal made after the solicitation closing date, at the request of or as allowed by a Contracting Officer as the result of negotiations.

“Time”, if stated as a number of days, is calculated using calendar days, unless otherwise specified, and will include Saturdays, Sundays, and legal holidays. However, if the last day falls on a Saturday, Sunday, or legal holiday, then the period shall include the next working day.

(b) Amendments to solicitations. If this solicitation is amended, all terms and conditions that are not amended remain unchanged. Offerors shall acknowledge receipt of any amendment to this solicitation by the date and time specified in the amendment(s).

(c) Submission, modification, revision, and withdrawal of proposals. (1) Unless other methods (e.g., electronic commerce or facsimile) are permitted in the solicitation, proposals and modifications to proposals shall be submitted in paper media in sealed envelopes or packages (i) addressed to the office specified in the solicitation, and (ii) showing the time and date specified for receipt, the solicitation number, and the name and address of the offeror. Offerors using commercial carriers should ensure that the proposal is marked on the outermost wrapper with the information in paragraphs (c)(1)(i) and (c)(1)(ii) of this provision.

(2) The first page of the proposal must show--

(i) The solicitation number;

(ii) The name, address, and telephone and facsimile numbers of the offeror (and electronic address if available);

(iii) A statement specifying the extent of agreement with all terms, conditions, and provisions included in the solicitation and agreement to furnish any or all items upon which prices are offered at the price set opposite each item;

(iv) Names, titles, and telephone and facsimile numbers (and electronic addresses if available) of persons authorized to negotiate on the offeror's behalf with the Government in connection with this solicitation; and

(v) Name, title, and signature of person authorized to sign the proposal. Proposals signed by an agent shall be accompanied by evidence of that agent's authority, unless that evidence has been previously furnished to the issuing office.

(3) Submission, modification, or revision, of proposals.

(i) Offerors are responsible for submitting proposals, and any modifications, or revisions, so as to reach the Government office designated in the solicitation by the time specified in the solicitation. If no time is specified in the solicitation, the time for receipt is 4:30 p.m., local time, for the designated Government office on the date that proposal or revision is due.

(ii)(A) Any proposal, modification, or revision received at the Government office designated in the solicitation after the exact time specified for receipt of offers is "late" and will not be considered unless it is received before award is made, the Contracting Officer determines that accepting the late offer would not unduly delay the acquisition; and--

(1) If it was transmitted through an electronic commerce method authorized by the solicitation, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of proposals; or

(2) There is acceptable evidence to establish that it was received at the Government installation designated for receipt of offers and was under the Government's control prior to the time set for receipt of offers; or

(3) It is the only proposal received.

(B) However, a late modification of an otherwise successful proposal that makes its terms more favorable to the Government, will be considered at any time it is received and may be accepted.

(iii) Acceptable evidence to establish the time of receipt at the Government installation includes the time/date stamp of that installation on the proposal wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

(iv) If an emergency or unanticipated event interrupts normal Government processes so that proposals cannot be received at the office designated for receipt of proposals by the exact time specified in the solicitation, and urgent Government requirements preclude amendment of the solicitation, the time specified for receipt of proposals will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal Government processes resume.

(v) Proposals may be withdrawn by written notice received at any time before award. Oral proposals in response to oral solicitations may be withdrawn orally. If the solicitation authorizes facsimile proposals, proposals may be withdrawn via facsimile received at any time before award, subject to the conditions specified in the provision at 52.215-5, Facsimile Proposals. Proposals may be withdrawn in person by an offeror or an authorized representative, if the identity of the person requesting withdrawal is established and the person signs a receipt for the proposal before award.

(4) Unless otherwise specified in the solicitation, the offeror may propose to provide any item or combination of items.

(5) Offerors shall submit proposals in response to this solicitation in English, unless otherwise permitted by the solicitation, and in U.S. dollars, unless the provision at FAR 52.225-17, Evaluation of Foreign Currency Offers, is included in the solicitation.

(6) Offerors may submit modifications to their proposals at any time before the solicitation closing date and time, and may submit modifications in response to an amendment, or to correct a mistake at any time before award.

(7) Offerors may submit revised proposals only if requested or allowed by the Contracting Officer.

(8) Proposals may be withdrawn at any time before award. Withdrawals are effective upon receipt of notice by the Contracting Officer.

(d) Offer expiration date. Proposals in response to this solicitation will be valid for the number of days specified on the solicitation cover sheet (unless a different period is proposed by the offeror).

(e) Restriction on disclosure and use of data. Offerors that include in their proposals data that they do not want disclosed to the public for any purpose, or used by the Government except for evaluation purposes, shall--

(1) Mark the title page with the following legend: This proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed--in whole or in part--for any purpose other than to evaluate this proposal. If, however, a contract is awarded to this offeror as a result of--or in connection with-- the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in sheets [insert numbers or other identification of sheets]; and

(2) Mark each sheet of data it wishes to restrict with the following legend: Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this proposal.

(f) Contract award. (1) The Government intends to award a contract or contracts resulting from this solicitation to the responsible offeror(s) whose proposal(s) represents the best value after evaluation in accordance with the factors and subfactors in the solicitation.

(2) The Government may reject any or all proposals if such action is in the Government's interest.

(3) The Government may waive informalities and minor irregularities in proposals received.

(4) The Government intends to evaluate proposals and award a contract without discussions with offerors (except clarifications as described in FAR 15.306(a)). Therefore, the offeror's initial proposal should contain the offeror's best terms from a cost or price and technical standpoint. The Government reserves the right to conduct discussions if the Contracting Officer later determines them to be necessary. If the Contracting Officer determines that the number of proposals that would otherwise be in the competitive range exceeds the number at which an efficient competition can be conducted, the Contracting Officer may limit the number of proposals in the competitive range to the greatest number that will permit an efficient competition among the most highly rated proposals.

(5) The Government reserves the right to make an award on any item for a quantity less than the quantity offered, at the unit cost or prices offered, unless the offeror specifies otherwise in the proposal.

(6) The Government reserves the right to make multiple awards if, after considering the additional administrative costs, it is in the Government's best interest to do so.

(7) Exchanges with offerors after receipt of a proposal do not constitute a rejection or counteroffer by the Government.

(8) The Government may determine that a proposal is unacceptable if the prices proposed are materially unbalanced between line items or subline items. Unbalanced pricing exists when, despite an acceptable total evaluated price, the price of one or more contract line items is significantly overstated or understated as indicated by the application of cost or price analysis techniques. A proposal may be rejected if the Contracting Officer determines that the lack of balance poses an unacceptable risk to the Government.

(9) If a cost realism analysis is performed, cost realism may be considered by the source selection authority in evaluating performance or schedule risk.

(10) A written award or acceptance of proposal mailed or otherwise furnished to the successful offeror within the time specified in the proposal shall result in a binding contract without further action by either party.

(11) If a post-award debriefing is given to requesting offerors, the Government shall disclose the following information, if applicable:

- (i) The agency's evaluation of the significant weak or deficient factors in the debriefed offeror's offer.
- (ii) The overall evaluated cost or price and technical rating of the successful and the debriefed offeror and past performance information on the debriefed offeror.
- (iii) The overall ranking of all offerors, when any ranking was developed by the agency during source selection.
- (iv) A summary of the rationale for award.
- (v) For acquisitions of commercial items, the make and model of the item to be delivered by the successful offeror.
- (vi) Reasonable responses to relevant questions posed by the debriefed offeror as to whether source-selection procedures set forth in the solicitation, applicable regulations, and other applicable authorities were followed by the agency.

(End of provision)

Section 00600 - Representations & Certifications

CLAUSES INCORPORATED BY FULL TEXT

52.204-8 ANNUAL REPRESENTATIONS AND CERTIFICATIONS (JAN 2016)

(a)(1) The North American Industry Classification System (NAICS) code for this acquisition is [insert NAICS code].

(2) The small business size standard is [insert size standard].

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b)(1) If the provision at 52.204-7, System for Award Management, is included in this solicitation, paragraph (d) of this provision applies.

(2) If the provision at 52.204-7 is not included in this solicitation, and the offeror is currently registered in System for Award Management (SAM), and has completed the Representations and Certifications section of SAM electronically, the offeror may choose to use paragraph (d) of this provision instead of completing the corresponding individual representations and certifications in the solicitation. The offeror shall indicate which option applies by checking one of the following boxes:

() Paragraph (d) applies.

() Paragraph (d) does not apply and the offeror has completed the individual representations and certifications in the solicitation.

(c) (1) The following representations or certifications in SAM are applicable to this solicitation as indicated:

(i) 52.203-2, Certificate of Independent Price Determination. This provision applies to solicitations when a firm-fixed-price contract or fixed-price contract with economic price adjustment is contemplated, unless—

(A) The acquisition is to be made under the simplified acquisition procedures in Part 13;

(B) The solicitation is a request for technical proposals under two-step sealed bidding procedures; or

(C) The solicitation is for utility services for which rates are set by law or regulation.

(ii) 52.203-11, Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions. This provision applies to solicitations expected to exceed \$150,000.

(iii) 52.204-3, Taxpayer Identification. This provision applies to solicitations that do not include the provision at 52.204-7, System for Award Management.

(iv) 52.204-5, Women-Owned Business (Other Than Small Business). This provision applies to solicitations that—

(A) Are not set aside for small business concerns;

(B) Exceed the simplified acquisition threshold; and

- (C) Are for contracts that will be performed in the United States or its outlying areas.
- (v) 52.209-2; Prohibition on Contracting with Inverted Domestic Corporations--Representation.
- (vi) 52.209-5; Certification Regarding Responsibility Matters. This provision applies to solicitations where the contract value is expected to exceed the simplified acquisition threshold.
- (vii) 52.214-14, Place of Performance--Sealed Bidding. This provision applies to invitations for bids except those in which the place of performance is specified by the Government.
- (viii) 52.215-6, Place of Performance. This provision applies to solicitations unless the place of performance is specified by the Government.
- (ix) 52.219-1, Small Business Program Representations (Basic & Alternate I). This provision applies to solicitations when the contract will be performed in the United States or its outlying areas.
- (A) The basic provision applies when the solicitations are issued by other than DoD, NASA, and the Coast Guard.
- (B) The provision with its Alternate I applies to solicitations issued by DoD, NASA, or the Coast Guard.
- (x) 52.219-2, Equal Low Bids. This provision applies to solicitations when contracting by sealed bidding and the contract will be performed in the United States or its outlying areas.
- (xi) 52.222-22, Previous Contracts and Compliance Reports. This provision applies to solicitations that include the clause at 52.222-26, Equal Opportunity.
- (xii) 52.222-25, Affirmative Action Compliance. This provision applies to solicitations, other than those for construction, when the solicitation includes the clause at 52.222-26, Equal Opportunity.
- (xiii) 52.222-38, Compliance with Veterans' Employment Reporting Requirements. This provision applies to solicitations when it is anticipated the contract award will exceed the simplified acquisition threshold and the contract is not for acquisition of commercial items.
- (xiv) 52.223-1, Biobased Product Certification. This provision applies to solicitations that require the delivery or specify the use of USDA-designated items; or include the clause at 52.223-2, Affirmative Procurement of Biobased Products Under Service and Construction Contracts.
- (xv) 52.223-4, Recovered Material Certification. This provision applies to solicitations that are for, or specify the use of, EPA- designated items.
- (xvi) 52.225-2, Buy American Certificate. This provision applies to solicitations containing the clause at 52.225-1.
- (xvii) 52.225-4, Buy American--Free Trade Agreements--Israeli Trade Act Certificate. (Basic, Alternates I, II, and III.) This provision applies to solicitations containing the clause at 52.225- 3.
- (A) If the acquisition value is less than \$25,000, the basic provision applies.
- (B) If the acquisition value is \$25,000 or more but is less than \$50,000, the provision with its Alternate I applies.
- (C) If the acquisition value is \$50,000 or more but is less than \$77,533, the provision with its Alternate II applies.

(D) If the acquisition value is \$77,533 or more but is less than \$100,000, the provision with its Alternate III applies.

(xviii) 52.225-6, Trade Agreements Certificate. This provision applies to solicitations containing the clause at 52.225-5.

(xix) 52.225-20, Prohibition on Conducting Restricted Business Operations in Sudan--Certification. This provision applies to all solicitations.

(xx) 52.225-25, Prohibition on Contracting with Entities Engaging in Certain Activities or Transactions Relating to Iran—Representation and Certification. This provision applies to all solicitations.

(xxi) 52.226-2, Historically Black College or University and Minority Institution Representation. This provision applies to solicitations for research, studies, supplies, or services of the type normally acquired from higher educational institutions.

(2) The following representations or certifications are applicable as indicated by the Contracting Officer:

[Contracting Officer check as appropriate.]

(i) 52.204-17, Ownership or Control of Offeror.

(ii) 52.222-18, Certification Regarding Knowledge of Child Labor for Listed End Products.

(iii) 52.222-48, Exemption from Application of the Service Contract Labor Standards to Contracts for Maintenance, Calibration, or Repair of Certain Equipment--Certification.

(iv) 52.222-52 Exemption from Application of the Service Contract Labor Standards to Contracts for Certain Services--Certification.

(v) 52.223-9, with its Alternate I, Estimate of Percentage of Recovered Material Content for EPA-Designated Products (Alternate I only).

(vi) 52.227-6, Royalty Information.

(A) Basic.

(B) Alternate I.

(vii) 52.227-15, Representation of Limited Rights Data and Restricted Computer Software.

(d) The offeror has completed the annual representations and certifications electronically via the SAM website accessed through <https://www.acquisition.gov>. After reviewing the SAM database information, the offeror verifies by submission of the offer that the representations and certifications currently posted electronically that apply to this solicitation as indicated in paragraph (c) of this provision have been entered or updated within the last 12 months, are current, accurate, complete, and applicable to this solicitation (including the business size standard applicable to the NAICS code referenced for this solicitation), as of the date of this offer and are incorporated in this offer by reference (see FAR 4.1201); except for the changes identified below [offeror to insert changes, identifying change by clause number, title, date]. These amended representation(s) and/or certification(s) are also incorporated in this offer and are current, accurate, and complete as of the date of this offer.

FAR Clause	Title	Date	Change
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Any changes provided by the offeror are applicable to this solicitation only, and do not result in an update to the representations and certifications posted on SAM.

(End of provision)

52.204-10 REPORTING EXECUTIVE COMPENSATION AND FIRST-TIER SUBCONTRACT AWARDS (OCT 2015)

(a) Definitions. As used in this clause:

Executive means officers, managing partners, or any other employees in management positions.

First-tier subcontract means a subcontract awarded directly by the Contractor for the purpose of acquiring supplies or services (including construction) for performance of a prime contract. It does not include the Contractor's supplier agreements with vendors, such as long-term arrangements for materials or supplies that benefit multiple contracts and/or the costs of which are normally applied to a Contractor's general and administrative expenses or indirect costs.

Month of award means the month in which a contract is signed by the Contracting Officer or the month in which a first-tier subcontract is signed by the Contractor.

Total compensation means the cash and noncash dollar value earned by the executive during the Contractor's preceding fiscal year and includes the following (for more information see 17 CFR 229.402(c)(2)):

- (1) Salary and bonus.
- (2) Awards of stock, stock options, and stock appreciation rights. Use the dollar amount recognized for financial statement reporting purposes with respect to the fiscal year in accordance with the Financial Accounting Standards Board's Accounting Standards Codification (FASB ASC) 718, Compensation-Stock Compensation.
- (3) Earnings for services under non-equity incentive plans. This does not include group life, health, hospitalization or medical reimbursement plans that do not discriminate in favor of executives, and are available generally to all salaried employees.
- (4) Change in pension value. This is the change in present value of defined benefit and actuarial pension plans.
- (5) Above-market earnings on deferred compensation which is not tax-qualified.

(6) Other compensation, if the aggregate value of all such other compensation (e.g., severance, termination payments, value of life insurance paid on behalf of the employee, perquisites or property) for the executive exceeds \$10,000.

(b) Section 2(d)(2) of the Federal Funding Accountability and Transparency Act of 2006 (Pub. L. 109-282), as amended by section 6202 of the Government Funding Transparency Act of 2008 (Pub. L. 110-252), requires the Contractor to report information on subcontract awards. The law requires all reported information be made public, therefore, the Contractor is responsible for notifying its subcontractors that the required information will be made public.

(c) Nothing in this clause requires the disclosure of classified information.

(d)(1) Executive compensation of the prime contractor. As a part of its annual registration requirement in the System for Award Management (SAM) database (FAR provision 52.204-7), the Contractor shall report the names and total compensation of each of the five most highly compensated executives for its preceding completed fiscal year, if—

(i) In the Contractor's preceding fiscal year, the Contractor received—

(A) 80 percent or more of its annual gross revenues from Federal contracts (and subcontracts), loans, grants (and subgrants), cooperative agreements, and other forms of Federal financial assistance; and

(B) \$25,000,000 or more in annual gross revenues from Federal contracts (and subcontracts), loans, grants (and subgrants), cooperative agreements, and other forms of Federal financial assistance; and

(ii) The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/execomp.htm>.)

(2) First-tier subcontract information. Unless otherwise directed by the contracting officer, or as provided in paragraph (g) of this clause, by the end of the month following the month of award of a first-tier subcontract with a value of \$30,000 or more, the Contractor shall report the following information at <http://www.frs.gov> for that first-tier subcontract. (The Contractor shall follow the instructions at <http://www.frs.gov> to report the data.)

(i) Unique identifier (DUNS Number) for the subcontractor receiving the award and for the subcontractor's parent company, if the subcontractor has a parent company.

(ii) Name of the subcontractor.

(iii) Amount of the subcontract award.

(iv) Date of the subcontract award.

(v) A description of the products or services (including construction) being provided under the subcontract, including the overall purpose and expected outcomes or results of the subcontract.

(vi) Subcontract number (the subcontract number assigned by the Contractor).

(vii) Subcontractor's physical address including street address, city, state, and country. Also

include the nine-digit zip code and congressional district.

(viii) Subcontractor's primary performance location including street address, city, state, and country. Also include the nine-digit zip code and congressional district.

(ix) The prime contract number, and order number if applicable.

(x) Awarding agency name and code.

(xi) Funding agency name and code.

(xii) Government contracting office code.

(xiii) Treasury account symbol (TAS) as reported in FPDS.

(xiv) The applicable North American Industry Classification System code (NAICS).

(3) Executive compensation of the first-tier subcontractor.

Unless otherwise directed by the Contracting Officer, by the end of the month following the month of award of a first-tier subcontract with a value of \$30,000 or more, and annually thereafter (calculated from the prime contract award date), the Contractor shall report the names and total compensation of each of the five most highly compensated executives for that first-tier subcontractor for the first-tier subcontractor's preceding completed fiscal year at <http://www.fsr.gov>, if—

(i) In the subcontractor's preceding fiscal year, the subcontractor received—

(A) 80 percent or more of its annual gross revenues from Federal contracts (and subcontracts), loans, grants (and subgrants), cooperative agreements, and other forms of Federal financial assistance; and

(B) \$25,000,000 or more in annual gross revenues from Federal contracts (and subcontracts), loans, grants (and subgrants), cooperative agreements, and other forms of Federal financial assistance; and

(ii) The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/excomp.htm>.)

(e) The Contractor shall not split or break down first-tier subcontract awards to a value less than \$30,000 to avoid the reporting requirements in paragraph (d) of this clause.

(f) The Contractor is required to report information on a first-tier subcontract covered by paragraph (d) when the subcontract is awarded. Continued reporting on the same subcontract is not required unless one of the reported data elements changes during the performance of the subcontract. The Contractor is not required to make further reports after the first-tier subcontract expires.

(g)(1) If the Contractor in the previous tax year had gross income, from all sources, under \$300,000, the Contractor is exempt from the requirement to report subcontractor awards.

(2) If a subcontractor in the previous tax year had gross income from all sources under \$300,000, the Contractor does not need to report awards for that subcontractor.

(h) The FSRS database at <http://www.fsrs.gov> will be prepopulated with some information from SAM and FPDS databases. If FPDS information is incorrect, the contractor should notify the contracting officer. If the SAM database information is incorrect, the contractor is responsible for correcting this information.

(End of clause)

Section 00700 - Contract Clauses

CONTRACT CLAUSES

52.202-1	Definitions	NOV 2013
52.204-7	System for Award Management	JUL 2013
52.204-13	System for Award Management Maintenance	JUL 2013
52.211-15	Defense Priority And Allocation Requirements	APR 2008
52.213-4	Terms and Conditions--Simplified Acquisitions (Other Than Commercial Items)	OCT 2015
52.219-6	Notice Of Total Small Business Set-Aside	NOV 2011
52.219-14	Limitations On Subcontracting	NOV 2011
52.222-1	Notice To The Government Of Labor Disputes	FEB 1997
52.222-3	Convict Labor	JUN 2003
52.222-5	Construction Wage Rate Requirements--Secondary Site of the Work	MAY 2014
52.222-6	Construction Wage Rate Requirements	MAY 2014
52.222-7	Withholding of Funds	MAY 2014
52.222-8	Payrolls and Basic Records	MAY 2014
52.222-9	Apprentices and Trainees	JUL 2005
52.222-10	Compliance with Copeland Act Requirements	FEB 1988
52.222-11	Subcontracts (Labor Standards)	MAY 2014
52.222-12	Contract Termination-Debarment	MAY 2014
52.222-13	Compliance With Construction Wage Rate Requirements and Related Regulations	MAY 2014
52.222-14	Disputes Concerning Labor Standards	FEB 1988
52.222-15	Certification of Eligibility	MAY 2014
52.222-21	Prohibition Of Segregated Facilities	APR 2015
52.222-26	Equal Opportunity	APR 2015
52.222-27	Affirmative Action Compliance Requirements for Construction	APR 2015
52.222-36	Equal Opportunity for Workers with Disabilities	JUL 2014
52.222-40	Notification of Employee Rights Under the National Labor Relations Act	DEC 2010
52.222-54	Employment Eligibility Verification	OCT 2015
52.223-5	Pollution Prevention and Right-to-Know Information	MAY 2011
52.223-6	Drug-Free Workplace	MAY 2001
52.223-9	Estimate of Percentage of Recovered Material Content for EPA-Designated Items	MAY 2008
52.223-12	Refrigeration Equipment and Air Conditioners	MAY 1995
52.223-18	Encouraging Contractor Policies To Ban Text Messaging While Driving	AUG 2011
52.225-13	Restrictions on Certain Foreign Purchases	JUN 2008
52.227-4	Patent Indemnity-Construction Contracts	DEC 2007
52.228-2	Additional Bond Security	OCT 1997
52.228-5	Insurance - Work On A Government Installation	JAN 1997
52.228-11	Pledges Of Assets	JAN 2012
52.228-12	Prospective Subcontractor Requests for Bonds	MAY 2014
52.228-14	Irrevocable Letter of Credit	NOV 2014
52.228-15	Performance and Payment Bonds--Construction	OCT 2010
52.229-3	Federal, State And Local Taxes	FEB 2013
52.229-4	Federal, State, And Local Taxes (State and Local Adjustments)	FEB 2013
52.232-5	Payments under Fixed-Price Construction Contracts	MAY 2014
52.232-16	Progress Payments	APR 2012

52.232-23 Alt I	Assignment of Claims (May 2014) - Alternate I	APR 1984
52.232-27	Prompt Payment for Construction Contracts	MAY 2014
52.232-33	Payment by Electronic Funds Transfer--System for Award Management	JUL 2013
52.232-36	Payment by Third Party	MAY 2014
52.232-39	Unenforceability of Unauthorized Obligations	JUN 2013
52.232-40	Providing Accelerated Payments to Small Business Subcontractors	DEC 2013
52.233-1 Alt I	Disputes (May 2014) - Alternate I	DEC 1991
52.233-3	Protest After Award	AUG 1996
52.233-4	Applicable Law for Breach of Contract Claim	OCT 2004
52.236-2	Differing Site Conditions	APR 1984
52.236-3	Site Investigation and Conditions Affecting the Work	APR 1984
52.236-5	Material and Workmanship	APR 1984
52.236-6	Superintendence by the Contractor	APR 1984
52.236-7	Permits and Responsibilities	NOV 1991
52.236-8	Other Contracts	APR 1984
52.236-9	Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements	APR 1984
52.236-10	Operations and Storage Areas	APR 1984
52.236-11	Use and Possession Prior to Completion	APR 1984
52.236-12	Cleaning Up	APR 1984
52.236-13	Accident Prevention	NOV 1991
52.236-14	Availability and Use of Utility Services	APR 1984
52.236-15	Schedules for Construction Contracts	APR 1984
52.236-17	Layout of Work	APR 1984
52.236-21	Specifications and Drawings for Construction	FEB 1997
52.236-26	Preconstruction Conference	FEB 1995
52.242-14	Suspension of Work	APR 1984
52.243-5	Changes and Changed Conditions	APR 1984
52.246-12	Inspection of Construction	AUG 1996
52.246-21	Warranty of Construction	MAR 1994
52.249-2 Alt I	Termination for Convenience of the Government (Fixed-Price) (Apr 2012) - Alternate I	SEP 1996
52.249-10	Default (Fixed-Price Construction)	APR 1984
252.201-7000	Contracting Officer's Representative	DEC 1991
252.204-7003	Control Of Government Personnel Work Product	APR 1992
252.204-7006	Billing Instructions	OCT 2005
252.215-7003	Requirement for Submission of Data Other Than Certified Cost or Pricing Data--Canadian Commercial Corporation.	JUL 2012
252.223-7001	Hazard Warning Labels	DEC 1991
252.223-7006	Prohibition On Storage, Treatment, and Disposal of Toxic or Hazardous Materials	SEP 2014
252.225-7048	Export-Controlled Items	JUN 2013
252.227-7033	Rights in Shop Drawings	APR 1966
252.232-7003	Electronic Submission of Payment Requests and Receiving Reports	JUN 2012
252.232-7010	Levies on Contract Payments	DEC 2006
252.236-7000	Modification Proposals-Price Breakdown	DEC 1991
252.236-7001	Contract Drawings, and Specifications	AUG 2000
252.236-7005	Airfield Safety Precautions	DEC 1991
252.243-7001	Pricing Of Contract Modifications	DEC 1991
252.244-7000	Subcontracts for Commercial Items	JUN 2013
252.247-7023	Transportation of Supplies by Sea	APR 2014

CLAUSES INCORPORATED BY FULL TEXT

52.211-10 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (APR 1984)

The Contractor shall be required to (a) commence work under this contract within 90 calendar days after the date the Contractor receives the notice to proceed, (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than the contract completion date. * The time stated for completion shall include final cleanup of the premises.

(End of clause)

52.211-14 NOTICE OF PRIORITY RATING FOR NATIONAL DEFENSE, EMERGENCY PREPAREDNESS, AND ENERGY PROGRAM USE (APR 2008)

Any contract awarded as a result of this solicitation will be **DO-C2** rated order certified for national defense, emergency preparedness, and energy program use under the Defense Priorities and Allocations System (DPAS) (15 CFR 700), and the Contractor will be required to follow all of the requirements of this regulation.

(End of provision)

52.216-1 TYPE OF CONTRACT (APR 1984)

The Government contemplates award of a **FIRM FIXED PRICE** contract resulting from this solicitation.

(End of provision)

52.219-28 POST-AWARD SMALL BUSINESS PROGRAM REREPRESENTATION (JULY 2013)

(a) Definitions. As used in this clause--

Long-term contract means a contract of more than five years in duration, including options. However, the term does not include contracts that exceed five years in duration because the period of performance has been extended for a cumulative period not to exceed six months under the clause at 52.217-8, Option to Extend Services, or other appropriate authority.

Small business concern means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR part 121 and the size standard in paragraph (c) of this clause. Such a concern is "not dominant in its field of operation" when it does not exercise a controlling or major influence on a national basis in a kind of business activity in which a number of business concerns are primarily engaged. In determining whether dominance exists, consideration shall be given to all appropriate factors, including volume of business, number of employees, financial resources, competitive status or position, ownership or control of materials, processes, patents, license agreements, facilities, sales territory, and nature of business activity.

(b) If the Contractor represented that it was a small business concern prior to award of this contract, the Contractor shall rerepresent its size status according to paragraph (e) of this clause or, if applicable, paragraph (g) of this clause, upon the occurrence of any of the following:

(1) Within 30 days after execution of a novation agreement or within 30 days after modification of the contract to include this clause, if the novation agreement was executed prior to inclusion of this clause in the contract.

(2) Within 30 days after a merger or acquisition that does not require a novation or within 30 days after modification of the contract to include this clause, if the merger or acquisition occurred prior to inclusion of this clause in the contract.

(3) For long-term contracts--

(i) Within 60 to 120 days prior to the end of the fifth year of the contract; and

(ii) Within 60 to 120 days prior to the date specified in the contract for exercising any option thereafter.

(c) The Contractor shall rerepresent its size status in accordance with the size standard in effect at the time of this rerepresentation that corresponds to the North American Industry Classification System (NAICS) code assigned to this contract. The small business size standard corresponding to this NAICS code can be found at <http://www.sba.gov/content/table-small-business-size-standards>.

(d) The small business size standard for a Contractor providing a product which it does not manufacture itself, for a contract other than a construction or service contract, is 500 employees.

(e) Except as provided in paragraph (g) of this clause, the Contractor shall make the representation required by paragraph (b) of this clause by validating or updating all its representations in the Representations and Certifications section of the System for Award Management (SAM) and its other data in SAM, as necessary, to ensure that they reflect the Contractor's current status. The Contractor shall notify the contracting office in writing within the timeframes specified in paragraph (b) of this clause that the data have been validated or updated, and provide the date of the validation or update.

(f) If the Contractor represented that it was other than a small business concern prior to award of this contract, the Contractor may, but is not required to, take the actions required by paragraphs (e) or (g) of this clause.

(g) If the Contractor does not have representations and certifications in SAM, or does not have a representation in SAM for the NAICS code applicable to this contract, the Contractor is required to complete the following rerepresentation and submit it to the contracting office, along with the contract number and the date on which the rerepresentation was completed:

The Contractor represents that it () is, () is not a small business concern under NAICS Code - assigned to contract number .

(Contractor to sign and date and insert authorized signer's name and title).

(End of clause)

52.222-23 NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY FOR CONSTRUCTION (FEB 1999)

(a) The offeror's attention is called to the Equal Opportunity clause and the Affirmative Action Compliance

Requirements for Construction clause of this solicitation.

(b) The goals for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Goals for minority participation for each trade	Goals for female participation for each trade
44.2%	6.9%

These goals are applicable to all the Contractor's construction work performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, the Contractor shall apply the goals established for the geographical area where the work is actually performed. Goals are published periodically in the Federal Register in notice form, and these notices may be obtained from any Office of Federal Contract Compliance Programs office.

(c) The Contractor's compliance with Executive Order 11246, as amended, and the regulations in 41 CFR 60-4 shall be based on (1) its implementation of the Equal Opportunity clause, (2) specific affirmative action obligations required by the clause entitled "Affirmative Action Compliance Requirements for Construction," and (3) its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade. The Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor, or from project to project, for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, Executive Order 11246, as amended, and the regulations in 41 CFR 60-4. Compliance with the goals will be measured against the total work hours performed.

(d) The Contractor shall provide written notification to the Deputy Assistant Secretary for Federal Contract Compliance, U.S. Department of Labor, within 10 working days following award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the --

- (1) Name, address, and telephone number of the subcontractor;
- (2) Employer's identification number of the subcontractor;
- (3) Estimated dollar amount of the subcontract;
- (4) Estimated starting and completion dates of the subcontract; and
- (5) Geographical area in which the subcontract is to be performed.

(e) As used in this Notice, and in any contract resulting from this solicitation, the "covered area" is **NUECES COUNTY, TX**

(End of provision)

52.222-55 MINIMUM WAGES UNDER EXECUTIVE ORDER 13658 (DEC 2014)

(a) Definitions. As used in this clause--

``United States" means the 50 states and the District of Columbia.

``Worker"--

(1) Means any person engaged in performing work on, or in connection with, a contract covered by Executive Order 13658, and

(i) Whose wages under such contract are governed by the Fair Labor Standards Act (29 U.S.C. chapter 8), the Service Contract Labor Standards statute (41 U.S.C. chapter 67), or the Wage Rate Requirements (Construction) statute (40 U.S.C. chapter 31, subchapter IV),

(ii) Other than individuals employed in a bona fide executive, administrative, or professional capacity, as those terms are defined in 29 CFR part 541,

(iii) Regardless of the contractual relationship alleged to exist between the individual and the employer.

(2) Includes workers performing on, or in connection with, the contract whose wages are calculated pursuant to special certificates issued under 29 U.S.C. 214(c).

(3) Also includes any person working on, or in connection with, the contract and individually registered in a bona fide apprenticeship or training program registered with the Department of Labor's Employment and Training Administration, Office of Apprenticeship, or with a State Apprenticeship Agency recognized by the Office of Apprenticeship.

(b) Executive Order Minimum Wage rate. (1) The Contractor shall pay to workers, while performing in the United States, and performing on, or in connection with, this contract, a minimum hourly wage rate of \$10.10 per hour beginning January 1, 2015.

(2) The Contractor shall adjust the minimum wage paid, if necessary, beginning January 1, 2016 and annually thereafter, to meet the Secretary of Labor's annual E.O. minimum wage. The Administrator of the Department of Labor's Wage and Hour Division (the Administrator) will publish annual determinations in the Federal Register no later than 90 days before the effective date of the new E.O. minimum wage rate. The Administrator will also publish the applicable E.O. minimum wage on www.wdol.gov (or any successor Web site) and on all wage determinations issued under the Service Contract Labor Standards statute or the Wage Rate Requirements (Construction) statute. The applicable published E.O. minimum wage is incorporated by reference into this contract.

(3)(i) The Contractor may request a price adjustment only after the effective date of the new annual E.O. minimum wage determination. Prices will be adjusted only if labor costs increase as a result of an increase in the annual E.O. minimum wage, and for associated labor costs and relevant subcontract costs. Associated labor costs shall include increases or decreases that result from changes in social security and unemployment taxes and workers' compensation insurance, but will not otherwise include any amount for general and administrative costs, overhead, or profit.

(ii) Subcontractors may be entitled to adjustments due to the new minimum wage, pursuant to paragraph (b)(2). Contractors shall consider any subcontractor requests for such price adjustment.

(iii) The Contracting Officer will not adjust the contract price under this clause for any costs other than those identified in paragraph (b)(3)(i) of this clause, and will not provideduplicate price adjustments with any price adjustment under clauses implementing the Service Contract Labor Standards statute or the Wage Rate Requirements (Construction) statute.

(4) The Contractor warrants that the prices in this contract do not include allowance for any contingency to cover increased costs for which adjustment is provided under this clause.

(5) A pay period under this clause may not be longer than semi-monthly, but may be shorter to comply with any applicable law or other requirement under this contract establishing a shorter pay period. Workers shall be paid no later than one pay period following the end of the regular pay period in which such wages were earned or accrued.

(6) The Contractor shall pay, unconditionally to each worker, all wages due free and clear without subsequent rebate or kickback. The Contractor may make deductions that reduce a worker's wages below the E.O. minimum wage rate only if done in accordance with 29 CFR 10.23, Deductions.

(7) The Contractor shall not discharge any part of its minimum wage obligation under this clause by furnishing fringe benefits or, with respect to workers whose wages are governed by the Service Contract Labor Standards statute, the cash equivalent thereof.

(8) Nothing in this clause shall excuse the Contractor from compliance with any applicable Federal or State prevailing wage law or any applicable law or municipal ordinance establishing a minimum wage higher than the E.O. minimum wage. However, wage increases under such other laws or municipal ordinances are not subject to price adjustment under this subpart.

(9) The Contractor shall pay the E.O. minimum wage rate whenever it is higher than any applicable collective bargaining agreement(s) wage rate.

(10) The Contractor shall follow the policies and procedures in 29 CFR 10.24(b) and 10.28 for treatment of workers engaged in an occupation in which they customarily and regularly receive more than \$30 a month in tips.

(c)(1) This clause applies to workers as defined in paragraph (a). As provided in that definition--

(i) Workers are covered regardless of the contractual relationship alleged to exist between the contractor or subcontractor and the worker;

(ii) Workers with disabilities whose wages are calculated pursuant to special certificates issued under 29 U.S.C. 214(c) are covered; and

(iii) Workers who are registered in a bona fide apprenticeship program or training program registered with the Department of Labor's Employment and Training Administration, Office of Apprenticeship, or with a State Apprenticeship Agency recognized by the Office of Apprenticeship, are covered.

(2) This clause does not apply to--

(i) Fair Labor Standards Act (FLSA)-covered individuals performing in connection with contracts covered by the E.O., i.e. those individuals who perform duties necessary to the performance of the contract, but who are not directly engaged in performing the specific work called for by the contract, and who spend less than 20 percent of their hours worked in a particular workweek performing in connection with such contracts;

(ii) Individuals exempted from the minimum wage requirements of the FLSA under 29 U.S.C. 213(a) and 214(a) and (b), unless otherwise covered by the Service Contract Labor Standards statute, or the Wage Rate Requirements (Construction) statute. These individuals include but are not limited to--

(A) Learners, apprentices, or messengers whose wages are calculated pursuant to special certificates issued under 29 U.S.C. 214(a).

(B) Students whose wages are calculated pursuant to special certificates issued under 29 U.S.C. 214(b).

(C) Those employed in a bona fide executive, administrative, or professional capacity (29 U.S.C. 213(a)(1) and 29 CFR part 541).

(d) Notice. The Contractor shall notify all workers performing work on, or in connection with, this contract of the applicable E.O. minimum wage rate under this clause. With respect to workers covered by the Service Contract Labor Standards statute or the Wage Rate Requirements (Construction) statute, the Contractor may meet this requirement by posting, in a prominent and accessible place at the worksite, the applicable wage determination under those statutes. With respect to workers whose wages are governed by the FLSA, the Contractor shall post notice, utilizing the poster provided by the Administrator, which can be obtained at www.dol.gov/whd/govcontracts, in a prominent and accessible place at the worksite. Contractors that customarily post notices to workers electronically may post the notice electronically provided the electronic posting is displayed prominently on any Web site that is maintained by the contractor, whether external or internal, and customarily used for notices to workers about terms and conditions of employment.

(e) Payroll Records. (1) The Contractor shall make and maintain records, for three years after completion of the work, containing the following information for each worker:

- (i) Name, address, and social security number;
- (ii) The worker's occupation(s) or classification(s);
- (iii) The rate or rates of wages paid;
- (iv) The number of daily and weekly hours worked by each worker;
- (v) Any deductions made; and
- (vi) Total wages paid.

(2) The Contractor shall make records pursuant to paragraph (e)(1) of this clause available for inspection and transcription by authorized representatives of the Administrator. The Contractor shall also make such records available upon request of the Contracting Officer.

(3) The Contractor shall make a copy of the contract available, as applicable, for inspection or transcription by authorized representatives of the Administrator.

(4) Failure to comply with this paragraph (e) shall be a violation of 29 CFR 10.26 and this contract. Upon direction of the Administrator or upon the Contracting Officer's own action, payment shall be withheld until such time as the noncompliance is corrected.

(5) Nothing in this clause limits or otherwise modifies the Contractor's payroll and recordkeeping obligations, if any, under the Service Contract Labor Standards statute, the Wage Rate Requirements (Construction) statute, the Fair Labor Standards Act, or any other applicable law.

(f) Access. The Contractor shall permit authorized representatives of the Administrator to conduct investigations, including interviewing workers at the worksite during normal working hours.

(g) Withholding. The Contracting Officer, upon his or her own action or upon written request of the Administrator, will withhold funds or cause funds to be withheld, from the Contractor under this or any other Federal contract with the same Contractor, sufficient to pay workers the full amount of wages required by this clause.

(h) Disputes. Department of Labor has set forth in 29 CFR 10.51, Disputes concerning contractor compliance, the procedures for resolving disputes concerning a contractor's compliance with Department of Labor regulations at 29 CFR part 10. Such disputes shall be resolved in accordance with those procedures and not the Disputes clause of this contract. These disputes include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the Department of Labor, or the workers or their representatives.

(i) Antiretaliation. The Contractor shall not discharge or in any other manner discriminate against any worker because such worker has filed any complaint or instituted or caused to be instituted any proceeding under or related to compliance with the E.O. or this clause, or has testified or is about to testify in any such proceeding.

(j) Subcontractor compliance. The Contractor is responsible for subcontractor compliance with the requirements of this clause and may be held liable for unpaid wages due subcontractor workers.

(k) Subcontracts. The Contractor shall include the substance of this clause, including this paragraph (k) in all subcontracts, regardless of dollar value, that are subject to the Service Contract Labor Standards statute or the Wage Rate Requirements (Construction) statute, and are to be performed in whole or in part in the United States.

(End of clause)

52.225-9 BUY AMERICAN—CONSTRUCTION MATERIALS (MAY 2014)

(a) Definitions. As used in this clause--

Commercially available off-the-shelf (COTS) item—

(1) Means any item of supply (including construction material) that is--

(i) A commercial item (as defined in paragraph (1) of the definition at FAR 2.101);

(ii) Sold in substantial quantities in the commercial marketplace; and

(iii) Offered to the Government, under a contract or subcontract at any tier, without modification, in the same form in which it is sold in the commercial marketplace; and

(2) Does not include bulk cargo, as defined in 46 U.S.C. 40102(4) such as agricultural products and petroleum products.

Component means an article, material, or supply incorporated directly into a construction material.

Construction material means an article, material, or supply brought to the construction site by the Contractor or a subcontractor for incorporation into the building or work. The term also includes an item brought to the site preassembled from articles, materials, or supplies. However, emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, that are discrete systems incorporated into a public building or work and that are produced as complete systems, are evaluated as a single and distinct construction material regardless of when or how the individual parts or components of those systems are delivered to the construction site. Materials purchased directly by the Government are supplies, not construction material.

Cost of components means--

(1) For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the construction material (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or

(2) For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (1) of this definition, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the construction material.

Domestic construction material means--

(1) An unmanufactured construction material mined or produced in the United States;

(2) A construction material manufactured in the United States, if--

(i) The cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind for which nonavailability determinations have been made are treated as domestic; or

(ii) The construction material is a COTS item.

Foreign construction material means a construction material other than a domestic construction material.

United States means the 50 States, the District of Columbia, and outlying areas.

(b) Domestic preference.

(1) This clause implements 41 U.S.C. chapter 83, Buy American, by providing a preference for domestic construction material. In accordance with 41 U.S.C. 1907, the component test of the Buy American statute is waived for construction material that is a COTS item. (See FAR 12.505(a)(2)). The Contractor shall use only domestic construction material in performing this contract, except as provided in paragraphs (b)(2) and (b)(3) of this clause.

(2) This requirement does not apply to information technology that is a commercial item or to the construction materials or components listed by the Government as follows:

(3) The Contracting Officer may add other foreign construction material to the list in paragraph (b)(2) of this clause if the Government determines that

(i) The cost of domestic construction material would be unreasonable. The cost of a particular domestic construction material subject to the requirements of the Buy American Act is unreasonable when the cost of such material exceeds the cost of foreign material by more than 6 percent;

(ii) The application of the restriction of the Buy American Act to a particular construction material would be impracticable or inconsistent with the public interest; or

(iii) The construction material is not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality.

(c) Request for determination of inapplicability of the Buy American Act. (1)(i) Any Contractor request to use foreign construction material in accordance with paragraph (b)(3) of this clause shall include adequate information for Government evaluation of the request, including--

(A) A description of the foreign and domestic construction materials;

(B) Unit of measure;

(C) Quantity;

(D) Price;

(E) Time of delivery or availability;

(F) Location of the construction project;

(G) Name and address of the proposed supplier; and

(H) A detailed justification of the reason for use of foreign construction materials cited in accordance with paragraph (b)(3) of this clause.

(ii) A request based on unreasonable cost shall include a reasonable survey of the market and a completed price comparison table in the format in paragraph (d) of this clause.

(iii) The price of construction material shall include all delivery costs to the construction site and any applicable duty (whether or not a duty-free certificate may be issued).

(iv) Any Contractor request for a determination submitted after contract award shall explain why the Contractor could not reasonably foresee the need for such determination and could not have requested the determination before contract award. If the Contractor does not submit a satisfactory explanation, the Contracting Officer need not make a determination.

(2) If the Government determines after contract award that an exception to the Buy American statute applies and the Contracting Officer and the Contractor negotiate adequate consideration, the Contracting Officer will modify the contract to allow use of the foreign construction material. However, when the basis for the exception is the unreasonable price of a domestic construction material, adequate consideration is not less than the differential established in paragraph (b)(3)(i) of this clause.

(3) Unless the Government determines that an exception to the Buy American statute applies, use of foreign construction material is noncompliant with the Buy American statute.

(d) Data. To permit evaluation of requests under paragraph (c) of this clause based on unreasonable cost, the Contractor shall include the following information and any applicable supporting data based on the survey of suppliers:

Foreign and Domestic Construction Materials Price Comparison

Construction material description	Unit of measure	Quantity	Price (dollars)

Item 1			
Foreign construction material....	_____	_____	_____
Domestic construction material...	_____	_____	_____
Item 2			
Foreign construction material....	_____	_____	_____
Domestic construction material...	_____	_____	_____

Include all delivery costs to the construction site and any applicable duty (whether or not a duty-free entry certificate is issued).

List name, address, telephone number, and contact for suppliers surveyed. Attach copy of response; if oral, attach summary.

Include other applicable supporting information.

(End of clause)

52.225-10 NOTICE OF BUY AMERICAN REQUIREMENT--CONSTRUCTION MATERIALS (MAY 2014)

(a) Definitions. "Commercially available off-the-shelf (COTS) item," "construction material," "domestic construction material," and "foreign construction material," as used in this provision, are defined in the clause of this solicitation entitled "Buy American --Construction Materials" (Federal Acquisition Regulation (FAR) clause 52.225-9).

(b) Requests for determinations of inapplicability. An offeror requesting a determination regarding the inapplicability of the Buy American statute should submit the request to the Contracting Officer in time to allow a determination before submission of offers. The offeror shall include the information and applicable supporting data required by paragraphs (c) and (d) of the clause at FAR 52.225-9 in the request. If an offeror has not requested a determination regarding the inapplicability of the Buy American statute before submitting its offer, or has not received a response to a previous request, the offeror shall include the information and supporting data in the offer.

(c) Evaluation of offers. (1) The Government will evaluate an offer requesting exception to the requirements of the Buy American statute, based on claimed unreasonable cost of domestic construction material, by adding to the offered price the appropriate percentage of the cost of such foreign construction material, as specified in paragraph (b)(3)(i) of the clause at FAR 52.225-9.

(2) If evaluation results in a tie between an offeror that requested the substitution of foreign construction material based on unreasonable cost and an offeror that did not request an exception, the Contracting Officer will award to the offeror that did not request an exception based on unreasonable cost.

(d) Alternate offers.

(1) When an offer includes foreign construction material not listed by the Government in this solicitation in paragraph (b)(2) of the clause at FAR 52.225-9, the offeror also may submit an alternate offer based on use of equivalent domestic construction material.

(2) If an alternate offer is submitted, the offeror shall submit a separate Standard Form 1442 for the alternate offer, and a separate price comparison table prepared in accordance with paragraphs (c) and (d) of the clause at FAR 52.225-9 for the offer that is based on the use of any foreign construction material for which the Government has not yet determined an exception applies.

(3) If the Government determines that a particular exception requested in accordance with paragraph (c) of the clause at FAR 52.225-9 does not apply, the Government will evaluate only those offers based on use of the equivalent domestic construction material, and the offeror shall be required to furnish such domestic construction material. An offer based on use of the foreign construction material for which an exception was requested--

(i) Will be rejected as nonresponsive if this acquisition is conducted by sealed bidding; or

(ii) May be accepted if revised during negotiations.

(End of provision)

52.228-13 ALTERNATIVE PAYMENT PROTECTIONS (JULY 2000)

(a) The Contractor shall submit one of the following payment protections:

PAYMENT BOND OR IRREVOCABLE LETTER OF CREDIT

- (b) The amount of the payment protection shall be 100 percent of the contract price.
- (c) The submission of the payment protection is required within **15** days of contract award.
- (d) The payment protection shall provide protection for the full contract performance period plus a one-year period.
- (e) Except for escrow agreements and payment bonds, which provide their own protection procedures, the Contracting Officer is authorized to access funds under the payment protection when it has been alleged in writing by a supplier of labor or material that a nonpayment has occurred, and to withhold such funds pending resolution by administrative or judicial proceedings or mutual agreement of the parties.
- (f) When a tripartite escrow agreement is used, the Contractor shall utilize only suppliers of labor and material that signed the escrow agreement.

(End of clause)

52.236-27 SITE VISIT (CONSTRUCTION) (FEB 1995)

- (a) The clauses at 52.236-2, Differing Site Conditions, and 52.236-3, Site Investigations and Conditions Affecting the Work, will be included in any contract awarded as a result of this solicitation. Accordingly, offerors or quoters are urged and expected to inspect the site where the work will be performed.
- (b) Site visits may be arranged during normal duty hours by contacting:
SEE SOLICITATION PAGE 3

(End of provision)

52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

FAR: <https://farsite.hill.af.mil>; <http://www.arnet.gov/far>;
DFARS: <http://www.acq.osd.mil/dpap/dars/index.html>
NMCARS: http://acquisition.navy.mil/policy_and_guidance/nmcars_nmcag
NFAS: <http://acq.navfac.navy.mil>

(End of clause)

In no event shall any understanding or agreement between the Contractor and any Government employee other than the Contracting Officer on any contract, modification, change order, letter or verbal direction to the Contractor be effective or binding upon the Government. All such actions must be formalized by a proper contractual document executed by an appointed Contracting Officer. The Contractor is hereby put on notice that in the event a change in work to be performed or increases in the scope of the work to be performed, it is the Contractor's responsibility to make inquiry of the Contracting Officer before making the deviation. Payments will not be made without being authorized by an appointed Contracting Officer with the legal authority to bind the Government.

FAC 5252.209-9300 ORGANIZATIONAL CONFLICTS OF INTEREST (JUN 1994)

The restrictions described herein shall apply to the Contractor and its affiliates, consultants and subcontractors under this contract. If the Contractor under this contract prepares or assists in preparing a statement of work, specifications and plans, the Contractor and its affiliates shall be ineligible to bid or participate, in any capacity, in any contractual effort which is based on such statement of work or specifications and plans as a prime contractor, subcontractor, consultant or in any similar capacity. The Contractor shall not incorporate its products or services in such statement of work or specification unless so directed in writing by the Contracting Officer, in which case the restriction shall not apply. This contract shall include this clause in its subcontractors' or consultants' agreements concerning the performance of this contract.

FAC 5252.228-9300 INDIVIDUAL SURETY/SURETIES (JUN 1994)

As prescribed in FAR 28.203(a), individual sureties will be permitted. In order for the Contracting Officer to make a determination as to the acceptability of individuals proposed as sureties, as prescribed in FAR 28-203(b), all proposers who submit bonds which are executed by individual sureties are requested to furnish additional information in support of SF-28, Affidavit of Individual Surety, with the bonds. Pursuant to Instruction 3(b) of Standard Form 24, the Bond, Standard Form 25, the Performance Bond, and the Standard Form 25A, the Payment Bond, the Contracting Officer requests the following information:

(a) Equity Securities (Stock):

- (1) State the place(s) of incorporation and address of the principal place of business for each issuing corporation listed.
- (2) State whether the security issued was issued by public or private offering and give the place of registration of the security.
- (3) State whether the security is presently, actively traded.

(b) Debt Securities (Bonds) and Certificates of Deposit:

- (1) List the type of bonds held and their maturity dates.
- (2) State the name, address, and telephone number of the issuing agency, firm or individual.
- (3) State the complete address(es) where the bonds are held.
- (4) State whether the bonds have been pledged as security or have otherwise been encumbered.

(c) Real Property Interests:

- (1) Provide complete recording data for the conveyance of each parcel or interest listed to the individual proposed as surety.
- (2) State whether the values listed are based upon personal evaluation or evaluation of an experienced real estate appraiser. If available, provide copies of written appraisals.

- (3) State the method(s) of valuation upon which appraisal is based.
- (4) Provide the assessed value of each property interest listed utilized by the appropriate tax assessor for purposes of property taxation.
- (5) Provide the telephone number, including area code, for the tax assessor who performed the most recent tax assessment.
- (6) State whether each real property interest listed is currently under lien or in any way encumbered and the dollar amount of each such lien or encumbrance.

(d) Persons Proposed as Individual Sureties:

- (1) A current list of all other bonds (bid, performance, and payment) on which the individual is a surety and bonds for which the individual is requesting to be a surety.
- (2) A statement as to the percent of completion of projects for which the individual is bound on a performance bond.

This information is necessary to enable the Contracting Officer to evaluate the sufficiency of the surety's net worth in a timely manner.

5252.232-9301 INVOICING PROCEDURES ELECTRONIC (NOV 2009)

(a) In accordance with DFARS Clause 252.232-7003 titled "Electronic Submission of Payment Requests", this contract/order requires use of the DoD Wide Area Workflow (WAWF) system for the submission of invoices. This web-based system, located at <https://wawf.eb.mil>, provides the technology for Government contractors and authorized Department of Defense (DoD) personnel to generate, capture and process receipt and payment-related documentation in a paperless environment. Invoices rendered under this contract shall be submitted electronically through WAWF. Submission of hard copy DD250/invoices will no longer be accepted for payment.

(b) It is recommended that the person in your company designated as the Central Contractor Registration (CCR) Electronic Business Point of Contact (EBPOC), and anyone responsible for the submission of invoices, use the online training system for WAWF at <http://wawftraining.com>. The Vendor, Group Administrator (GAM), and sections marked with an asterisk in the training system should be reviewed.

Additional Vendor information is also available at http://acquisition.navy.mil/rda/home/acquisition_one_source/ebusiness/don_ebusiness_solutions/wawf_overview/vendor_information. Here you will find information on "Getting Started" as well as "Quick Reference Guides".

(c) Within ten (10) days after award, the designated CCR EBPOC is responsible for activating the company's CAGE code in WAWF by calling 1-866-618-5988 for the DISA WAWF Helpdesk, email address cscassig@csd.disa.mil. Once the company's CAGE code is activated, the CCR EBPOC must self-register under the company's CAGE code on WAWF and follow the instructions for a group administrator. After the company is set-up on WAWF, any additional persons responsible for submitting invoices must self-register under the company's CAGE code at <https://wawf.eb.mil>.

(d) The contractor shall use the following document type, DODAAC codes with corresponding extensions, and inspection and acceptance locations when submitting invoices in WAWF:

SEE WAWF CLAUSE

Note: Supporting documentation must be attached. File names cannot contain spaces or special characters, except underscore "_" which is an acceptable character. There is NO maximum to the number of files that can be attached to an invoice, however EACH file is limited to a maximum file size UNDER 2 megabytes.

(e) Before closing out of an invoice session in WAWF, but after submitting the document(s), you will be prompted to "Send More Email Notifications." Select "Send More Email Notification" and add additional email addresses noted above in the first email address blocks. This additional notification to the Government is important to ensure that the specific acceptor/receiver is aware the invoice documents have been submitted into WAWF.

(f) If you have any questions regarding WAWF, please contact the WAWF DFAS helpdesk at 877-251-WAWF (9293) or email address of CCL-EC-Navy-WAWF-helpdesk@dfas.mil, or the NAVFAC WAWF point of contact identified above in section (d). (End of clause)

FAC 5252.236-9301 SPECIAL WORKING CONDITIONS AND ENTRY TO WORK AREA(JUN 1994)

Denial of entry to the work areas under this contract may be required by the Government under certain circumstances where the Contractor's work or presence would constitute a safety or security hazard to ordnance storage or handling operations. Restrictions covering entry to and availability of the work areas are as follows:

a. Entry. Entry to work areas located within the special Security Limited areas, defined as those work areas located within the existing security fence, can be granted subject to special personnel requirements as specified herein and to other normal security and safety requirements. Complete denial of entry to the Limited Area may be required during brief periods of one to two hours (normally) and on rare occasions of two to four hours. For bidding purposes, the Contractor shall assume denial of entry to the work areas in the Limited Area of six 2-hour denials and one 4-hour denial per month.

b. Vehicle Delay. The Contractor shall also assume for bidding purposes that, in addition to site denial, each vehicle and/or unit of construction equipment will be delayed during each movement through the security gate, both entering and leaving the limited area. Delays will average 1 HR.

Operational Considerations. To reduce delay time while preserving required security, the following points should be considered in operational planning:

a. Vehicle Search. Security regulations required that all vehicles, when authorized to enter the Limited Area be thoroughly searched by guard force personnel. Such a search will be required for all vehicle/ construction equipment. Accordingly, once a vehicle or unit of construction equipment has been cleared, it may be left in the Limited Area after initial entry has been made. For the period of time authorized the vehicle/equipment left in the Limited Area will be assigned parking areas by the Contracting Officer. The vehicle/equipment must be secured as specified in paragraph entitled "SECURITY REQUIREMENTS." The intent is to reduce the Contractor loss of time at the security gate. No private vehicles will be allowed to enter the Limited Area.

b. Delivery Vehicles. Vehicles delivering construction materials will be inspected by guard force personnel while the driver is being processed for entry into the Limited Area. The driver and vehicle will then be escorted in the Limited Area by a Security Escort. To provide this service, delivery schedules should be promulgated in advance and vendors made aware that a reasonable delay can be expected if delivery is other than the time specified. Deliveries after 1600 hours will not be allowed entry into the Limited Area without prior approval of the Physical Security Officer.

FAC 5252.236-9303 ACCIDENT PREVENTION (NOV 1998)

- (a) The Contractor will maintain an accurate record of, and will report to the Contracting Officer in the manner and on the forms prescribed by the Contracting Officer, all accidents resulting in death, traumatic injury, occupational disease, and damage to property, materials, supplies and equipment incident to work performed under this contract.
- (b) Compliance with the provisions of this article by subcontractors will be the responsibility of the Contractor.
- (c) Prior to commencement of the work, the Contractor may be required to:
 - (1) submit in writing his proposals for effectuating provision for accident prevention;
 - (2) meet in conference with representatives of the Contracting Officer to discuss and develop mutual understandings relative to administration of the overall safety program.

5252.236-9310 - RECORD DRAWINGS (OCT 2004)

The Contractor shall maintain at the job site two sets of full-size prints of the contract drawings, accurately marked in red with adequate dimensions, to show all variations between the construction actually provided and that indicated or specified in the contract documents, including buried or concealed construction. Special attention shall be given to recording the horizontal and vertical location of all buried utilities that differ from the final government-accepted drawings. Existing utility lines and features revealed during the course of construction, shall also be accurately located and dimensioned. Variations in the interior utility systems shall be clearly defined and dimensioned; and coordinated with exterior utility connections at the building five-foot line, where applicable. Existing topographic features which differ from those shown on the contract drawings shall also be accurately located and recorded. Where a choice of materials or methods is permitted herein, or where variations in scope or character of methods is permitted herein, or where variations in scope or character of work from that of the original contract are authorized, the drawings shall be marked to define the construction actually provided. The representations of such changes shall conform to standard drafting practice and shall include such supplementary notes, legends, and details as necessary to clearly portray the as-built construction. These drawings shall be available for review by the Contracting Officer at all times. Upon completion of the work, both sets of the marked up prints shall be certified as correct, signed by the Contractor, and delivered to the Contracting Officer for his approval before acceptance. Requests for partial payments will not be approved if the marked prints are not kept current, and request for final payment will not be approved until the marked prints are delivered to the Contracting Officer. (End of clause)

FAC 5252.245-9302 LIMITED ASSUMPTION OF RISK BY GOVERNMENT (JUN 1994)

- (a) Title of all work in place shall be in the Government, and title to all property intended for incorporation in the work shall vest in the Government upon delivery thereof to the site of the work. The term "Government-owned property" as used in this clause refers to such work in place and to such other property as to which title has vested in the Government and includes any property furnished or rented to the Contractor by the Government. Upon completion of the work, any such Government-owned property not a part of the work (except property rented to, or furnished without charge to the contractor by the Government) shall become the property of the Contractor. The vesting of title in the Government, as provided in this paragraph, shall in no way relieve the Contractor of any obligations otherwise provided in this contract in respect to such Government-owned property except as expressly stated in paragraph (b) of this clause.
- (b) The Contractor represents that the contract price does not include the cost of insurance, nor any provision for a reserve, covering the risk assumed by the Government under this paragraph.

The Government assumes the risk of loss or damage to such Government-owned property (including expenses incidental to such loss or damage) which results directly or indirectly from the explosion of Government-owned or controlled munitions (including, without limitations, ammunition, bombs, powder, dynamite and other explosives), whether or not caused by negligence, except that the Government does not assume at any time the risk of, and the Contractor shall be responsible for, such loss or damage (1) which is in fact covered by insurance or for which contractor is otherwise reimbursed, or (2) which results from disregard of proper instructions of the Contracting Officer, on the part of any of the Contractor's directors, officers or any other representatives having supervision or direction of all or substantially all the Contractor's operations under this contract.

(c) In the event of loss or damage to Government-owned property resulting from the risk assumed by the Government hereunder, the Contracting Officer shall determine whether, and to what extent, such property shall be rebuilt, repaired or replaced by the Contractor or otherwise. Should this determination cause an increase or decrease in the cost of doing the work under this contract or time required for its performance, an equitable adjustment shall be made as provided in the changes clause of the contract.

(d) The provisions contained in the statement of work under "Permits and Responsibilities," are to be deemed modified by this clause only to the extent required to give effect to the limited assumption of risk provided in this clause.

Section 00800 - Special Contract Requirements

252.232-7006 WAWF

252.232-7006 WIDE AREA WORKFLOW PAYMENT INSTRUCTIONS (MAY 2013)

(a) Definitions. As used in this clause--

Department of Defense Activity Address Code (DoDAAC) is a six position code that uniquely identifies a unit, activity, or organization.

Document type means the type of payment request or receiving report available for creation in Wide Area WorkFlow (WAWF).

Local processing office (LPO) is the office responsible for payment certification when payment certification is done external to the entitlement system.

(b) Electronic invoicing. The WAWF system is the method to electronically process vendor payment requests and receiving reports, as authorized by DFARS 252.232-7003, Electronic Submission of Payment Requests and Receiving Reports.

(c) WAWF access. To access WAWF, the Contractor shall--

(1) Have a designated electronic business point of contact in the System for Award Management at <https://www.acquisition.gov>; and

(2) Be registered to use WAWF at <https://wawf.eb.mil/> following the step-by-step procedures for self-registration available at this Web site.

(d) WAWF training. The Contractor should follow the training instructions of the WAWF Web-Based Training Course and use the Practice Training Site before submitting payment requests through WAWF. Both can be accessed by selecting the "Web Based Training" link on the WAWF home page at <https://wawf.eb.mil/>.

(e) WAWF methods of document submission. Document submissions may be via Web entry, Electronic Data Interchange, or File Transfer Protocol.

(f) WAWF payment instructions. The Contractor must use the following information when submitting payment requests and receiving reports in WAWF for this contract/order:

Contract number, typically in the form N69450-14-M-1234, for example.

(1) Document type. The Contractor shall use the following document type(s).

Naval Construction/Facilities Management Invoice

(2) Inspection/acceptance location. The Contractor shall select the following inspection/acceptance location(s) in WAWF, as specified by the contracting officer.

Inspection – N44215

Acceptance – N44215

(3) Document routing. The Contractor shall use the information in the Routing Data Table below only to fill in applicable fields in WAWF when creating payment requests and receiving reports in the system.

Routing Data Table*

Field Name in WAWF	Data to be entered in WAWF
Pay Official DoDAAC	N68732
Issue By DoDAAC	N69450
Admin DoDAAC	N44215
Inspect By DoDAAC	N44215
Ship To Code	N/A
Ship From Code	N/A
Mark For Code	N/A
Service Approver (DoDAAC)	N/A
Service Acceptor (DoDAAC)	N/A
Accept at Other DoDAAC	N/A
LPO DoDAAC	N44215
DCAA Auditor DoDAAC	N/A
Other DoDAAC(s)	N/A

(4) Payment request and supporting documentation. The Contractor shall ensure a payment request includes appropriate contract line item and subline item descriptions of the work performed or supplies delivered, unit price/cost per unit, fee (if applicable), and all relevant back-up documentation, as defined in DFARS Appendix F, (e.g. timesheets) in support of each payment request.

(5) WAWF email notifications. The Contractor shall enter the email address identified below in the “Send Additional Email Notifications” field of WAWF once a document is submitted in the system.
joel.overson@navy.mil

(6) WAWF point of contact. (1) The Contractor may obtain clarification regarding invoicing in WAWF from the following contracting activity's WAWF point of contact.

WAWF Technician: Dana Villarreal (361)516-6210 dana.villarreal@navy.mil
 Contracting Officer: Joel Overson (361)961-3397 joel.overson@navy.mil

(2) For technical WAWF help, contact the WAWF helpdesk at 866-618-5988.
 (End of clause)

	Rates	Fringes
IRONWORKER, ORNAMENTAL.....	\$ 23.02	6.35

SUTX2014-068 07/21/2014		

	Rates	Fringes
BRICKLAYER.....	\$ 20.04	0.00
CARPENTER.....	\$ 15.21	0.00
CEMENT MASON/CONCRETE FINISHER...	\$ 15.33	0.00
INSULATOR - MECHANICAL (Duct, Pipe & Mechanical System Insulation).....	\$ 19.77	7.13
IRONWORKER, REINFORCING.....	\$ 12.27	0.00
IRONWORKER, STRUCTURAL.....	\$ 22.16	5.26
LABORER: Common or General.....	\$ 9.68	0.00
LABORER: Mason Tender - Brick...	\$ 11.36	0.00
LABORER: Mason Tender - Cement/Concrete.....	\$ 10.58	0.00
LABORER: Pipelayer.....	\$ 12.49	2.13
LABORER: Roof Tearoff.....	\$ 11.28	0.00
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 14.25	0.00
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 13.93	0.00
OPERATOR: Bulldozer.....	\$ 18.29	1.31
OPERATOR: Drill.....	\$ 16.22	0.34
OPERATOR: Forklift.....	\$ 14.83	0.00
OPERATOR: Grader/Blade.....	\$ 13.37	0.00
OPERATOR: Loader.....	\$ 13.55	0.94
OPERATOR: Mechanic.....	\$ 17.52	3.33
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 16.03	0.00
OPERATOR: Roller.....	\$ 12.70	0.00
PAINTER (Brush, Roller, and Spray).....	\$ 14.45	0.00

PIPEFITTER.....	\$ 25.80	8.55
PLUMBER.....	\$ 25.64	8.16
ROOFER.....	\$ 13.75	0.00
SHEET METAL WORKER (HVAC Duct Installation Only).....	\$ 22.73	7.52
SHEET METAL WORKER, Excludes HVAC Duct Installation.....	\$ 21.13	6.53
TILE FINISHER.....	\$ 11.22	0.00
TILE SETTER.....	\$ 14.74	0.00
TRUCK DRIVER: Dump Truck.....	\$ 12.39	1.18
TRUCK DRIVER: Flatbed Truck.....	\$ 19.65	8.57
TRUCK DRIVER: Semi-Trailer Truck.....	\$ 12.50	0.00
TRUCK DRIVER: Water Truck.....	\$ 12.00	4.11

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

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

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198

indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

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

- * an existing published wage determination
- * a survey underlying a wage determination

- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

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

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

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

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

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

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

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

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

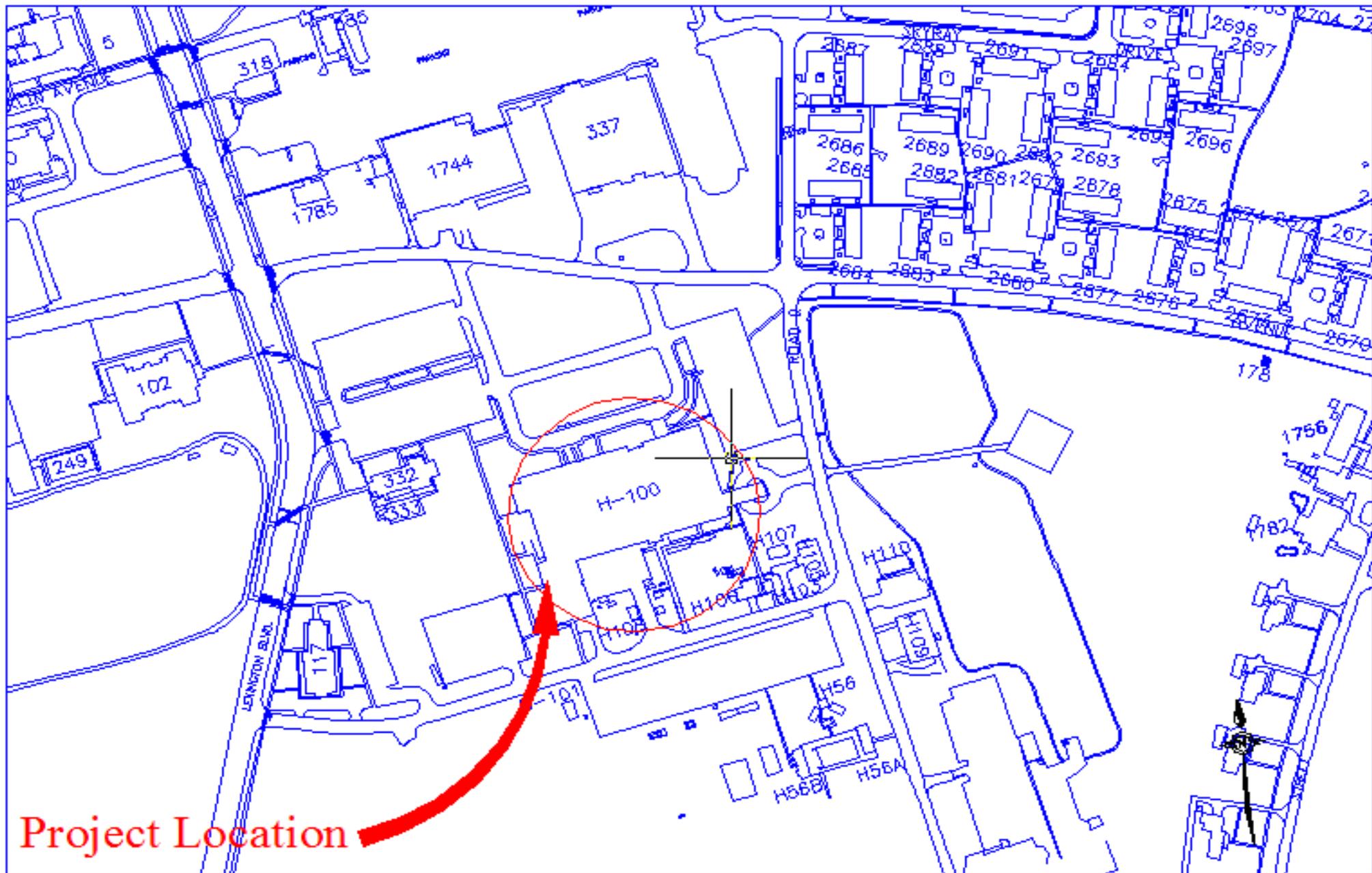
4.) All decisions by the Administrative Review Board are final.

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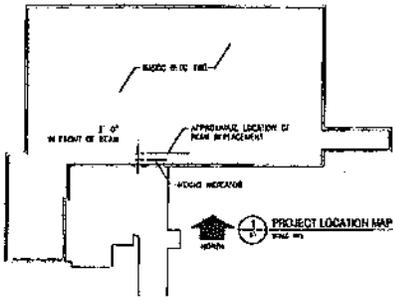
END OF GENERAL DECISION

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ATTACHMENT A PROJECT LOCATION



Project Location



GENERAL NOTES

1. COORDINATE DIMENSIONS, OPENINGS, DIMENSIONS WITH ALL MECHANICAL, ELECTRICAL, PLUMBING & PIPING. DIMENSIONS PRIOR TO CONSTRUCTION NOT ALL ITEMS INDICATED ARE COVERED BY STRUCTURAL DIMENSIONS. VERIFY DIMENSIONS OF ANY DISCREPANCIES.
2. ALL DETAILS ARE TYPICAL UNLESS OTHERWISE INDICATED AT APPROPRIATE LOCATIONS. WHETHER SPECIFICALLY NOTICED OR NOT.
3. ALL CONSTRUCTION INCLUDING MATERIALS AND INSTALLATION, SHALL CONFORM TO THE PROVISIONS OF THE 2001/2003 IBC AND STEWARDS RELEASED HEREIN.
4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND SET CONDITIONS BEFORE STARTING WORK. THE ARCHITECT AND STRUCTURAL ENGINEER SHALL MAINTAINLY BE ADVISED BY NOTICE OF ANY DISCREPANCIES.
5. ALL DIMENSIONS UNLESS OTHERWISE NOTED WITHIN THE DRAWING SHALL BE TO THE CENTERLINE UNLESS OTHERWISE NOTED. THE ATTENTION OF THE STRUCTURAL ENGINEER, WORK SHOWN AND PROVIDED HEREIN IS SUBJECT TO CHANGE BY THE STRUCTURAL ENGINEER IN WRITING.
6. IN CASE OF CONFLICT, NOTES AND DETAILS OF THIS DRAWING SHALL TAKE PRECEDENCE OVER THE "GENERAL NOTES". TYPICAL DETAILS SHALL BE USED UNLESS OTHERWISE SPECIFIED. ALL DISCREPANCIES FOR INFORMATION WILL BE COVERED BY THESE NOTES OR DETAILS.
7. A. A SPECIFIC DETAIL IS NOT SHOWN FOR ANY PART OF THE WORK, THE CONTRACTOR SHALL BE THE SAME AS FOR SIMILAR WORK.
8. WORKING DIMENSIONS SHALL NOT BE SCALED FROM PENCIL SECTIONS OR DETAILS UNLESS OTHERWISE SPECIFIED.
9. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ADEQUATE PROTECTION AND SHIELDING AS REQUIRED FOR SAFETY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION. THESE DIMENSIONS REPRESENTS THE FINISHED STRUCTURE AND DO NOT INDICATE THE METHOD OF CONSTRUCTION.
10. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR AND FOR THE CONSTRUCTION UNDER THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THE CONTRACTOR SHALL VERIFY DIMENSIONS AND NOT BE LIABLE TO THE ARCHITECT OR ENGINEER FOR ANY DISCREPANCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF ALL PERSONS AND PROPERTY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF ALL PERSONS AND PROPERTY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF ALL PERSONS AND PROPERTY.
11. IF ANY DIMENSION IS PROPOSED BY THE CONTRACTOR, THE CONTRACTOR SHALL PROVIDE CALCULATIONS AND PROTECTIVE MEASURES TO BE PROVIDED TO THE ARCHITECT AND ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF ALL PERSONS AND PROPERTY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF ALL PERSONS AND PROPERTY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF ALL PERSONS AND PROPERTY.

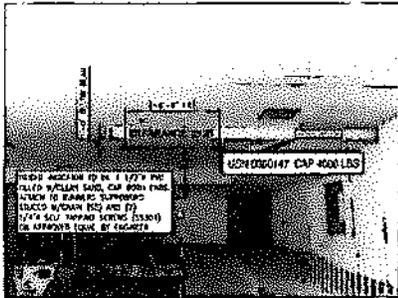
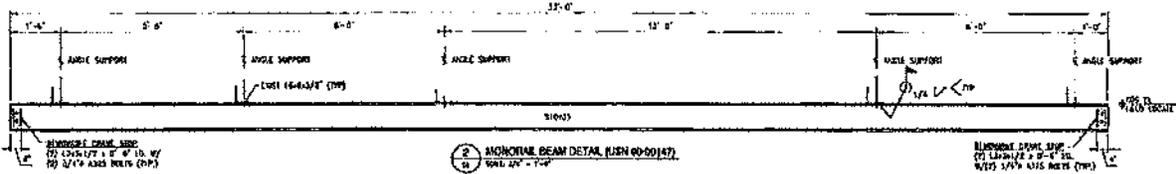


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ANCHORAGE BEAM DETAIL (USN 00-00147)
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STRUCTURAL STEEL NOTES

1. ALL FABRICATED AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE AISC MANUAL OF STEEL CONSTRUCTION, LATEST EDITION.
2. ALL STRUCTURAL STEEL DETAILS AND CONNECTIONS SHALL CONFORM TO THE AISC CODE OF STANDARD PRACTICE FOR STEEL BRIDGES AND STRUCTURES.
3. ALL WELD SHALL BE DONE USING E70XX ELECTRODES PER AWS AND AISC.
4. ALL WELDED CONNECTIONS SHALL DEVELOP THE FULL STRENGTH OF MEMBER UNLESS OTHERWISE NOTED.
5. ALL CONNECTIONS SHALL BE SHIP WELDED AND FULL WELDED UNLESS OTHERWISE NOTED. WELDED JOINTS SHALL BE SHIP WELDED. ALL FULL WELDED JOINTS SHALL BE CLEANED AND PAINTED AFTER COMPLETION.
6. ALL SHIP JOINTS SHALL BE SHIP WELDED IN ACCORDANCE TO STEWARDS RELEASED HEREIN.
7. ALL WELDED CONNECTIONS SHALL DEVELOP THE FULL STRENGTH OF MEMBER UNLESS OTHERWISE NOTED.
8. ALL CONNECTIONS SHALL BE SHIP WELDED AND FULL WELDED UNLESS OTHERWISE NOTED. WELDED JOINTS SHALL BE SHIP WELDED. ALL FULL WELDED JOINTS SHALL BE CLEANED AND PAINTED AFTER COMPLETION.
9. ALL SHIP JOINTS SHALL BE SHIP WELDED IN ACCORDANCE TO STEWARDS RELEASED HEREIN.
10. CONNECTIONS SHALL BE SHIP WELDED UNLESS OTHERWISE NOTED.
11. ALL WELDED CONNECTIONS SHALL DEVELOP THE FULL STRENGTH OF MEMBER UNLESS OTHERWISE NOTED.
12. STEEL MEMBERS SHALL NOT BE CUTTED EXCEPT WHERE SHOWN ON THE DRAWINGS.

CONCRETE NOTES

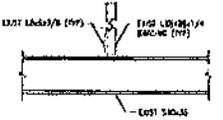
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DESIGN CODES

- 1. AISC MANUAL OF STEEL CONSTRUCTION, LATEST EDITION.
- 2. AISC CODE OF STANDARD PRACTICE FOR STEEL BRIDGES AND OTHER STRUCTURES (CS).
- 3. AISC DESIGN GUIDE 7 (D7) (EDITION).
- 4. AISC DESIGN GUIDE 9 (D9) (EDITION).
- 5. AISC DESIGN GUIDE 10 (D10) (EDITION).
- 6. AISC DESIGN GUIDE 11 (D11) (EDITION).
- 7. AISC DESIGN GUIDE 12 (D12) (EDITION).
- 8. AISC DESIGN GUIDE 13 (D13) (EDITION).
- 9. AISC DESIGN GUIDE 14 (D14) (EDITION).
- 10. AISC DESIGN GUIDE 15 (D15) (EDITION).
- 11. AISC DESIGN GUIDE 16 (D16) (EDITION).
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- 94. AISC DESIGN GUIDE 99 (D99) (EDITION).
- 95. AISC DESIGN GUIDE 100 (D100) (EDITION).

LEGEND

- SS - STAINLESS STEEL



TYPICAL ATTACHMENT OF EXISTING MEMBERS TO STEELS

NAVAL HEALTH CLINIC HAS COMPLETE RAIL LOADING DOCK MONORAIL RAIL BEAM REPLACEMENT
RAY VELA'S WELDING MONORAIL DETAILS, SECTION & NOTES

12/15/2000

81

MUNOZ ENGINEERING

TBPE FIRM No. 12240

Practical Engineering Solutions

April 17, 2013

10651 E Street
Building H-100
Corpus Christi, TX 78469

Attn: Robert Stec, Contract Manager for VW International, Inc.

**Re: NASCC – NAVAL HEALTH CLINIC (BLDG 100)
LOADING DOCK MONORAIL BEAM REPLACEMENT**

Gentlemen:

Attached are the structural calculations of the monorail beam replacement with a matching 2 Ton capacity. Provided the replacement of beam is performed as indicated on the construction documents the monorail beam and its attachment will be "Structurally Adequate." In addition, the existing angle bracing and monorail beam have been in-service for over 20 years and the replacement design matches the pre-construction conditions.

If you have any questions, please call me at (361) 944-1301 or e-mail me at rmiii@rocketmail.com.

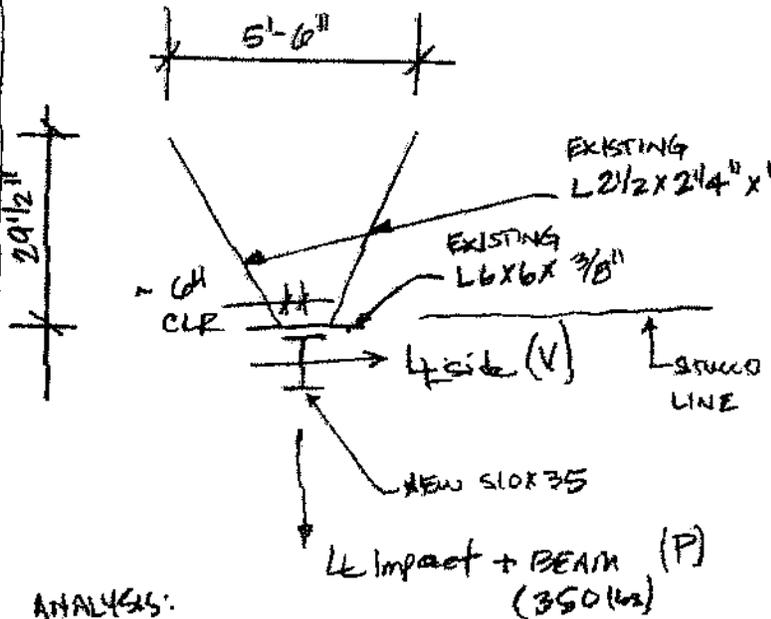
Sincerely,
MUNOZ ENGINEERING
TBPE FIRM No. F-12240


Ramiro Muñoz III, PE, MLSE
Principal/Project Manager



04/17/13

Attachments



$L = 2 \text{ TON} = 4000 \text{ LBS}$

Impact Vertical = 25%
Side = 20%

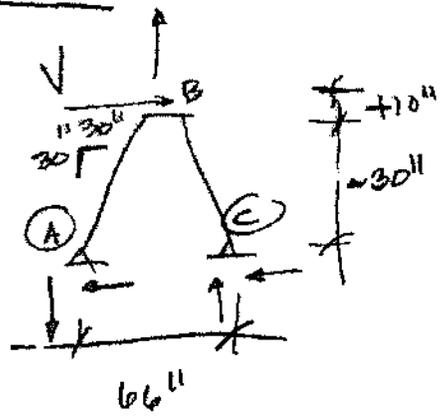
Trolley = ~ 250 lbs
+ Blocks

$L_{\text{impact}} = 5,313 \text{ lbs} \therefore 5.4 \text{ K}$

$L_{\text{side}} \rightarrow = 850 \text{ lbs} \therefore 0.85 \text{ K}$

Max Bay Spacing = $\frac{13'-0" + 6'-0"}{2}$
 $= 9'-0"$

ANALYSIS:



$M = 40" \times 0.85 \text{ K} = 34 \text{ K-in}$
L SIDE

$R_{\text{due M}} = \frac{34 \text{ K-in}}{66"} = 0.515 \text{ K}$
L SIDE

$R_{\text{due L+P}} = (P) = \frac{5.4 \text{ K} + 0.85 \text{ K}}{2} = 2.875 \text{ K}$
 $\frac{5.75 \text{ K}}{2}$

Column Angle Brace : Chk buckling

$$P_{req'd \text{ angle}} = \sqrt{(2.875k)^2 + \left(\frac{0.850k}{2}\right)^2} = 2.911k$$

$$L_{unbraced} = 42'' = 3'-6'' \quad (\text{Interpolated from Table 4-11})$$

$$P_{all} = 17.15k \gg P_{req'd}, \text{ok}$$

compression

L6x6x $\frac{3}{8}$ is not considered to govern

Expansion Anchor (assumed):

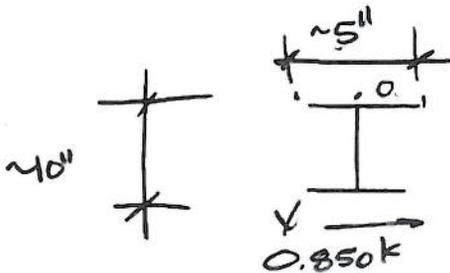
NCC note: The bldg plan calls for 7/8" threaded inserts & bolts and no other details are noted. The engineer has verified by inspection that a 7/8" threaded rod or bolt is installed and there are no signs of distress or cracking after ~30 yrs of service. A 5/8" X 4 3/4" expansion anchor is considered a conservative assumption for analysis since the anchor depth is unknown.

$$V_{req'd} = \frac{0.850k}{2} = .425k$$

$$T_{req'd \text{ max}} = 2.88k$$

Existing appears to be 5/8" ϕ \gg $P_{req'd}$
or cast-in-place anchor

Weld requirement from S10 to L6



$$M_o = 10'' \times 0.850k = 8.50k \text{ in}$$

$$T/C = M_o / 5'' = 1.7k$$

$$\text{plus } L_t \text{ impact } + D = \frac{5.75k}{2} = 2.875k$$

$$T_{total} = 1.7k + 2.875k = 4.58k$$

$$l_{req'd} = \frac{4.58k}{0.928(4)} = 1.24''$$

$$l_{provided} = 5'' \gg l_{req'd}$$

NCC:

$$Fall = .212(70ksi)(3/16'')(3''*2) = 16.7k \quad ok$$

MONORAIL BEAM ANALYSIS																																																															
For S-shaped Underhung Monorails Analyzed as Simple-Spans with / without Overhang Per AISC 9th Edition ASD Manual and CMAA Specification No. 74 (2004)																																																															
Job Name:	NASC - BLDG 100	Subject:	MONORAIL BEAM																																																												
Job Number:	NA	Originator:	RNH																																																												
		Checker:	RNH																																																												
Input:																																																															
Monorail Size: Select: S10x35																																																															
Design Parameters: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Beam Fy =</td> <td style="width: 10%;">36</td> <td style="width: 10%;">ksi</td> <td style="width: 25%;"></td> </tr> <tr> <td>Beam Simple-Span, L =</td> <td>13.0000</td> <td>ft</td> <td></td> </tr> <tr> <td>Unbraced Length, Lb =</td> <td>13.0000</td> <td>ft</td> <td></td> </tr> <tr> <td>Bending Coef., Cb =</td> <td>1.00</td> <td></td> <td></td> </tr> <tr> <td>Overhang Length, Lo =</td> <td>0.0000</td> <td>ft</td> <td></td> </tr> <tr> <td>Unbraced Length, Lbo =</td> <td>0.0000</td> <td>ft</td> <td></td> </tr> <tr> <td>Bending Coef., Cbo =</td> <td>1.00</td> <td></td> <td></td> </tr> <tr> <td>Lifted Load, P =</td> <td>4.000</td> <td>kips</td> <td></td> </tr> <tr> <td>Trolley Weight, Wt =</td> <td>0.150</td> <td>kips</td> <td></td> </tr> <tr> <td>Hoist Weight, Wh =</td> <td>0.100</td> <td>kips</td> <td></td> </tr> <tr> <td>Vert. Impact Factor, Vi =</td> <td>25</td> <td>%</td> <td></td> </tr> <tr> <td>Horz. Load Factor, HLF =</td> <td>20</td> <td>%</td> <td></td> </tr> <tr> <td>Total No. Wheels, Nw =</td> <td>4</td> <td></td> <td></td> </tr> <tr> <td>Wheel Spacing, S =</td> <td>0.7500</td> <td>ft</td> <td></td> </tr> <tr> <td>Distance on Flange, a =</td> <td>1.0000</td> <td>in</td> <td></td> </tr> </table>				Beam Fy =	36	ksi		Beam Simple-Span, L =	13.0000	ft		Unbraced Length, Lb =	13.0000	ft		Bending Coef., Cb =	1.00			Overhang Length, Lo =	0.0000	ft		Unbraced Length, Lbo =	0.0000	ft		Bending Coef., Cbo =	1.00			Lifted Load, P =	4.000	kips		Trolley Weight, Wt =	0.150	kips		Hoist Weight, Wh =	0.100	kips		Vert. Impact Factor, Vi =	25	%		Horz. Load Factor, HLF =	20	%		Total No. Wheels, Nw =	4			Wheel Spacing, S =	0.7500	ft		Distance on Flange, a =	1.0000	in	
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S10x35 Member Properties:																																																															
A =	10.30	in. ²	d/Af = 4.12																																																												
d =	10.000	in.	ix = 147.00 in. ⁴																																																												
tw =	0.594	in.	Sx = 29.40 in. ³																																																												
bf =	4.940	in.	ly = 8.30 in. ⁴																																																												
tf =	0.491	in.	Sy = 3.36 in. ³																																																												
k =	1.125	in.	J = 1.290 in. ⁴																																																												
rt =	1.100	in.	Cw = 188.0 in. ⁶																																																												
Support Reactions: (no overhang)																																																															
RR(max) =	5.33	= Pv*(L-S/2)/L+w/1000*L/2																																																													
RL(min) =	0.38	= Pv*(S/2)/L+w/1000*L/2																																																													
Results:																																																															
Parameters and Coefficients:																																																															
Pv =	5.250	kips	Pv = P*(1+Vi/100)+Wt+Wh (vertical load)																																																												
Pw =	1.313	kips/wheel	Pw = Pv/Nw (load per trolley wheel)																																																												
Ph =	0.800	kips	Ph = HLF*P (horizontal load)																																																												
ta =	0.452	in.	ta = tf-bf/24+a/6 (for S-shape)																																																												
λ =	0.460		λ = 2*a/(bf-tw)																																																												
Cxo =	-0.580		Cxo = -1.096+1.095*λ+0.192*e ^(-6.0*λ)																																																												
Cx1 =	0.582		Cx1 = 3.965-4.835*λ-3.965*e ^(-2.675*λ)																																																												
Czo =	0.396		Czo = -0.981-1.479*λ+1.120*e ^(1.322*λ)																																																												
Cz1 =	1.311		Cz1 = 1.810-1.150*λ+1.060*e ^(-7.70*λ)																																																												
Bending Moments for Simple-Span:																																																															
x =	6.313	ft.	x = 1/2*(L-S/2) (location of max. moments from left end of simple-span)																																																												
Mx =	16.83	ft-kips	Mx = (Pv/2)/(2*L)*(L-S/2) ² +w/1000*x/2*(L-x)																																																												
My =	2.45	ft-kips	My = (Ph/2)/(2*L)*(L-S/2) ²																																																												
Lateral Flange Bending Moment from Torsion for Simple-Span: (per USS Steel Design Manual, 1981)																																																															
e =	5.000	in.	e = d/2 (assume horiz. load taken at bot. flange)																																																												
at =	19.426		at = SQRT(E*Cw/(J*G)), E=29000 ksi and G=11200 ksi																																																												
Mt =	0.34	ft-kips	Mt = Ph*e*at/(2*(d-tf))*TANH(L ¹² /(2*at))/12																																																												
X-axis Stresses for Simple-Span:																																																															
fbx =	6.87	ksi	fbx = Mx/Sx																																																												
Lb/rt =	141.82		Lb/rt = Lb ¹² /rt																																																												
Fbx =	18.67	ksi	Fbx = 12000*Cb/(Lb ¹² *(d/Af)) <= 0.60*Fy																																																												
			fbx <= Fbx, O.K.																																																												

(continued)

Y-axis Stresses for Simple-Span:

$f_{by} = 8.76$ ksi
 $f_{wns} = 2.43$ ksi
 $f_{by}(\text{total}) = 11.19$ ksi
 $F_{by} = 27.00$ ksi

$f_{by} = M_y/S_y$
 $f_{wns} = M_t^{12}/(S_y/2)$ (warping normal stress)
 $f_{by}(\text{total}) = f_{by} + f_{wns}$
 $F_{by} = 0.75 \cdot F_y$

$f_{by} \leq F_{by}$, O.K.

Combined Stress Ratio for Simple-Span:

S.R. = 0.782

S.R. = $f_{bx}/F_{bx} + f_{by}(\text{total})/F_{by}$

S.R. ≤ 1.0 , O.K.

Vertical Deflection for Simple-Span:

$P_v = 4.250$ kips
 $\Delta(\text{max}) = 0.0837$ in.
 $\Delta(\text{ratio}) = L/1863$
 $\Delta(\text{allow}) = 0.3467$ in.

$P_v = P + W_h + W_t$ (without vertical impact)
 $\Delta(\text{max}) = P_v/2 \cdot (L-S)/2 / (24 \cdot E \cdot I) \cdot (3 \cdot L^2 - 4 \cdot ((L-S)/2)^2) + 5 \cdot w/12000 \cdot L^4 / (384 \cdot E \cdot I)$
 $\Delta(\text{ratio}) = L^{12}/\Delta(\text{max})$
 $\Delta(\text{allow}) = L^{12}/450$

Defl.(max) \leq Defl.(allow), O.K.

Bending Moments for Overhang:

$M_x = \text{N.A.}$ ft-kips
 $M_y = \text{N.A.}$ ft-kips

$M_x = (P_v/2) \cdot (L_o + (L_o - S)) + w/1000 \cdot L_o^2/2$
 $M_y = (P_h/2) \cdot (L_o + (L_o - S))$

Lateral Flange Bending Moment from Torsion for Overhang:

(per USS Steel Design Manual, 1981)

$e = \text{N.A.}$ in.
 $a_t = \text{N.A.}$
 $M_t = \text{N.A.}$ ft-kips

$e = d/2$ (assume horiz. load taken at bot. flange)
 $a_t = \text{SQRT}(E \cdot C_w / (J \cdot G))$, $E = 29000$ ksi and $G = 11200$ ksi
 $M_t = P_h \cdot e \cdot a_t / (d - t_f) \cdot \text{TANH}(L_o^{12}/a_t)/12$

X-axis Stresses for Overhang:

$f_{bx} = \text{N.A.}$ ksi
 $L_{bo}/r_t = \text{N.A.}$
 $F_{bx} = \text{N.A.}$ ksi

$f_{bx} = M_x/S_x$
 $L_{bo}/r_t = L_{bo}^{12}/r_t$
 $F_{bx} = 0.66 \cdot F_y$

Y-axis Stresses for Overhang:

$f_{by} = \text{N.A.}$ ksi
 $f_{wns} = \text{N.A.}$ ksi
 $f_{by}(\text{total}) = \text{N.A.}$ ksi
 $F_{by} = \text{N.A.}$ ksi

$f_{by} = M_y/S_y$
 $f_{wns} = M_t^{12}/(S_y/2)$ (warping normal stress)
 $f_{by}(\text{total}) = f_{by} + f_{wns}$
 $F_{by} = 0.75 \cdot F_y$

Combined Stress Ratio for Overhang:

S.R. = N.A.

S.R. = $f_{bx}/F_{bx} + f_{by}(\text{total})/F_{by}$

Vertical Deflection for Overhang:

(assuming full design load, P_v without impact, at end of overhang)

$P_v = \text{N.A.}$ kips
 $\Delta(\text{max}) = \text{N.A.}$ in.
 $\Delta(\text{ratio}) = \text{N.A.}$
 $\Delta(\text{allow}) = \text{N.A.}$ in.

$P_v = P + W_h + W_t$ (without vertical impact)
 $\Delta(\text{max}) = P_v \cdot L_o^2 \cdot (L + L_o) / (3 \cdot E \cdot I) + w/12000 \cdot L_o^4 \cdot (4 \cdot L_o^2 \cdot L - L^3 + 3 \cdot L_o^3) / (24 \cdot E \cdot I)$
 $\Delta(\text{ratio}) = L_o^{12}/\Delta(\text{max})$
 $\Delta(\text{allow}) = L_o^{12}/450$

Bottom Flange Bending (simplified):

$b_e = 5.892$ in.
 $t_f2 = 0.672$ in.
 $a_m = 1.720$ in.
 $M_f = 2.258$ in.-kips
 $S_f = 0.237$ in.³
 $f_b = 9.54$ ksi
 $F_b = 27.00$ ksi

Min. of: $b_e = 12 \cdot t_f$ or S^{12} (effective flange bending length)
 $t_f2 = t_f + (b_f/2 - t_w/2) / 2 \cdot (1/6)$ (flange thk. at web based on 1:6 slope of flange)
 $a_m = (b_f/2 - t_w/2) - (k - t_f2)$ (where: $k - t_f2$ = radius of fillet)
 $M_f = P_w \cdot a_m$
 $S_f = b_e \cdot t_f^2 / 6$
 $f_b = M_f / S_f$
 $F_b = 0.75 \cdot F_y$

$f_b \leq F_b$, O.K.

(continued)

Bottom Flange Bending per CMAA Specification No. 74 (2004):

(Note: torsion is neglected)

Local Flange Bending Stress @ Point 0:

(Sign convention: + = tension, - = compression)

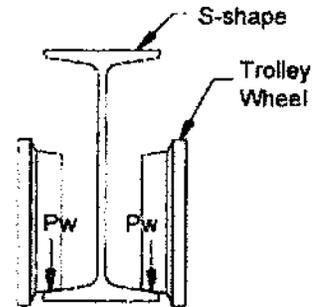
$$\begin{aligned} \sigma_{x0} &= -3.73 \text{ ksi} & \sigma_{x0} &= C_{x0} \cdot P_w / t_a^2 \\ \sigma_{z0} &= 2.55 \text{ ksi} & \sigma_{z0} &= C_{z0} \cdot P_w / t_a^2 \end{aligned}$$

Local Flange Bending Stress @ Point 1:

$$\begin{aligned} \sigma_{x1} &= 3.74 \text{ ksi} & \sigma_{x1} &= C_{x1} \cdot P_w / t_a^2 \\ \sigma_{z1} &= 8.43 \text{ ksi} & \sigma_{z1} &= C_{z1} \cdot P_w / t_a^2 \end{aligned}$$

Local Flange Bending Stress @ Point 2:

$$\begin{aligned} \sigma_{x2} &= 3.73 \text{ ksi} & \sigma_{x2} &= -\sigma_{x0} \\ \sigma_{z2} &= -2.55 \text{ ksi} & \sigma_{z2} &= -\sigma_{z0} \end{aligned}$$



Resultant Biaxial Stress @ Point 0:

$$\begin{aligned} \sigma_z &= 17.54 \text{ ksi} & \sigma_z &= f_{bx} + f_{by} + 0.75 \cdot \sigma_{z0} \\ \sigma_x &= -2.80 \text{ ksi} & \sigma_x &= 0.75 \cdot \sigma_{x0} \\ \tau_{xz} &= 0.00 \text{ ksi} & \tau_{xz} &= 0 \text{ (assumed negligible)} \\ \sigma_{t0} &= 19.09 \text{ ksi} & \sigma_{t0} &= \text{SQRT}(\sigma_x^2 + \sigma_z^2 - \sigma_x \cdot \sigma_z + 3 \cdot \tau_{xz}^2) \end{aligned}$$

$\Leftarrow F_b = 0.66 \cdot F_y = 23.76 \text{ ksi, O.K.}$

Resultant Biaxial Stress @ Point 1:

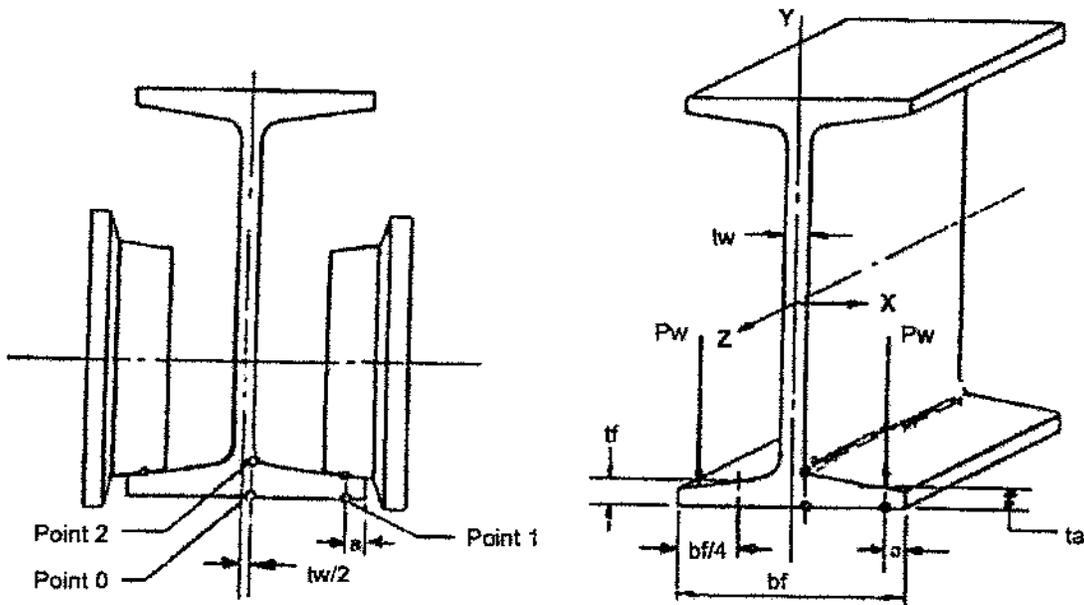
$$\begin{aligned} \sigma_z &= 21.95 \text{ ksi} & \sigma_z &= f_{bx} + f_{by} + 0.75 \cdot \sigma_{z1} \\ \sigma_x &= 2.81 \text{ ksi} & \sigma_x &= 0.75 \cdot \sigma_{x1} \\ \tau_{xz} &= 0.00 \text{ ksi} & \tau_{xz} &= 0 \text{ (assumed negligible)} \\ \sigma_{t1} &= 20.69 \text{ ksi} & \sigma_{t1} &= \text{SQRT}(\sigma_x^2 + \sigma_z^2 - \sigma_x \cdot \sigma_z + 3 \cdot \tau_{xz}^2) \end{aligned}$$

$\Leftarrow F_b = 0.66 \cdot F_y = 23.76 \text{ ksi, O.K.}$

Resultant Biaxial Stress @ Point 2:

$$\begin{aligned} \sigma_z &= 13.72 \text{ ksi} & \sigma_z &= f_{bx} + f_{by} + 0.75 \cdot \sigma_{z2} \\ \sigma_x &= 2.80 \text{ ksi} & \sigma_x &= 0.75 \cdot \sigma_{x2} \\ \tau_{xz} &= 0.00 \text{ ksi} & \tau_{xz} &= 0 \text{ (assumed negligible)} \\ \sigma_{t2} &= 12.55 \text{ ksi} & \sigma_{t2} &= \text{SQRT}(\sigma_x^2 + \sigma_z^2 - \sigma_x \cdot \sigma_z + 3 \cdot \tau_{xz}^2) \end{aligned}$$

$\Leftarrow F_b = 0.66 \cdot F_y = 23.76 \text{ ksi, O.K.}$



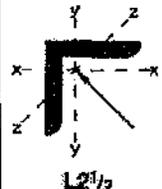


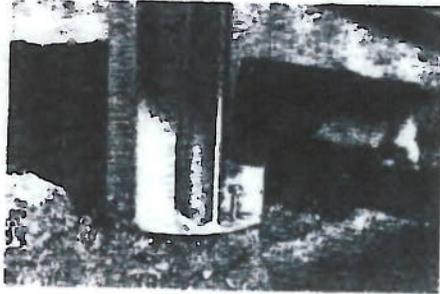
Table 4-11 (continued)
**Available Strength in
 Axial Compression, kips**
Centrically Loaded Single Angles

$F_y = 36 \text{ ksi}$

Shape	L2 1/2 x 2 1/2 x								L2 1/2 x 2 x		
	3/8		5/16		1/4		3/16 ^c		3/8		
Wt/lb	5.90		4.90		4.04		3.06		5.30		
Design	P_n/Ω_c	$\phi_c P_n$	P_n/Ω_c	$\phi_c P_n$	P_n/Ω_c	$\phi_c P_n$	P_n/Ω_c	$\phi_c P_n$	P_n/Ω_c	$\phi_c P_n$	
	ASD	LRFD	ASD	LRFD	ASD	LRFD	ASD	LRFD	ASD	LRFD	
Effective length KL (%) with respect to least radius of gyration r_x	0	37.4	56.1	31.5	47.4	25.8	38.4	19.1	28.7	33.4	50.2
	1	36.1	54.3	30.5	45.9	24.7	37.2	18.5	27.8	32.0	48.1
	2	32.8	49.2	27.7	41.6	22.4	33.7	16.8	25.2	28.1	42.2
	3	27.8	41.8	23.5	35.3	19.1	28.6	14.3	21.5	22.6	34.0
	4	22.1	33.2	18.7	28.1	15.2	22.8	11.4	17.2	16.7	25.2
	5	16.4	24.7	13.9	20.9	11.3	17.0	8.56	12.9	11.4	17.1
	6	11.6	17.4	9.82	14.8	7.98	12.0	6.87	9.13	7.86	11.8
	7	8.53	12.8	7.21	10.8	5.87	8.82	4.46	6.70		
	8	6.53	9.81	5.52	8.30	4.49	6.75	3.42	5.13		
Properties											
A_g (in. ²)	1.73		1.46		1.19		0.900		1.55		
r_x (in.)	0.481		0.481		0.482		0.482		0.419		
ASD	LRFD		* Shape is slender for compression with $F_y = 36 \text{ ksi}$. Note: Heavy line indicates KL/r equal to or greater than 200.								
$\Omega_c = 1.67$	$\phi_c = 0.90$										

NCC note: This is not the installed fastener. Used for analysis purposes only.

KB3 Kwik Bolt 3 Expansion Anchor



Features and Applications

- Rounded end for easy installation
- Dog point impact section to prevent thread damage during installation
- Standard thread bolts for high shear application, long thread bolts for greater flexibility
- Available in carbon steel, hot-dip galvanized, 304SS and 316SS to suit any environment
- Best approval rating in class

Technical Data

KB-3

Base material

- Lightweight Concrete
- Uncracked concrete
- Lightweight concrete over metal deck
- Grout-filled block

Anchor material

- KB3: carbon steel, electroplated zinc min 5 microns
- KB3 HDG: carbon steel, hot-dip galvanized min 43 microns
- KB3 304SS: AISI 304 stainless steel
- KB3 316SS: AISI 316 stainless steel

Listings/Approvals

- ICC-ES (International Code Council) - ESR-1385 (ACO1 Masonry)
- Approval Pending - (AC 193 concrete)
- FM (Factory Mutual) - Sprinkler Hanger Components for Automatic Sprinkler Systems
- UL (Underwriter Laboratories) - UL 203 Pipe Hanger Equipment for Fire Protection Services
- COLA (City of Los Angeles) - RR-25577
- Metro-Dade County - NOA No. 06-0810.13
- Qualified under an NQA-1 nuclear quality program



Length Identification System

Stamp on Anchor		A	B	C	D	E	F	G	H	I	J	K	L	M
Length of Anchor (in)	From	1-1/2	2	2-1/2	3	3-1/2	4	4-1/2	5	5-1/2	6	6-1/2	7	7-1/2
	Up To But Not Including	2	2-1/2	3	3-1/2	4	4-1/2	5	5-1/2	6	6-1/2	7	7-1/2	8
Stamp on Anchor		N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Length of Anchor (in)	From	8	8-1/2	9	9-1/2	10	11	12	13	14	15	16	17	18
	Up To But Not Including	8-1/2	9	9-1/2	10	11	12	13	14	15	16	17	18	19



KB3 Identification Mark

Kwik Bolt 3 Anchor Program

Kwik Bolt 3 Carbon Steel Standard Thread

Description	Hole Dia	Anchor Length	Thread Length	Qty	Item No.	Qty	Master Carton Item No.	Allowable Loads ^{1, 2} ≥ 4000 psi Concrete		
								Emb Depth	Tension (lb)	Shear (lb)
KB3 1/4" x 1-3/4"	1/4"	1-3/4"	3/4"	100	00282502	1200	03000340	1-1/8"	430	530
KB3 1/4" x 2-1/4"	1/4"	2-1/4"	7/8"	100	00282503	1200	03000860	2"	800	530
KB3 3/8" x 2-1/4"	3/8"	2-1/4"	7/8"	50	00282505	400	03000861	1-5/8"	1095	1420
KB3 3/8" x 3"	3/8"	3"	1-1/4"	50	00282506	400	03000862	2-1/2"	1850	1460
KB3 3/8" x 3-3/4"	3/8"	3-3/4"	1-1/4"	50	00282507	400	03000902	2-1/2"	1850	1460
KB3 3/8" x 5"	3/8"	5"	1-1/4"	50	00282508	300	03000905	2-1/2"	1850	1460
KB3 1/2" x 2-3/4"	1/2"	2-3/4"	1-1/4"	25	00282509	200	03000924	2-1/4"	1620	2735
KB3 1/2" x 3-3/4"	1/2"	3-3/4"	1-5/16"	25	00282510	200	03000940	2-1/4"	1620	2735
KB3 1/2" x 4-1/2"	1/2"	4-1/2"	1-5/16"	25	00282511	150	03000990	3-1/2"	2440	3020
KB3 1/2" x 5-1/2"	1/2"	5-1/2"	1-5/16"	25	00282512	150	03000993	3-1/2"	2440	3020
KB3 5/8" x 3-3/4"	5/8"	3-3/4"	1-1/2"	15	00282513	90	03000807	2-3/4"	2210	4070
KB3 5/8" x 4-3/4"	5/8"	4-3/4"	1-1/2"	15	00282514	90	03000997	4"	3385	4885
KB3 5/8" x 6"	5/8"	6"	1-1/2"	15	00282515	90	03000808	4"	3385	4885
KB3 5/8" x 7"	5/8"	7"	1-1/2"	15	00282516	80	03000810	4"	3385	4885
KB3 3/4" x 4-3/4"	3/4"	4-3/4"	1-1/2"	10	00282517	80	03000999	3-1/4"	2730	5710
KB3 3/4" x 5-1/2"	3/4"	5-1/2"	1-1/2"	10	00282518	80	03000844	4-3/4"	5285	7325
KB3 3/4" x 7"	3/4"	7"	1-1/2"	10	00282519	60	03000847	4-3/4"	5285	7325
KB3 1" x 6"	1"	6"	2-1/4"	5	00286017	25	03001196	4-1/2"	4670	8140
KB3 1" x 9"	1"	9"	2-1/4"	5	00286018	20	03001197	6"	7070	9200



1 Always refer to Hilti Product Technical Guide for complete details on anchor specifications, limitations, explanation of data, information on other base materials and embedments, and other technical data
 2 Values shown are for a shear plane through the anchor body. When the shear plane acts through the thread, please see corresponding reduction factors in the Hilti Product Technical Guide

Hilti. Outperform. Outlast.



Damaged monorail beam

