

Addendum No. 1
June 10, 2019

This addendum is hereby incorporated into the bidding documents for the General, and Electrical construction of the above referenced project bidding June 19, 2019, 9:00 a.m. local time. The corrections, clarifications, changes and approvals herein shall become an integral and binding part of any contract entered into between the Owner, Contractor and his successful sub-bidders.

Attendance at the Pre-Bid Meeting, held June 6, 2019 was as follows:

Juston Rouse	Wemco	(509) 991-5194 Juston@wemcoinc.com
Josh Morris	Wemco	(509) 999-9063
Dave Lehto	Knight Const.	(509) 995-7931
Jared Keck	Knight Const.	(509) 821-0619
Mike Lenz	ITD	
Shad Flores	ITD	
Scott Fischer	Architects West	(208) 667-9402 scottf@architectswest.com

Note portable toilets are required by ITD for construction personnel, as per Specification Section 015000, paragraph 2.2, B.

ARCHITECTURAL MANUAL

Bid Proposal:

1. Use the attached, new Bid Proposal which includes Add Alternate No. 2 for Laser Sensing at both the new and existing bridge cranes to prevent simultaneous operation of both cranes within the same bay.

Section 011000 – Summary

1. Paragraph 1.8, A. On-Site Work Hours; change to read 6 am to 2:30 pm and closed between 11 am and noon. This will correspond with ITD personnel's schedule.

Section 012300 – Alternates

1. Paragraph 3.1., B; Add Alternate 2, for Laser Sensing at both the new and existing bridge cranes to prevent simultaneous operation of both cranes within the same bay.

Section 146000 – Crane and Hoist

1. Replace the original specification with the new specification included in this Addendum. Corrections indicated with red text.

END OF ADDENDUM No. 1

BID PROPOSAL

TO: STATE OF IDAHO
IDAHO TRANSPORTATION DEPARTMENT

Gentlemen:

The Bidder, in compliance with your Invitation for Bids for the construction of ITD Project No: ITD Project FM11902; ITD Coeur d'Alene Bridge Crane Addition, having examined the bidding and Contract Documents and the site of the proposed Work, and being familiar with all of the conditions surrounding the construction of the proposed Project, including the availability of materials and labor, hereby proposes to furnish all labor, materials and supplies and to provide the service and insurance in accordance with the Contract Documents, within the time set forth therein, and at the prices stated below. These prices are to cover all expenses incurred in performing the Work required under the Contract Documents.

Bidder hereby agrees to commence Work under this Contract on a date to be specified in the written "Notice to Proceed" of the Owner and to substantially complete the Project within 90 consecutive calendar days thereafter, as stipulated in the specifications. Bidder further agrees to pay as liquidated damages, the sum of \$200.00 for each consecutive calendar day after the established substantial completion date or adjusted date as established by change order.

Bidder acknowledges receipt of Addenda No. _____.
(List all Addenda)

BASE PROPOSAL: Bidder agrees to perform all of the base proposal Work described in the specifications and shown on the plans for the sum of:

Dollars(\$_____))
(Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.)

Add Alternate No. 1:

Replace bussing and electrical components if existing crane electrical bussing is found to be of insufficient capacity; add the sum of:

Dollars(\$_____))

Add Alternate No. 2:

Add laser sensors to both the new and the existing bridge crane; add the sum of:

Dollars(\$_____))

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informality in the bidding.

The bidder agrees that this bid shall be good for a period of forty-five (45) calendar days after the scheduled opening time for receiving bids.

Upon receipt of written Notice of Intent to Award of this bid, Bidder will execute the formal Contract within ten (10) calendar days and deliver a Surety Bond or Bonds as required by paragraph "Performance and Payment Bonds" first page (ITB-1) of the Instructions to Bidders.

The bid security in the amount of five percent (5%) of the bid amount is to become the property of the Owner, in the event the Contract and bond are not executed within the time set forth, as liquidated damages for the delay and additional expense to the Owner caused thereby.

The names and addresses of the entities who will perform the Work identified below, subject to approval of Owner and Architect, if Undersigned is awarded the Contract, are as follows:

Electrical (PWCL Category 16000)

(Name) _____

(Address) _____

Idaho Public Works Contractors License No. _____

Idaho Electrical Contractors License No. _____

FAILURE TO NAME A PROPERLY LICENSED SUBCONTRACTOR WILL RENDER THE BID UNRESPONSIVE AND VOID.

Bidder warrants that bid has been prepared and that any contract resulting from acceptance of this bid is subject to the Fixed Price Construction Contract.

The undersigned notifies that it is of this date duly licensed as an Idaho Public Works Contractor and further that it possesses Idaho Public Works Contractor's License No. _____, and is domiciled in the State of _____.

Dated this _____ day of _____, _____.
(date) (month) (year)

Respectfully submitted by:

(Contractor's Name- Typed)

(Street or PO Address)

(City, State and zip code)

(Authorized Signature)

SEAL

(Seal - if bid is by a corporation)

(Title)

(Telephone Number)

(FAX Number)

(Email Address)

Have you remembered to include bid security (bid bond or a certified or cashier's check), Contractor's Affidavit Concerning Alcohol and Drug-Free Workplace and a signed copy of the Bidder's Acknowledgment Statement with your bid?

SECTION 146000 – CRANE AND HOIST

PART 1 – GENERAL

1.01 DESCRIPTION

A. SCOPE

1. This section specifies bridge cranes and hoisting equipment.
2. Runway beams and rail are existing and are not included in this section. Idaho Transportation Department has hired a Structural Engineer to verify that the existing beams and rails are adequate to support this new bridge crane. This report is included in section 003000, Information Available to Bidders.

B. CRANE SUMMARY

Crane #1	location	
Span:		40 Ft., 0 Inches
Capacity:		10 Tons
Crane type:		Top running, double girder
Classification:		Crane shall be designed and constructed to CMAA Specification # 70 for Class “D” service requirements and operation in a non-hazardous environment.
Crane speed:		2 step, infinitely variable
Crane drive:		Dual motor drive
Trolley speed:		2 step, infinitely variable
Trolley drive:		Motorized
Hoist speeds:		2 step, infinitely variable; 14 fpm max.
Hoist type:		Electric wire rope
Hoist lift required:		16 Ft.
Control:		Pendant from independent track on bridge
Load Break:		Weston style mechanical load break

C. WORK INCLUDES THE FOLLOWING:

1. Detailed design of completed crane system, including bridge, end trucks, trolley, hoists, cabling, controls, and all appurtenances specified hereinafter.
2. Shop drawings.
3. Fabrication of a complete crane.
4. Inspection and shop testing.
5. Documentation and schedules.

1.02 REFERENCES

Equipment furnished under this section shall comply in all respects with the requirements of the following standards:

OSHA Occupational Safety and Health Administration
Part 1926.554 - Overhead Hoists
Part 1910.179 – Overhead and Gantry Cranes

CMAA Crane Manufacturer’s Association of America
Specifications for Top Running Bridge & Gantry Type Multiple
Girder Electric Overhead Traveling Cranes - No. 70 (2015)

ANSI / ASME

American National Standards Institute /
American Society of Mechanical Engineers
ANSI / ASME HST-4 - 1999 Performance Standard For Overhead
Electric Wire Rope Hoists
ANSI / ASME B30.16 – 2003 Overhead Hoists (Underhung)
ANSI / ASME B30.2 - 2001 Overhead and Gantry Cranes
(Top Running Bridge, Single Or Multiple Girder, Top Running
Trolley Hoist)
ANSI / ASME B30.11 – 2004 Monorails and Underhung Cranes
ANSI / ASME B30.17 – 2003 Overhead and Gantry Cranes (Top
Running Bridge, Single Girder, Underhung Hoist)

NEMA National Electric Manufacturer’s Association
UL 508A panels

NEC National Electric Code – 1999
Article 100, Article 240-1, Article 430-31, Article 430-51, Article
610-1, Article 610-31

1.03 SUBMITTALS

A. SHOP DRAWINGS AND EQUIPMENT DATA

1. Manufacturer’s catalog data for hoist.
2. Dimensional drawings and details for bridge crane system.
3. Wiring schematics. – ship with crane

B. OPERATIONS AND MAINTENANCE MANUALS (one set of Owner’s manuals in paper and on CD rom)

1. Equipment function, normal operating characteristics, and limiting conditions.
2. Assembly, installation, alignment, and maintenance instructions.
3. Lubrication and maintenance instructions.
4. Guide to “troubleshooting”.
5. Parts list.
6. As-built drawing.
7. Test results.

1.04 APPLICABLE STANDARDS

- A. Contractor shall adhere to OSHA, state, and local safety guidelines, laws, rules, and regulations.
- B. Contractor shall conform to all applicable ANSI, CMAA, and HMI specifications and/or standards.
- C. Comply with CMAA **specification 70**.
- D. Long lead items [hoist, end trucks, drives and controls] will be ordered by contractor upon receipt of purchase order and credit approval. Steel will not be ordered until shop drawings and submittals have been approved by the customer.
- E. All electric equipment shall be UL, CSA c/us or ETL labeled, **508A**.

1.05 WARRANTIES

- A. Provide one-year equipment warranty.

PART 2 - PRODUCTS

2.01 ACCEPTABLE PRODUCTS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.
- B. Bridge crane package systems shall be provided by a company supplying and servicing wire rope hoists for a minimum of five years.
- C. Basis-of-Design Hoist shall be **Yale Cable King or Shaw-Box 700 or 800 Series**.
- D. Other manufacturers include Demag.

2.02 MATERIALS

<u>Components</u>	<u>Material</u>
Bridge beams	Steel, ASTM A36 or A992
End trucks	Steel, ASTM A36 (or equal)
Trolley	Steel, ASTM A36 (or equal)
Wheels	Steel
Hooks	Forged steel

2.03 EQUIPMENT

A. HOIST AND TROLLEY

1. Top-running double girder cranes shall utilize a double girder trolley electric wire rope hoist as manufactured by **Yale or Shaw-Box**.
2. The hoist shall be equipped with a load-limiting device (**overload clutch**) that shall prevent lifting more than **125%** of the rated load.
3. Hoist and trolley motors shall be per 1.01B above, as applicable.
4. Hoisting motor(s) shall be **VFD rated**.
5. Hoisting motor(s) shall be totally enclosed with IP55 protection, minimum class F insulation, Klixon type bimetal switch for thermal protection and shall have a 60% ED rating.
6. Trolley shall be furnished with an adjustable frequency inverter drive and two-step or infinitely variable speed control for smooth acceleration and deceleration.
7. Trolley motors shall be inverter duty motors with minimum class "F" insulation and motor enclosures shall be TENV [totally enclosed non-ventilated].
8. Rotary cam type limit switch equipped with 4 micro-switches shall be provided. Limit switch shall provide upper and lower limit of hoist travel, hoist slow down prior to reaching upper limit and phase sequence supervision at upper limit. An additional block operated limit shall be included.
9. Hoist motor brake shall be DC disc type with adequate torque to stop and hold over **125%** of the hoist rated load.
10. Large diameter rope drum with a minimum of 36:1 drum to wire rope diameter ratio. Groove depth shall be at least 35% of rope diameter. The rope drum shall be equipped with a rope guide to help keep the rope aligned in the grooves of the drum.

11. Wire rope shall be constructed from galvanized steel having a minimum safety factor of 5.
12. Hoist reeving shall be single reeved. Lateral hook drift shall not exceed 1/8 inch per foot of vertical travel on single reeved models.
13. The hoist nameplate is to carry a CSA c/us rating. The actual hoist control enclosure rating shall be at least equivalent to IP55 / NEMA 4 type.
14. Hooks shall be made of forged alloy steel (34CrMo4QT or 34CrNiMo6QT) and shall be fitted with a spring-loaded flipper-type safety latch.
15. Hoist shall have a duty rating suitable for the load class and load cycles of the application.
16. AGMA quality class 12 machine cut, hardened and precision ground hoist gearing. On models over 5 ton capacity the gears inside the hoist gearbox are lubricated with semi-fluid grease or oil.
17. AGMA quality class 10, hardened and precision ground trolley drive gearing, lubricated by semi-fluid grease.
18. Trolleys shall have safety drop lugs and energy absorbing bumpers.

B. BRIDGE GIRDER

1. Bridge girder shall be per 1.01B above, as applicable.
2. Bridge girders shall be constructed from welded girders or Structural beams, Steel, ASTM A36 or A992, as required.

C. END TRUCKS AND BRIDGE DRIVE

1. End trucks shall be designed in accordance with CMAA specifications as applicable.
2. End trucks shall be bolted to bridge girder.
3. Bridge drive shall be dual-motor (A-4 arrangement per CMAA).
4. Bridge drive shall be designed to stop the bridge within CMAA specifications.
5. End trucks shall be equipped with rail sweeps and energy-absorbing rubber bumpers.
6. Travel limit switches to be provided as necessary for safe operation.

7. Bridge shall be furnished with an adjustable frequency inverter drive and two-step or infinitely variable speed control for smooth acceleration and deceleration.
8. Bridge motors shall be inverter duty motors with minimum class “F” insulation and motor enclosures shall be TENV [totally enclosed non-ventilated].
9. AGMA quality class 10, hardened and precision ground bridge drive gearing, lubricated by semi-fluid grease.

D. POWER SUPPLY

1. Power supply for the hoist shall be **230 volt, 3 ph., 60 Hz. (contractor to verify)**. All power required for the operation of the hoist, trolley, and end trucks shall be developed from this source.
2. Runway electrification shall be 4-bar safety type rigid conductors as manufactured by Insul-8, Duct-O-Wire Company or Wampfler. Wall mounted disconnect switch and power to runway conductors provided by Electrical Contractor.
3. Cross bridge electrification shall be flat cable style festoon system with terminal box, multi-conductor cord, plug connectors (when available) and accessories. Cables are to be hardwired when plug connectors are not available.

E. CONTROLS

The following controls shall be used as applicable:

1. Six-way operation, plug-in pushbutton pendant suspended from independent festoon track. Radio control may be quoted as an option.
2. Pendant shall include Start (momentary) button and Emergency Stop (push to maintain, turn to release) that controls a mainline contactor in the bridge control panel.
3. Pushbutton shall be clearly marked with hoist, trolley and bridge travel directions.
4. Hoist shall be **variable frequency inverter control** and the trolley and bridge controls shall be variable frequency inverter control (standard), as required per section 1.01.B.
5. Electrical control enclosures shall be IP55 or NEMA 4 type. Pushbutton enclosure shall have a rating of IP65, NEMA 4X, 4 or 5.

F. LABELING

1. Hoist and bridge beam shall be labeled with load rating.
2. A corrosion-resistant nameplate shall be fixed to the bridge with the following information:
 - a. Name of manufacturer
 - b. Mfg.'s model number and serial number
 - c. Capacity
 - d. Date of manufacture (month and year)

G. PAINTING

1. Hoist and trolley shall be factory painted (2-part epoxy) per manufacturer's standards, **yellow to match the existing bridge crane.**
2. Bridge shall be shop cleaned, primed, and painted per manufacturer's standards.
3. The following items shall not be painted:
 - a. Rail surfaces in contact with wheels
 - b. Wheel running surfaces
 - c. Hoist wire rope
 - d. Conductor bar, festoon cables and supports

PART 3 – EXECUTION

3.01 INSTALLATION AND INSPECTION

- A. Inspect structure and crane rail erection for conformance with reviewed shop drawings and contract documents prior to installation of equipment. Bring nonconforming work to the attention of the customer prior to proceeding with crane installation. Non-conforming runway structure or installation must be corrected prior to load testing of crane system. Costs of delays or additional work due to nonconforming runway structure will be reimbursed by the Owner.
- B. Bridge crane shall be installed in conformance with manufacturer's instructions and inspected by a manufacturer's representative. Provide all necessary accessories to make bridge crane complete, usable, and capable of meeting the operating requirements specified in the Operating Requirements. Test, adjust and clean equipment for acceptance by Owner.

3.02 TESTING

- A. All crane equipment shall be operated through a complete lift and lowering cycle and through a complete travel of the bridge and trolley to determine that the equipment shall perform smoothly and safely and that pendant cable length is sufficient to permit operation from desired floor levels. All tests shall be carried

out with the bridge crane equipment loaded at 125 percent of capacity. The bridge crane provider shall provide the test weight loads. Any defects shall be corrected by the bridge crane provider without any expense to the Owner.

3.03 USE BY CONTRACTOR

- A. If crane is used by the Contractor, it shall be repaired, repainted, and otherwise refurbished to like new condition prior to its acceptance. The Contractor assumes all responsibility for operation and maintenance until the crane has been accepted by Owner.

3.04 CLEANUP

- A. Upon completion of work, area shall be cleaned and restored to original condition, acceptable to the Owner.

END OF SECTION 146000