

Date: February 25, 2011

RE: City of Duluth Bid #11-4401
(New Passenger Terminal Bid Package 2A)

Addendum No. 2

TO: Prospective Bidders

This Addendum forms a part of the Contract Documents and modifies the original Bidding Documents dated February 3, 2011. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

1.0 PROJECT MANUAL

1.1 Contract:

Contract – Replace contract in its entirety with that attached to this Addendum; 7 pages. Page 3, No. 8; last sentence changed to include 49 CFR Part 1520, Protection of Sensitive Security Information. Page 4, No 10; last two (2) paragraphs added to reflect TSA auditing clause.

1.2 Technical Specifications:

Section 01210 – Allowances: - 3 pages

- Replace Section in its entirety with that attached to this Addendum.

Section 01230 – Alternates: - 4 pages

- Replace Section in its entirety with that attached to this Addendum.

01361 Sustainable Design Requirements

- Part 1.8.F DIVISION 6 - WOODS, PLASTICS, AND COMPOSITES shall be revised to state the following:
 1. Certified Wood:
 - a. The use of "FSC Certified" products is required in all wood products as listed under Item 1.11, Products where available. If a wood product with the "FSC Certified" label does not exist or is not available, a non-"FSC Certified" product may be substituted in place. Any use of "FSC Certified" wood products (except recycled or salvaged wood) which have been harvested in accordance with the "FSC Principles and Criteria" for well-managed forests developed by the Forest Stewardship Council (FSC) shall be reported and documented in accordance with Item 1.9, LEED Submittals below.

Section 07131 – Self Adhering Sheet Waterproofing – 5 pages

- Replace Section in its entirety with that attached to this Addendum.

Section 08331 – Overhead Coiling Doors:

- Revise Article 2.2 to add new Sub-paragraph D.3.a to read:
Provide 5 glazed slats centered approx. 5'-4" a.f.f.

Section 08710 – Finish Hardware: - 2 pages

- Add new Article 2.21 attached to this Addendum.
- Revise Hardware Set 34 in Article 3.8 DOOR HARDWARE SCHEDULE as follows:

HW SET: 34

		HINGES AS REQUIRED - TORX		
1	EA	UL437 DEADBOLT	B862 TORX	SCH
1	EA	FLUSH PULL	15C TORX	HAG
1	EA	PUSH PLATE	8200 8" X 16" TORX	IVE
1	EA	THRESHOLD	63A TORX	ZER
1	EA	STOP		

- Add the following hardware sets to Article 3.8 DOOR HARDWARE SCHEDULE:

HW SET: 58

		HINGES AS REQUIRED		
1	EA	CLASSROOM LOCK	L9071	SCH
1	EA	OVERHEAD STOP	900S	GLY

HW SET: 59

		HINGES AS REQUIRED		
1	EA	UTILITY LOCK	L9466	SCH
1	EA	STOP		

Section 09111 – Non-Structural Steel Framing:

- **Revise Article 1.2, Sub-paragraph A.3 to read:**
Metal strapping as backing for support of wall cabinets, closet shelving, handrails and bracketed counter and work surfaces not supported by base cabinets.

Section 10651 – Operable Panel Partitions:

- **Revise Article 2.1, Paragraph F to read:**
Electric Controls: Remote-control station and emergency release mechanism.
 1. Controls shall be integrated with computer controlled access system with provision for card reader control in place of key operators and door position switches.

Section 13700 – Part 1542 Computer Controlled Access System:

- **Revise Article 1.9, Paragraph B to read:**
The system contractor integrator shall have previous experience in installation of systems of similar scope for at least 2 projects in the past five (5) years.
Contractor shall provide names of the project, year completed and references to the A/E for review and approval with bid.

Section 14240 – Hydraulic Elevators:

- **Revise Article 2.4, Paragraph A to read:**

General: Provide manufacturer's standard microprocessor-based operation system for each elevator as required to provide automatic operation of the type indicated and defined in the Code as "Operations."

- **Replace the Elevator Schedule with that attached to this Addendum.**

Section 15150 - Sanitary, Vent, and Storm Drainage Piping:

- **Insert new Part 3.2.A to state:**
See schedule on drawings.
- **Revise Part 3.2.A to be Part 3.2.B.**
- **A new Part 3.2.A shall be inserted to state "See schedule on drawings."**
The existing Part 3.2.A shall be revised to be Part 3.2.B.

Specification Section 15051 – Basic Plumbing Materials and Methods

- **Part 1.13 and 1.14 shall be deleted in their entirety, as there are no seismic design requirements for this building.**

Section 15410 - Plumbing Fixtures- 15 pages.

- **Replace Section in its entirety with that attached to this Addendum.**

Section 15550 - Heating, Ventilation & Air Conditioning Piping

- **The valve schedule in Part 2.2 shall allow Milwaukee brand valves provided that they meet all requirements of this section and are considered equal to the basis of design valve listed. This is true for all valve manufacturers.**

Section 15881 – In-Slab Ductwork

- **Part 2.2.A shall be revised to state:**
The AIRFLOOR forms shall be stamped out of 26 gauge cold rolled steel and shall be 12"x12"x3-3/4" high at the dome. Pre-assembled into 4'x2' sections at the AIRFLOOR factory.

Section 15950 – HVAC Instrumentation and Controls

- **Part 1.7.I.2 shall be revised to state:**
A maintained service organization consisting of at least three (3) competent servicemen, within 50 miles of the project site, for a period of not less than ten years.
- **Part 1.12.D.1 shall be revised to remove the words "Alternate 1" from this section. The requirement for the one year maintenance contract during the warranty period shall be included in the contractor's base bid.**
- **Part 1.12.D.2 shall be revised to indicate this as "Alternate 13a," and not "Alternate 2." The warranty period for this alternate shall include one (1) additional year after the initial one year warranty and maintenance period included in the base bid.**
- **A new Part 1.12.D.3 shall be added as "Alternate 13b." All items included in this alternate shall be identical to Alternate 13a, except that the warranty period shall be for five (5) additional years after the initial one year warranty and maintenance period included in the base bid.**
- **Part 2.1.A shall be revised to state:**
Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work are

limited to the following: Honeywell (Excel 5000), Johnson Controls (Metasys), Siemens (System 600 Apogee).

- **Part 2.1.B shall be eliminated.**
- **Part 2.8.D.8 shall allow Milwaukee brand control valves provide that they meet all requirements of this section and are considered equal to the Jamesbury 830L valve. This is true for all valve manufacturers.**

Section 16231 - Packaged Engine Generators:

- **Part 1.5.J shall be revised from "Comply with EPA emissions Tier 4". to "Comply with EPA emissions Tier 2".**
- **Part 2.3.D shall be revised from "Transient Voltage Performance: Not more than 10 percent variation..." to "Transient Voltage Performance: Not more than 15 percent variation...."**

Section 16726 - Integrated Paging Systems and Equipment:

- **Delete Article 3.6 in its entirety.**

Section 347716 – Baggage Handling Systems:

- **Add the following contractors to the list of Acceptable Manufacturers under Part 2.01, Paragraph A:**
Automatic Systems, Inc., Kansas City, MO
Diversified Conveyors, Inc., Memphis, TN
Logan Teleflex, Inc., Louisville, KY
- **Add the following Paragraph C under Part 2.01:**
BHS Controls Subcontractors
 1. Subject to compliance with requirements, available firms qualified to perform as BHS controls subcontractor for this project include, but are not limited to, the following:
 - a. Brock Solutions, Kitchener, ON
- **Part 2.14.A.3 shall be revised to eliminate the reference to a "Warm back-up" PLC configuration, all outbound BHS systems will be on a Hot Back-up PLC configuration.**

2.0 DRAWINGS

Replace drawings listed below with sheets included with this Addendum No. 2

2.1 Volume 1 of 3 – Civil / Structural

- Sheet C004: Ultimate Development Site Plan - Located existing HPG line and emergency generator.**
- Sheet S118: Tug Road Foundation Plan – Added In-Floor Radiant Snow Melt system; added crown to ramp pavement; added apron light pole foundations.**
- Sheet S506: Structural Details – New sheet depicting apron light pole foundation detail.**

2.2 Volume 2 of 3 – Architectural

- Sheet A101: Overall First Floor Plan - Revised door locations.**
- Sheet A110: Enlarged First Floor Plan Area A - Revised door locations.**

- Sheet A111:** Enlarged First Floor Plan Area B - Revised door locations; Added door designation at Rm. 129.
- Sheet A606:** Interior Elevations – Revised door locations.
- Sheet A701:** Door Schedules – Revised door and frame types.
- Sheet A720:** Exterior Systems Tug Tunnel – Added area of in-slab heat.
- Sheet A721:** Exterior Systems Tug Tunnel – Added in-slab heat.
- Sheet A722:** Exterior Systems Tug Tunnel – Added in-slab heat.

2.3 Volume 3 of 3 – Mechanical, Electrical, Plumbing & Fire Protection

- Sheet M001:** Mechanical Legend – Miscellaneous Revisions
- Sheet M002:** Mechanical Symbols & Abbreviations – Miscellaneous Revisions
- Sheet M110:** Enlarged First Floor Mechanical Plan Area A – Miscellaneous Revisions
- Sheet M111:** Enlarged First Floor Mechanical Plan Area B – Miscellaneous Revisions
- Sheet M112:** Enlarged Second Floor Mechanical Plan Area A – Miscellaneous Revisions
- Sheet M113:** Enlarged Second Floor Mechanical Plan Area B – Miscellaneous Revisions
- Sheet M114:** Enlarged Third Floor Mechanical Plan Area A – Miscellaneous Revisions
- Sheet M115:** Enlarged Third Floor Mechanical Plan Area B – Miscellaneous Revisions
- Sheet M116:** Enlarged Roof Level Mechanical Plan Area A – Miscellaneous Revisions
- Sheet M202:** Mechanical Sections & Elevations – Added Sections
- Sheet M301:** Heating Hot Water Flow Diagram – Miscellaneous Revisions
- Sheet M303:** Tug Tunnel Ramp Snow Melt Plan, Flow Diagram & Details – New Sheet
- Sheet M303A:** Landside Snow Melt Schematic Interior Piping Routing Diagram – Renumbered Sheet and Miscellaneous Revisions
- Sheet M401:** Mechanical Equipment Schedules I – Miscellaneous Revisions
- Sheet M402:** Mechanical Equipment Schedules II – Miscellaneous Revisions
- Sheet M403:** Mechanical Equipment Schedules III – Miscellaneous Revisions
- Sheet M502:** Mechanical Details II – Miscellaneous Revisions
- Sheet M503:** Mechanical Details III – Miscellaneous Revisions
- Sheet M506:** Ramp Snow Melt System Details – New Sheet
- Sheet MP110:** Enlarged First Floor Mechanical Piping Plan Area A – Miscellaneous Revisions
- Sheet MP111:** Enlarged First Floor Mechanical Piping Plan Area B – Miscellaneous Revisions
- Sheet MP112:** Enlarged Second Floor Mechanical Piping Plan Area A – Miscellaneous Revisions
- Sheet MP113:** Enlarged Second Floor Mechanical Piping Plan Area B – Miscellaneous Revisions
- Sheet MP114:** Enlarged Third Floor Mechanical Piping Plan Area A – Miscellaneous Revisions
- Sheet MP115:** Enlarged Third Floor Mechanical Piping Plan Area B – Miscellaneous Revisions

Sheet E001:	Electrical Symbols – Added symbol
Sheet E110:	Enlarged First Floor Electrical Plan Area A – Miscellaneous Revisions
Sheet E111:	Enlarged First Floor Electrical Plan Area B – Miscellaneous Revisions
Sheet E112:	Enlarged Second Floor Electrical Plan Area A – Miscellaneous Revisions
Sheet E113:	Enlarged Second Floor Electrical Plan Area B – Miscellaneous Revisions
Sheet E114:	Enlarged Third Floor Electrical Plan Area A – Miscellaneous Revisions
Sheet E115:	Enlarged Third Floor Electrical Plan Area B – Miscellaneous Revisions
Sheet E118:	Canopy Lighting Plan – Revised Canopy Lighting
Sheet E200:	Enlarged Equipment Rooms – Miscellaneous Revisions
Sheet E201:	Grounding Plan – Miscellaneous Revisions
Sheet E300:	Power Riser Diagram – Miscellaneous Revisions
Sheet E401:	Lighting Fixture Schedule – Revised Apron Lighting
Sheet E403:	Panel Schedule – Miscellaneous Revisions
Sheet E404:	Panel Schedule – Miscellaneous Revisions
Sheet E405:	Panel Schedule – Miscellaneous Revisions
Sheet E406:	Panel Schedule – Miscellaneous Revisions
Sheet E407:	Panel Schedule – Miscellaneous Revisions
Sheet E408:	Panel Schedule – Miscellaneous Revisions
Sheet EL111:	Enlarged First Floor Lighting Plan Area B – Revised Lighting
Sheet ET410:	Technology First Floor Plan Area A – Miscellaneous Revisions
Sheet ET411:	Technology First Floor Plan Area B – Miscellaneous Revisions
Sheet ET412:	Technology Second Floor Plan Area A – Miscellaneous Revisions
Sheet ET413:	Technology Second Floor Plan Area B – Miscellaneous Revisions
Sheet ET414:	Technology Third Floor Plan Area A – Miscellaneous Revisions
Sheet ET415:	Technology Third Floor Plan Area B – Miscellaneous Revisions
Sheet ET503:	Access Control Details – Added Type 2 Access Point
Sheet ET600:	Access Point Schedule – Miscellaneous Revisions
Sheet P101:	Enlarged Underground Plumbing Plan Area B – Miscellaneous Revisions
Sheet P110:	Enlarged First Floor Plumbing Plan Area A – Miscellaneous Revisions
Sheet P111:	Enlarged First Floor Plumbing Plan Area B – Miscellaneous Revisions
Sheet P112:	Enlarged Second Floor Plumbing Plan Area A – Miscellaneous Revisions
Sheet P113:	Enlarged Second Floor Plumbing Plan Area B – Miscellaneous Revisions
Sheet P114:	Enlarged Third Floor Plumbing Plan Area A – Miscellaneous Revisions
Sheet P115:	Enlarged Third Floor Plumbing Plan Area B – Miscellaneous Revisions
Sheet P301:	Water Schematic, Gas Schematic & Storm Riser Diagram – Miscellaneous Revisions

Sheet P302: Cold & Hot Water Riser Diagram – Miscellaneous Revisions
Sheet P303: Waste & Vent Riser Diagram – Miscellaneous Revisions
Sheet P501: Plumbing Schedules – Miscellaneous Revisions

Sheet F111: Enlarged First Floor Fire Protection Plan Area B – Miscellaneous Revisions
Sheet F112: Enlarged Second Floor Fire Protection Plan Area A – Miscellaneous Revisions
Sheet F113: Enlarged Second Floor Fire Protection Plan Area B – Miscellaneous Revisions
Sheet F501: Fire Protection Schedules and Riser Diagram – Miscellaneous Revisions

3.0 OTHER:

There will be no “Request for Substitutions” considered until each Bid Division has been awarded.

3.1 Responses to Bidder Questions:

See attached Appendix A for Responses to Bidder Questions. 12- pages

END OF ADDENDUM NO. 2



KRAUS-ANDERSON®
CONSTRUCTION COMPANY

Breaking new ground since 1897

3716 Oneota Street

Duluth, MN 55807

O 218.722.3775

F 218.722.3778

www.krausanderson.com

KRAUS-ANDERSON CONSTRUCTION COMPANY

ADDENDUM NO. 2

February 25, 2011

Duluth International Airport
New Passenger Terminal
Bid Package 2A
4701 Grinden Drive
Duluth, MN 55811

TO ALL CONTRACTORS:

The following are clarifications and/or changes to the Plans and Specifications, dated February 3, 2011, to be Bid on March 8, 2011, for the above named Project. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

1. **Section 00305 Bid Form**

A. Delete and replace existing Bid Form with Bid Form incorporated by this Addendum.

2. **Section 01014 Work Scope Descriptions**

A. Delete and replace existing Work Scope Index dated January 31, 2011, with Work Scope Index incorporated by this Addendum dated February 25, 2011.

B. Under 1.02 K. Cleanup: Add the following to Work Scopes 3.20A, 4.20A, 5.20A, 6.20A, 7.20A, 8.20A, 8.22A, 9.20A, 13.20A, 14.20A, 15.20A, 16.20A: At a minimum, 1-day per week will be designated as the Cleanup day. Each contractor must anticipate several hours of cleanup each week on this day, which will vary by the level of cleaning required. During this cleanup time – All trades/contractors on site will be required to participate or be back charged for their portion of this cleanup. This will be enforced.

C. Under 1.02 J. Cleanup: Add the following to Work Scopes 10.20A, 13.21A, 14.21A: At a minimum, 1-day per week will be designated as the Cleanup day. Each contractor must anticipate several hours of cleanup each week on this day, which will vary by the level of cleaning required. During this cleanup time – All trades/contractors on site will be required to participate or be back charged for their portion of this cleanup. This will be enforced.

D. Work Scope 3.20A – Concrete & Earthwork

1. Under 1.01 A. 1. Specific Specification Sections: Add Section 07210 Thermal Insulation at vertical foundation insulation.
2. Under 1.02 B. Scope: Including but not limited to: Add the following: This Work Scope sets the tug tunnel trench drains provided by work scope 15.20A.
3. Under 1.02 B. Scope: Including but not limited to: Add the following: All vertical foundation insulation.
4. Under 1.02 B. Scope Excluded: Add the following: Concrete for crosswalks is not in this contract, and part of BP-1 work.
5. Under 1.02 W. Subgrade Preparation: Add the following: This waterproofing and protection board/thermal insulation/drainage board scope includes all tug tunnel and tug ramp areas to completed elevations of 11'-2" unless noted otherwise. This work must include proper connections into the waterproofing systems installed with BP-1 to satisfy manufacturer's warranties. Note all protection board/thermal insulation and drainage board work is incidental to the waterproofing.
6. Under 1.08 Alternates: Add Alternate No. 14A: Add snowmelt system, as indicated on Drawings A720, A721 & A722, for West Tug Ramp only. Note: this work would be in 2012, bid accordingly.
7. Under 1.08 Alternates: Add Alternate No. 14B: Add snowmelt system, as indicated on Drawings A720, A721 & A722, for both East and West Tug Ramps. Note: this work would be in 2012, bid accordingly.

E. Work Scope 6.20A – Rough Carpentry

1. Under 1.02 B. Scope: Including but not limited to: Add the following: Wood blocking on canopies.
2. Under 1.02 B. Scope: Including but not limited to: Add the following: Installation of Access Doors and Frames provided by work scope 8.20A.
3. Under 1.08 Alternates: Add Alternate No. 2A to this Work Scope: Deduct Alternate No. 2A: Delete work associated with the north pedestrian canopy located at A/A.1 grid line.
4. Under 1.08 Alternates: Add Alternate No. 2B to this Work Scope: Deduct Alternate No. 2B: Delete work associated with the south pedestrian canopy located at AA grid line at the Grinden Drive pedestrian island.

F. Work Scope 7.20A – Roofing & Louvers

1. Under 1.02 B. Scope Excluded: Add the following: Louvers to enclose the Building portion between gridlines 1.3 and 11.7.
2. Under 1.02, N. Tug Tunnel: Add the following: Referring to plan sheet A720, all Phase I and Phase 2 Composite Wall Panels and Louvers and Vents work is part of Alternate No. 11. Base bid for this Work Scope does not include these two sections of work.

G. Work Scope 8.20A – Doors, Frames and Hardware (Materials Only)

1. Under 1.06 Allowances, A. Subcontractor Allowance: Change "Include a \$2,500 allowance to: "Include a \$10,000 allowance..." for Allowance No. 11.
2. Under 1.06 Allowances: Add the following: Allowance No. 12: Include allowance in Work Scope 8.20A for supplying Access Doors and Frames Section 08311 to be located and sized in accordance with coordinated mechanical equipment layout in the amount of \$3,000.
3. Under 1.07 Alternates: Add the following: Alternate No. 15: Delete the supply of locksets at Door Nos. 106A, 107A, 108A, 109A, 110A, 111A, 112A, 113A, 114A, 115A, 120A, 122A, 123A, 123B, 124A, 125A, 125B, 127A, 127B, 131A, 131B, 138A, 140A, 141A, 142A, 148A, 149B, 150A, 151A, 156A, 172A, 190A, 203A, 204A, 205A, 209A, 210A, 211A, 212A, 217A, 230A, 240A, 302A, 304A, 304B, 306A, 311A, 312A, 313A, 313B, 314A, 317A, 318A, 322A, 323A, 324A, 325A, 326A, 327A, 333A, 336A, 337A, 390A & 391B.

H. Work Scope 10.20A Operable Partitions

1. Under 1.02, add item K: Specifications super cede Plan details regarding finish type.

I. Work Scope 13.21A Computer Controlled Access

1. Under Item 1.02 B. Scope Excluded: Add the following: All rough-in work for this Work Scope is by WS 16.20A Electrical.

J. Work Scope 14.21A Baggage Handling System

1. Delete the second copy of this Work Scope in the Project Manual.
2. Under 1.06 1.: Add the following: This break out is for the entire Outbound system.

K. Work Scope 15.20A – Mechanical Systems (Full)

1. Under 1.01 A. 1. Specific Specification Sections: Add Section 07210 Thermal Insulation at tug tunnel heated floor areas.
2. Under 1.01 A. 1. Specific Specification Sections: Delete Section 10200 Louvers and Vents from this Work Scope.
3. Under 1.02 B. Scope: Including but not limited to: Add the following: This Work Scope provides the tug tunnel trench drains, which are set by Work Scope 3.20A.
4. Under 1.02 B. Scope: Including but not limited to: Add the following: This Work Scope provides and installs all pumps per Sheet P501 Schedule.

5. Under 1.02, add Item W: **Snow Melt Systems (Alternates 1A/1B/1C):** These Alternates are design/build and dependant on the system and performance requirements. The piping for the entire system must be sized according to each Alternate. Supplying and installing any and all manholes required for this system is part of each Alternate. Plan Sheet M303 scope is part of each Alternate which outlines the interior piping system locations only. This interior work must be included within the Alternate pricing.

6. Under 1.02, add item X: **Professional Design Insurance:** If any portion of this Work Scope includes, without limitation, the design of a building system, in addition to the construction of such system, or other professional services, including surveying, then the Prime Contractor shall purchase and maintain Professional Errors and Omission coverage insurance on a "Claims Made" basis in an amount of not less than Two Million Dollars (\$2,000,000) per claim and Two Million Dollars (\$2,000,000) aggregate, with a deductible and/or self-insured retention, including those relating to defense costs, not in excess of \$50,000, with insurance companies rated A or better by AM Best or other carrier acceptable to the Owner (Duluth Airport Authority). The retroactive date shall be prior to the start of the Work. This awarded Contractor shall continue to carry such insurance for at least three (3) years after final completion of the Project and issuance of the final Certificate for Payment. The Owner (Duluth Airport Authority) shall be the beneficiary of the provisions of this paragraph.

7. Under 1.08 Alternates: Add Alternate No. 10: Delete the Ornamental Metal work specified in Section 05700 from Work Scope 15.20A.

8. Under 1.08 Alternates: Add Alternate No. 13A: Add 1 year Extended Maintenance Contract for HVAC Instrumentation and Controls in accordance with Section 15950, Article 1.12; Paragraph D.

9. Under 1.08 Alternates: Add Alternate No. 13B: Add 5 year Extended Maintenance Contract for HVAC Instrumentation and Controls in accordance with Section 15950, Article 1.12; Paragraph D.

10. Under 1.08 Alternates: Add Alternate No. 14A: Add snowmelt system, as indicated on Drawings A720, A721 & A722, for West Tug Ramp only. Note: this work would be in 2012, bid accordingly.

11. Under 1.08 Alternates: Add Alternate No. 14B: Add snowmelt system, as indicated on Drawings A720, A721 & A722, for both East and West Tug Ramps. Note: this work would be in 2012, bid accordingly.

L. Work Scope 16.20A – Electrical Systems (Full)

1. Under 1.02 B. Scope: Including but not limited to: Add the following: All apron lighting poles, bases, conduit, wiring, fixtures and controls are part of this Work Scope. Note that some apron lighting poles and bases cannot be installed until 2012 due to coordination with future Bid Package work.

2. Under 1.02 B. Scope: Including but not limited to: Add the following: Note Diesel Generator Unit Alternate deduct is for the packaged unit with enclosure deletion only. All concrete slab work, conductors, etc. is to remain in the base bid scope.

3. Under 1.02 B. Scope: Including but not limited to: Add the following: ROUGH-IN CLARIFICATION: All rough-in work for all low voltage systems ONLY, specifically sections 13700A, 13742A, 16710, 16716, 16717, 16726, 16730. All device, termination, software and hardware for the low voltage systems are to be part of a future Bid Package. The term "Rough-In" is considered to be supply and install all cable pathways, trays, conduits and boxes. All other Division 16 work (high voltage and fire alarm work) is complete unless noted otherwise. Close coordination of this work scope will be a requirement with the future Bid Package 2B work as timing and scheduling will be required.

4. Under 1.07 1.: Add the following: This break out is for the entire Outbound system.

5. Under 1.08 Alternates: Add Alternate No. 14A: Add snowmelt system, as indicated on Drawings A720, A721 & A722, for West Tug Ramp only. Note: this work would be in 2012, bid accordingly.

6. Under 1.08 Alternates: Add Alternate No. 14B: Add snowmelt system, as indicated on Drawings A720, A721 & A722, for both East and West Tug Ramps. Note: this work would be in 2012, bid accordingly.

3. **Section 01027 – Applications for Payment**

A. Add Part I Item 1.5: RETAINAGE

A. The amount that will be retained will be as follows:

1. Five percent (5%) of the value of satisfactorily complete work and site stored materials until the Work of the Contract is fully complete for all Work Scopes except 14.21A Baggage Handling Systems. Ten percent (10%) of the value of satisfactorily complete work and site stored materials until the Work of the Contract is fully complete for Work Scope 14.21A Baggage Handling Systems.
2. Remaining retained percentage may be requested after Final Completion of the Work of the Contract when the Work is fully complete and acceptable to Architect and Owner. Final payment will be made within 30 days thereafter.
3. In event of a very minor amount of work incomplete or not corrected due to weather, unsuitable conditions for testing or similar conditions preventing the Contractor from proceeding, the retained amount may be reduced to three times the value of the incomplete work upon recommendation of the Construction Manager / Architect and approval of the Owner.

4. **General Information**

A. Add Reynolds, Smith & Hill's, Inc. Addendum No. 2 dated February 25, 2011, in its entirety.

END OF KRAUS-ANDERSON CONSTRUCTION COMPANY
ADDENDUM NO. 2

DULUTH INTERNATIONAL AIRPORT
NEW PASSENGER TERMINAL
BID PACKAGE 2A
ADDENDUM NO. 2

Page 5 of 5

(Bidder may copy this form on his own letterhead)
SUBMIT IN DUPLICATE

BID FORM

BID TO: Duluth Airport Authority;
By the City Purchasing Agent
Room 100 City Hall
Duluth, MN 55802

BID FROM: _____

In accordance with the Invitation to Bid and the proposed Contract Documents prepared by Reynolds, Smith and Hill, relating to the construction of:

Duluth International Airport
New Passenger Terminal
Bid Package 2A
Duluth, Minnesota

the undersigned, having visited the site of proposed construction and having become thoroughly familiar with local conditions affecting the cost and performance of the Work and with all requirements of the Contract Documents and related Addenda, hereby proposes and agrees to provide all labor, materials, equipment, applicable permits and taxes required to construct and complete the Work in accordance with the Contract Documents and Addenda for the following amounts:

Base Bids:

Instructions for Submitting Base Bids:

- For bidders wishing to submit bids on more than one Work Scope, space has been provided to submit bids for Multiple Work Scopes on the same Bid Form.
- State Base Bid in both words and figures in spaces provided.
- Bidders submitting bids for more than one Work Scope are invited to submit a combined bid for work included under all Work Scopes for which Bidder is submitting a bid.

1. Base Bid for Work Scope No. 3.20A Title Concrete & Earthwork

Bid Amount: _____ \$ _____

2. Base Bid for Work Scope No. 4.20A Title Masonry Partitions
Bid Amount: _____ \$ _____
3. Base Bid for Work Scope No. 5.20A Title Steel (Supply and Install)
Bid Amount: _____ \$ _____
4. Base Bid for Work Scope No. 6.20A Title Rough Carpentry
Bid Amount: _____ \$ _____
5. Base Bid for Work Scope No. 7.20A Title Roofing & Louvers
Bid Amount: _____ \$ _____
6. Base Bid for Work Scope No. 8.20A Title Doors, Frames & Hardware (Materials Only)
Bid Amount: _____ \$ _____
7. Base Bid for Work Scope No. 8.22A Title Coiling Doors
Bid Amount: _____ \$ _____
8. Base Bid for Work Scope No. 9.20A Title Metal Studs & Drywall
Bid Amount: _____ \$ _____
9. Base Bid for Work Scope No. 10.20A Title Operable Partitions
Bid Amount: _____ \$ _____
10. Base Bid for Work Scope No. 13.20A Title Fire Protection Systems
Bid Amount: _____ \$ _____
11. Base Bid for Work Scope No. 13.21A Title Computer Controlled Access
Bid Amount: _____ \$ _____
12. Base Bid for Work Scope No. 14.20A Title Elevators & Escalators
Bid Amount: _____ \$ _____
13. Base Bid for Work Scope No. 14.21A Title Baggage Handling Systems
Bid Amount: _____ \$ _____

A. WS 14.21A price breakout for baggage handling systems within building coordinate gridlines 7 to 12. This break out is for the entire Outbound system:

Labor: \$ _____

Material: \$ _____

Equipment: \$ _____

Freight: \$ _____

14. Base Bid for Work Scope No. 15.20A Title Mechanical Systems (Full)

Bid Amount: _____ \$ _____

15. Base Bid for Work Scope No. 16.20A Title Electrical Systems (Full)

Bid Amount: _____ \$ _____

A. WS 16.20A price breakout for costs of any and all electrical systems for baggage handling systems between Gridlines 7 to 12. This break out is for the entire Outbound system.

Labor: \$ _____

Material: \$ _____

Equipment: \$ _____

Freight: \$ _____

Combined Base Bid:

Work Scope Numbers and Titles on which Combined Bid is based:

Work Scope No. _____ Title: _____

Work Scope No. _____ Title: _____

Work Scope No. _____ Title: _____

Work Scope No. _____ Title: _____

Work Scope No. _____ Title: _____

Combined Bid Amount: _____ \$ _____

Unit Prices:

Refer to Section 01014 individual Work Scopes for complete description of Unit Prices.

		ADD	DEDUCT
Unit Price No. <u>1</u>	to Work Scope <u>3.20A</u>	\$ _____ / _____	\$ _____ / _____
Unit Price No. <u>2</u>	to Work Scope <u>3.20A</u>	\$ _____ / _____	\$ _____ / _____
Unit Price No. <u>3</u>	to Work Scope <u>3.20A</u>	\$ _____ / _____	\$ _____ / _____
Unit Price No. <u>4</u>	to Work Scope <u>5.20A</u>	\$ _____ / _____	\$ _____ / _____
Unit Price No. <u>5</u>	to Work Scope <u>6.20A</u>	\$ _____ / _____	\$ _____ / _____

00305 - BID FORM

		ADD	DEDUCT
Unit Price No. <u>6</u>	to Work Scope <u>9.20A</u>	\$ _____ / _____	\$ _____ / _____
Unit Price No. <u>7</u>	to Work Scope <u>3.20A</u>	\$ _____ / _____	\$ _____ / _____
Unit Price No. <u>8</u>	to Work Scope <u>13.21A</u>	\$ _____ / _____	\$ _____ / _____
Unit Price No. <u>9</u>	to Work Scope <u>14.20A</u>	\$ _____ / _____	\$ _____ / _____
Unit Price No. _____	to Work Scope _____	\$ _____ / _____	\$ _____ / _____
Unit Price No. _____	to Work Scope _____	\$ _____ / _____	\$ _____ / _____
Unit Price No. _____	to Work Scope _____	\$ _____ / _____	\$ _____ / _____

Alternates:

Refer to Section 01230 for complete description of Alternates.

		ADD	DEDUCT
Alternate No. <u>1A</u>	to Work Scope <u>3.20A</u>	\$ _____	\$ _____
Alternate No. <u>1A</u>	to Work Scope <u>15.20A</u>	\$ _____	\$ _____
Alternate No. <u>1A</u>	to Work Scope <u>16.20A</u>	\$ _____	\$ _____
Alternate No. <u>1B</u>	to Work Scope <u>3.20A</u>	\$ _____	\$ _____
Alternate No. <u>1B</u>	to Work Scope <u>15.20A</u>	\$ _____	\$ _____
Alternate No. <u>1B</u>	to Work Scope <u>16.20A</u>	\$ _____	\$ _____
Alternate No. <u>1C</u>	to Work Scope <u>3.20A</u>	\$ _____	\$ _____
Alternate No. <u>1C</u>	to Work Scope <u>15.20A</u>	\$ _____	\$ _____
Alternate No. <u>1C</u>	to Work Scope <u>16.20A</u>	\$ _____	\$ _____
Alternate No. <u>2A</u>	to Work Scope <u>3.20A</u>	\$ _____	\$ _____
Alternate No. <u>2A</u>	to Work Scope <u>5.20A</u>	\$ _____	\$ _____
Alternate No. <u>2A</u>	to Work Scope <u>6.20A</u>	\$ _____	\$ _____
Alternate No. <u>2A</u>	to Work Scope <u>15.20A</u>	\$ _____	\$ _____
Alternate No. <u>2A</u>	to Work Scope <u>16.20A</u>	\$ _____	\$ _____

DULUTH INTERNATIONAL AIRPORT
 NEW PASSENGER TERMINAL
 BID PACKAGE 2A
 ADDENDUM NO. 2

SECTION 00305 - 4

00305 - BID FORM

		ADD	DEDUCT
Alternate No.	<u>2B</u> to Work Scope <u>3.20A</u>	\$ _____	\$ _____
Alternate No.	<u>2B</u> to Work Scope <u>5.20A</u>	\$ _____	\$ _____
Alternate No.	<u>2B</u> to Work Scope <u>6.20A</u>	\$ _____	\$ _____
Alternate No.	<u>2B</u> to Work Scope <u>15.20A</u>	\$ _____	\$ _____
Alternate No.	<u>2B</u> to Work Scope <u>16.20A</u>	\$ _____	\$ _____
Alternate No.	<u>3</u> to Work Scope <u>16.20A</u>	\$ _____	\$ _____
Alternate No.	<u>4</u> to Work Scope <u>8.22A</u>	\$ _____	\$ _____
Alternate No.	<u>5</u> to Work Scope <u>15.20A</u>	\$ _____	\$ _____
Alternate No.	<u>5</u> to Work Scope <u>16.20A</u>	\$ _____	\$ _____
Alternate No.	<u>6</u> to Work Scope <u>15.20A</u>	\$ _____	\$ _____
Alternate No.	<u>6</u> to Work Scope <u>16.20A</u>	\$ _____	\$ _____
Alternate No.	<u>7</u> to Work Scope <u>15.20A</u>	\$ _____	\$ _____
Alternate No.	<u>8</u> to Work Scope <u>3.20A</u>	\$ _____	\$ _____
Alternate No.	<u>9</u> to Work Scope <u>16.20A</u>	\$ _____	\$ _____
Alternate No.	<u>10</u> to Work Scope <u>15.20A</u>	\$ _____	\$ _____
Alternate No.	<u>11</u> to Work Scope <u>3.20A</u>	\$ _____	\$ _____
Alternate No.	<u>11</u> to Work Scope <u>5.20A</u>	\$ _____	\$ _____
Alternate No.	<u>11</u> to Work Scope <u>6.20A</u>	\$ _____	\$ _____
Alternate No.	<u>11</u> to Work Scope <u>7.20A</u>	\$ _____	\$ _____
Alternate No.	<u>11</u> to Work Scope <u>8.20A</u>	\$ _____	\$ _____
Alternate No.	<u>11</u> to Work Scope <u>9.20A</u>	\$ _____	\$ _____
Alternate No.	<u>11</u> to Work Scope <u>13.20A</u>	\$ _____	\$ _____
Alternate No.	<u>12</u> to Work Scope <u>3.20A</u>	\$ _____	\$ _____

00305 - BID FORM

	ADD	DEDUCT
Alternate No. <u>13A</u> to Work Scope <u>15.20A</u>	\$ _____	\$ _____
Alternate No. <u>13B</u> to Work Scope <u>15.20A</u>	\$ _____	\$ _____
Alternate No. <u>14A</u> to Work Scope <u>3.20A</u>	\$ _____	\$ _____
Alternate No. <u>14A</u> to Work Scope <u>15.20A</u>	\$ _____	\$ _____
Alternate No. <u>14A</u> to Work Scope <u>16.20A</u>	\$ _____	\$ _____
Alternate No. <u>14B</u> to Work Scope <u>3.20A</u>	\$ _____	\$ _____
Alternate No. <u>14B</u> to Work Scope <u>15.20A</u>	\$ _____	\$ _____
Alternate No. <u>14B</u> to Work Scope <u>16.20A</u>	\$ _____	\$ _____
Alternate No. <u>15</u> to Work Scope <u>8.20A</u>	\$ _____	\$ _____
Alternate No. _____ to Work Scope _____	\$ _____	\$ _____
Alternate No. _____ to Work Scope _____	\$ _____	\$ _____
Alternate No. _____ to Work Scope _____	\$ _____	\$ _____

Addenda: Receipt of the following Addenda to the Contract Documents and their costs being incorporated into the Bid is acknowledged (provide Addenda numbers below):

<u>Addenda No.</u>	<u>Dated</u>	<u>Addenda No.</u>	<u>Dated</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Bid Acceptance: If written notice of the acceptance of this Bid is received by the undersigned within 90 days after date set for opening of this Bid, or at any other time thereafter before Bid is withdrawn, the undersigned agrees to enter into and execute a Contract with the Owner in accordance with this Bid as accepted and in a form acceptable to Owner, and to furnish and deliver to the Construction Manager the Performance Bond, Payment Bond, and proof of insurance coverage, all within 10 days after notice of acceptance of this Bid.

Execution of Proposal: The entity(ies) signing this proposal is fully authorized to sign on behalf of the named firm and to fully bind the named firm to all of the conditions and provisions of the Contract. This proposal shall remain valid and not be withdrawn for 90 calendar days after bid due date.

Submitted this _____ day of _____, 20_____.

Name of Firm: _____

Street Address: _____

City: _____ State: _____ Zip: _____

Phone Number: _____ Fax Number: _____

Bidder is: (check one)

☐ Individual

☐ Partnership

☐ Corporation

If Bidder is a corporation, give legal name of corporation, state where incorporated, and names of president and secretary. If a partnership, give names of all individual co-partners composing the firm. If an individual, give first and last name in full.

Name (typed or printed): _____

Signature: _____

Title: _____

END OF DOCUMENT

Duluth International Airport New Passenger Terminal **BP-2A**

01014 Work Scope Index

Note: All work described is furnish and install unless noted otherwise.

		CM (Work by Construction Manager - KA)		February 25, 2011	
		PC (Work by Prime Contractors)			
		Owner (Work by DAA)			
Work Scope No.	Work Scope Description	Work	Spec Sections Included		Remarks
		By	Spec #	Spec Section	
3.20A	Concrete & Earthwork	PC	01732	Selective Demo	Walls & Slabs @ Tug Tunnels, sidewalks/stoops, Canopy Fnd/Cols, Screen Wall, topping slabs over in-floor HVAC duct domes.

		CM (Work by Construction Manager - KA)			February 25, 2011
		PC (Work by Prime Contractors)			
		Owner (Work by DAA)			
Work Scope No.	Work Scope Description	Work	Spec Sections Included		Remarks
		By	Spec #	Spec Section	
9.20A	Metal Studs & Drywall	PC	05400 09111 09250 07210 07841	Cold-Formed Metal Framing Non-Structural Steel Framing Gypsum Board Thermal Insulation Through-Penetration Firestop Systems	Complete (at Tug Tunnels) Complete Complete As it applies (rigid, batt and spray foam) Excluding WS 14.21A, WS 15.20A Mech, WS 16.20A Elect & WS 13.20A Fire Prot penetrations, WS 14.20A Elevator/Escalators - included in their scopes
10.20A	Operable Partitions	PC	10651	Operable Panel Partitions	
13.20A	Fire Protection System	PC	13050 13053 13055 13060 13075 13520 13915 13916 13921 13967 13970 13975 07841	Fire Protection General Requirements Fire Protection General Materials and Methods Fire Protection Motors Fire Protection Hangers and Supports Fire Protection Identification Fire Protection Cabinets Fire Protection Suppression Piping Fire Suppression Sprinklers Electric-Driven Horizontal Fire Pumps Clean-Agent Extinguishing Systems Pre-Action Sprinkler System Standpipes and Hoses Through-Penetration Firestop Systems	For This Work Scope Only
13.21A	Computer Controlled Access		13700A	Part 1542 Computer Controlled Access System (CCAS)	WS 16.20A includes rough-in for this Work Scope
14.20A	Elevators & Escalators	PC	14240 14310 07841	Hydraulic Elevators Escalators Through-Penetration Firestop Systems	For This Work Scope Only
14.21A	Baggage Handling Systems	PC	07841	Baggage Handling Systems Specifications Through-Penetration Firestop Systems	For This Work Scope Only
15.20A	Mechanical Systems (Full)	PC	Division 15 07210 07841 05700 07920 2504.604	Mechanical Thermal Insulation Through-Penetration Firestop Systems Ornamental Metal Joint Sealants Insulation Board	Section 15010 through 15995, Includes the ENTIRE Tug Ramps, Full Length , and in-floor HVAC duct domes installed under topping slabs. At tug tunnel heated floor areas (Alt. 14A/14B) For This Work Scope Only Radiation/Annunciator Panel, miscellaneous As it applies City of Duluth Specification/MNDOT 3760) - Alternate 1A, 1B and 1C
16.20A	Electrical Systems (Full)	PC	Division 16 07841	Electrical Through-Penetration Firestop Systems	Section 16050 through 16730. Includes the ENTIRE Tug Ramps, Full Length . Includes all electrical rough-in work for: WS 13.21A Computer Controlled Access, and Sections 13700A, 13742A, 16710, 16716, 16717, 16726, 16730. For This Work Scope Only

CONTRACT

"CONTRACTOR NAME"

NEW PASSENGER TERMINAL-BID PACKAGE 2A

"Duluth International Airport Project Name"

FAA AIP No. 3-27-0024-49-11

Mn/DOT Project No. _____

THIS CONTRACT is made and is in effect as of this _____ day of _____, 2011, by and between the Duluth Airport Authority, (the "OWNER") and "_____", (the "CONTRACTOR").

THE PARTIES AGREE AS FOLLOWS: The Contractor, for and in consideration of the mutual promises contained herein, and the payment to Contractor of an amount not to exceed _____

"CONTRACT AMOUNT IN WORDS" \$ _____ "CONTRACT AMOUNT IN NUMBERS"

based on the Contractor's bid, dated March 1, 2011, which is hereby made a part of this Contract and appended hereto as Exhibit A, agrees to competently perform the various items of work and construct the projects therein indicated at Duluth International Airport (the "Airport") in accordance with the "New Passenger Terminal Bid Package 2A-Site Work, Structure and Enclosure" Contract Documents and Specifications hereinafter referred to as Exhibit B dated

_____"DATE OF DOCUMENTS"

Said Exhibit B is hereby made a part of and basis of this Contract, and a true copy of said Exhibit B is now on file in the office of the Owner.

In the event of a conflict between any of the terms and conditions of this Contract and the Exhibits, such terms and conditions shall be deemed to be controlling in this order:

- (1) This Contract, (2) then Exhibit B, (3) then Exhibit A.

The parties further agree as follows:

1. That in consideration of the foregoing, the Owner hereby agrees to pay to the Contractor, promptly and according to the requirements of this Contract, the amount set forth above subject to the conditions as set forth in this Contract.
2. That it is understood that the parties named herein are the only persons interested in this Contract as principals. The parties do not intend to create any third party beneficiaries to this Contract. No employee or agent of Contractor shall be an employee or agent of Owner for any purpose.
3. That the Contractor has examined the site of the proposed work, plans and specifications, special provisions, contract documents, and all addenda in order that the Contractor might become familiar with the character, quality, and quantity of the work to be performed, the materials to be furnished and the requirements of the specifications, special provisions and contract documents.
4. That the Contractor certifies to be in compliance with all Human Rights, Affirmative Action and Equal Opportunity Requirements of state, federal, or local laws, all applicable drug and alcohol regulations, including the DAA drug and alcohol policy, and all other laws, rules, and regulations as are included in this Contract or are otherwise applicable to Contractor. Violation of any of these rules is grounds to void this contract.
5. That in the event any surety upon any bond furnished in connection with this Contract becomes unacceptable to the Owner, or if any such surety shall fail to furnish reports as to its financial condition from time to time as requested by the Owner, the Contractor agrees to furnish promptly such additional surety as may be required from time to time to protect the interests of the Owner or of persons supplying labor or materials in the prosecution of the work contemplated by this Contract.

6. That the Contractor shall not commence any work to be performed under this Contract until the Contractor has obtained from responsible insurance companies all insurance required as set forth in the provision entitled "Insurance and Indemnification Requirements" found in Part 5 - Supplementary General Conditions as contained in Exhibit B. The Owner and the City of Duluth, (the "City") shall be named as additional insureds on Contractor's Certificate of Insurance specific to Public Liability and Automobile Liability coverage. The Contractor shall maintain this insurance in full force and effect until the work to be performed under this Contract has been accepted by the Owner. Further, the Contractor shall indemnify the Owner and the City as set forth in said "Insurance and Indemnification Requirements" found in Part 5- Supplemental General Conditions contained in Exhibit B.
7. That should it become necessary to change any feature of the project from the terms and conditions set forth herein, this shall be done by written and dated supplemental agreement (change order). The Contractor shall not start working on any work requiring a supplemental agreement until the written agreement setting forth the adjusted prices shall be dated and executed by the Owner and the Contractor.
8. That the Contractor at all times shall observe and comply with all Federal, State, Territory or Possessions, and local laws, codes, ordinances, and regulations in any manner affecting the conduct of the work, including MSA 471.425 on prompt payment to subcontractors as set forth in Exhibit B, and 49 CFR Part 1520, Protection of Sensitive Security Information.
9. That it is further understood and agreed by the parties to this Contract that the work specified herein shall be commenced in accordance with Exhibit B. The time of commencing and completion of said work is the essence of this Contract and the Contractor shall complete all work in accordance with Exhibit B.

Liquidated damages shall be assessed as listed in the Contract Documents and Specifications: General Provisions, 80-08 Failure to Complete Work on Time on page GP-38-39 (\$3,000.00 per Calendar Day).

10. The books, records, documents and accounting procedures and practices of the Contractor as they relate to this Contract are subject to examination of the Owner, the City, and either the Legislative Auditor or the State Auditor, as appropriate, for a period of six (6) years following termination or expiration of this Contract. The Federal Government, including the Comptroller General of the United States, has the right to examine or audit relevant financial records regarding this Contract for a period not to exceed six (6) years after expiration of the term of this Contract. Contractor shall maintain an established accounting system that complies with generally accepted accounting principles. Records related to disputes arising out of this Contract shall be maintained and made available until such disputes have been resolved. As used in this provision, "records" includes books, documents, accounting procedures and practices, and other data, regardless of type and regardless of whether such items are in written form, in the form of computer data, or in any other form.

The Contractor shall maintain all records and other evidence sufficient to reflect costs claimed to have been incurred or anticipated to be incurred directly or indirectly in performance of this Contract. The Transportation Security Administration Contracting Officer "TSA CO" or the authorized representative of the TSA CO shall have the right to examine and audit those records at any time, or from time to time. The right of examination shall include inspection at all reasonable times at the offices of the Contractor.

11. Kraus-Anderson Construction Company as the Construction Manager and Reynolds Smith and Hills, Inc. as the architect/engineer, will provide administration of this Contract and

will be the Owner's representatives for purposes of this Contract; provided, however, that the Owner's Executive Director (the "Executive Director") will be the Owner's representative for purposes of Paragraph 13.

12. The Contractor shall not contract with a proposed person or entity to whom the Owner reasonably objects.
13. In addition to the events of default set forth in Paragraph a through I in Section 80-09 of Exhibit B, it shall be deemed to be an event of default by the Contractor if the Contractor fails to observe or perform any of the terms, provisions, conditions, covenants or agreements required to be observed or performed under this Contract or so fails to administer the work as to endanger the performance of this Contract.

The Executive Director shall have the discretion to implement one or more of the following remedies in the event of a default:

- a. Terminate this Agreement immediately upon written notice.
- b. Provide Contractor with written notice of default setting forth a time period within which to cure the default, and if such default is not cured to the satisfaction of the Executive Director within said time period, the Executive Director may immediately terminate this Contract.
- c. Take the prosecution of the work out of the hands of the Contractor or surety, appropriate or use any or all materials and equipment that have been mobilized for use in the work and are acceptable, enter into an agreement(s) for the completion of said Contract according to the terms and provisions hereof, and/or use such other methods as in the opinion of the Executive Director will be required for the completion of said Contract in an acceptable manner. All costs and charges incurred by the Owner, together with the cost of completing the work under Contract, will be deducted from any monies due or which may become due the

Contractor. If such expense exceeds the sum which would have been payable under the Contract, then the Contractor and the surety shall be liable and shall pay to the Owner the amount of such excess.

- d. Seek and be entitled to injunctive or declaratory relief to prevent violation of the terms and conditions of this Contract or compel Contractor's performance of its obligations hereunder.
- e. Seek such other legal or equitable relief as a court of competent jurisdiction may determine is available to Owner.

The remedies provided under this Contract shall be deemed to be cumulative and non-exclusive and the election of one remedy shall not be deemed to be the waiver of any other remedy with regard to any event of default under this Contract.

- 14. Any waiver by any party of any provision of this Contract shall not imply a subsequent waiver of that or any other provision.
- 15. This Contract is made in the State of Minnesota and shall be construed and interpreted in accordance with the laws of the State of Minnesota. The appropriate venue and jurisdiction for any litigation hereunder shall be in a court located in St. Louis County, Minnesota. However, litigation in the federal courts involving the parties shall be in the appropriate federal court within the State of Minnesota.
- 16. Notice to the Owner or the Contractor provided for herein shall be sufficient if sent by the regular United States mail, postage prepaid, addressed to the Owner as follows: Duluth Airport Authority, 4701 Grinden Dr., Duluth, MN 55811 and addressed to the Contractor as follows: _____

"NAME AND COMPLETE ADDRESS OF CONTRACTOR" or to such other respective persons or addresses as the parties may designate to each other in writing from time to time.

17. This Contract, including all exhibits and addenda, constitutes the entire Contract between the Owner and the Contractor and supersedes all prior written oral agreements and negotiations between the parties relating to the subject matter hereto.
18. The Contractor represents to the Owner that the officers of the Contractor who executed this Contract on its behalf are fully authorized to do so, and that this Contract when thus executed by said officers of the Contractor on its behalf shall constitute and be the binding obligation and agreement of the Contractor in accordance with the terms and conditions hereof.

The parties hereto have duly executed this Contract for the purpose herein expressed this _____ day of _____, 2011.

DULUTH AIRPORT AUTHORITY

"NAME OF CONTRACTOR"

By _____
John M. Eagleton
President

By _____
NAME: _____
TITLE: _____

By _____
Robert C. Pearson
Secretary

By _____
NAME: _____
TITLE: _____

Approved as to form:

Joan Christensen
Assistant City Attorney

**NEW PASSENGER TERMINAL
DULUTH INTERNATIONAL AIRPORT
DULUTH, MINNESOTA**

SECTION 01210 - ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements governing allowances.
 - 1. Certain items are specified in the Contract Documents by allowances. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when additional information is available for evaluation. If necessary, additional requirements will be issued by Change Order.
- B. Types of allowances include the following:
 - 1. Lump-sum allowances.
 - 2. Unit-cost allowances.
 - 3. Quantity allowances.
 - 4. Contingency allowances.
 - 5. Testing and inspecting allowances.
- C. Related Sections include the following:
 - 1. Division 1 Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders for allowances.
 - 2. Division 1 Section "Quality Requirements" for procedures governing the use of allowances for testing and inspecting.
 - 3. Divisions 2 through 16 Sections for items of Work covered by allowances.

1.3 SELECTION AND PURCHASE

- A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.
- B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
- C. Purchase products and systems selected by Architect from the designated supplier.

1.4 SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.

- B. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.5 COORDINATION

- A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

1.6 LUMP-SUM / UNIT-COST AND QUANTITY ALLOWANCES

- A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner under allowance and shall include taxes, freight, and delivery to Project site.
- B. Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner under allowance shall be included as part of the Contract Sum and not part of the allowance.

1.7 TESTING AND INSPECTING ALLOWANCES

- A. Testing and inspecting allowances include the cost of engaging testing agencies, actual tests and inspections, and reporting results.
- B. The allowance does not include incidental labor required to assist the testing agency or costs for retesting if previous tests and inspections result in failure. The cost for incidental labor to assist the testing agency shall be included in the Contract Sum.
- C. Costs of services not required by the Contract Documents are not included in the allowance.
- D. At Project closeout, credit unused amounts remaining in the testing and inspecting allowance to Owner by Change Order.

1.8 UNUSED MATERIALS

- A. Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.
 - 1. If requested by Architect, prepare unused material for storage by Owner when it is not economically practical to return the material for credit. If directed by Architect, deliver unused material to Owner's storage space. Otherwise, disposal of unused material is Contractor's responsibility.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

- A. **Allowance No. 1:** Include allowance in Work Scope 3.20A for Erosion Control practices in the amount of \$35,000.
- B. **Allowance No. 2:** Include allowance in Work Scope 4.20A for substitution of alternate CMU's in the amount of \$5,000.
- C. **Allowance No. 3:** Include allowance in Work Scope 5.20A for substitution of alternate paint coatings in the amount of \$7,500.
- D. **Allowance No. 4:** Include allowance in Work Scope 6.20A for miscellaneous blocking in the amount of \$2,500.
- E. **Allowance No. 5:** Include allowance in Work Scope 7.20A for field water testing beyond the specification requirements in the amount of \$2,000.
- F. **Allowance No. 6:** Include allowance in Work Scope 9.20A for miscellaneous non-structural framing and bracing in the amount of \$5,000.
- G. **Allowance No. 7:** Include allowance in Work Scope 10.20A for substitution of alternate partition finish materials in the amount of \$10,000.
- H. **Allowance No. 8:** Include allowance in Work Scope 13.21A for additional access control provisions in the amount of \$16,000.
- I. **Allowance No. 9:** Include allowance in Work Scope 15.20A for substitution of alternate Plumbing fixtures and HVAC equipment in the amount of \$20,000.
- J. **Allowance No. 10:** Include allowance in Work Scope 16.20A for substitution of alternate lighting fixtures and electrical devices in the amount of \$25,000.
- K. **Allowance No. 11:** Include allowance in Work Scope 8.20A for additional door hardware in the amount of \$10,000.
- L. **Allowance No. 12:** Include allowance in Work Scope 8.20A for access doors and frames to be located and sized in accordance with coordinated mechanical equipment layout in the amount of \$3,000.

END OF SECTION 01210

**NEW PASSENGER TERMINAL
DULUTH INTERNATIONAL AIRPORT
DULUTH, MINNESOTA**

SECTION 01230 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

- A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A Schedule of Alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

ALTERNATES SHALL INCLUDE:

- A. **Alternate No. 1A:** Add snowmelt system for sidewalk area north of Grinden Drive as indicated on Drawing C205 to Work Scopes 3.20A, 15.20A & 16.20A.

Add the sum of: _____ Dollars (\$_____).

- B. **Alternate No. 1B:** Add snowmelt system for sidewalk area north of Grinden Drive and pedestrian crosswalks as indicated on Drawing C205 to Work Scopes 3.20A, 15.20A & 16.20A.

Add the sum of: _____ Dollars (\$_____).

- C. **Alternate No. 1C:** Add snowmelt system for sidewalk area north of Grinden Drive, pedestrian crosswalks and Grinden Drive pedestrian island pavement as indicated on Drawing C205 to Work Scopes 3.20A, 15.20A & 16.20A.

Add the sum of: _____ Dollars (\$_____).

- D. **Alternate No. 2A:** Delete work associated with the north pedestrian canopy located at A/A.1 Line from Work Scopes WS 3.20A, 5.20A, 6.20A, 15.20A & 16.20A.

Deduct the sum of: _____ Dollars (\$_____).

- E. **Alternate No. 2B:** Delete work associated with the south pedestrian canopy located at the Grinden Drive pedestrian island at AA Line from Work Scopes WS 3.20A, 5.20A, 6.20A, 15.20A & 16.20A.

Deduct the sum of: _____ Dollars (\$_____).

- F. **Alternate No. 3:** Delete the supply and installation of lighting fixtures specified in Section 16500 from Work Scope WS 16.20A.

Deduct the sum of: _____ Dollars (\$_____).

- G. **Alternate No. 4:** Delete the supply and installation of Overhead Coiling Doors and Overhead Coiling Grilles specified in Sections 08331 and 08334 from Work Scope WS 8.22A.

Deduct the sum of: _____ Dollars (\$_____).

- H. **Alternate No. 5:** Delete the supply and installation of Mechanical Chiller equipment specified in Section 15681 from Work Scope WS 15.20A, and associated electrical work from Work Scope WS 16.20A.

Deduct the sum of: _____ Dollars (\$_____).

- I. **Alternate No. 6:** Delete the supply and installation of Mechanical Air Distribution Devices specified in Section 15882 from Work Scope WS 15.20A, and associated electrical work from Work Scope WS 16.20A.

Deduct the sum of: _____ Dollars (\$_____).

- J. **Alternate No. 7:** Delete the supply and installation of Plumbing Fixtures, Plumbing Emergency Fixtures, Plumbing Security Fixtures and Drinking Fountains specified in Sections 15410, 15412, 15413 and 15426 from Work Scope WS 15.20A.

Deduct the sum of: _____ Dollars (\$_____).

- K. **Alternate No. 8:** Substitute standard concrete for integrally colored concrete for sidewalks as part of Work Scope WS 3.20A.

Deduct the sum of: _____ Dollars (\$_____).

- L. **Alternate No. 9:** Delete the Packaged Electrical Generator specified in Section 16231 from Work Scope WS 16.20A.

Deduct the sum of: _____ Dollars (\$_____).

- M. **Alternate No. 10:** Delete the Ornamental Metal work specified in Section 05700 from Work Scope WS 15.20A.

Deduct the sum of: _____ Dollars (\$_____).

- N. **Alternate No. 11:** Add construction of the remainder of the Tug Tunnel construction (Phase 2) to Work Scopes WS 3.20A, 5.20A, 6.20A, 7.20A, 8.20A, 9.20A and 13.20A.

Add the sum of: _____ Dollars (\$_____).

- O. **Alternate No. 12:** Delete the freestanding cast-in-place "screenwall" east of the terminal in the vicinity of Line F and its associated foundation work from Work Scope WS 3.20A.

Deduct the sum of: _____ Dollars (\$_____).

- P. **Alternate No. 13A:** Add 1 year Extended Maintenance Contract for HVAC Instrumentation and Controls in accordance with Section 15950, Article 1.12; Paragraph D, to Work Scope 15.20A.

Add the sum of: _____ Dollars (\$_____).

- Q. **Alternate No. 13B:** Add 5 year Extended Maintenance Contract for HVAC Instrumentation and Controls in accordance with Section 15950, Article 1.12; Paragraph D, to Work Scope 15.20A.

Add the sum of: _____ Dollars (\$_____).

- R. **Alternate No. 14A:** Add snowmelt system, as indicated on Drawings A720, A721 & A722, for West Tug Ramp only to Work Scopes 3.20A, 15.20A & 16.20A.

Add the sum of: _____ Dollars (\$_____).

- S. **Alternate No. 14B:** Add snowmelt system, as indicated on Drawings A720, A721 & A722, for both East and West Tug Ramps to Work Scopes 3.20A, 15.20A & 16.20A.

Add the sum of: _____ Dollars (\$_____).

- T. **Alternate No. 15:** Delete the supply of locksets at Door Nos. 106A, 107A, 108A, 109A, 110A, 111A, 112A, 113A, 114A, 115A, 120A, 122A, 123A, 123B, 124A, 125A, 125B, 127A, 127B, 131A, 131B, 138A, 140A, 141A, 142A, 148A, 149B, 150A, 151A, 156A, 172A, 190A, 203A, 204A, 205A, 209A, 210A, 211A, 212A, 217A, 230A, 240A, 302A, 304A, 304B, 306A, 311A, 312A, 313A, 313B, 314A, 317A, 318A, 322A, 323A, 324A, 325A, 326A, 327A, 333A, 336A, 337A, 390A & 391B from Work Scope WS 8.20A.

Deduct the sum of: _____ Dollars (\$_____).

END OF SECTION 01230

**NEW PASSENGER TERMINAL
DULUTH INTERNATIONAL AIRPORT
DULUTH, MINNESOTA**

**SECTION 07131 – SELF-ADHERING
SHEET WATERPROOFING**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Modified Bituminous Sheet Waterproofing.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, and tested physical and performance properties of waterproofing.
 - 2. Include manufacturer's written instructions for evaluating, preparing, and treating substrate.
- B. LEED Submittals:
 - 1. Product Certificates for Credit MR 5: For products and materials required to comply with requirements for regional materials, certificates indicating location of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include statement indicating distance to Project, cost for each regional material, and fraction by weight that is considered regional.
- C. Shop Drawings: Show locations and extent of waterproofing and details of substrate joints and cracks, sheet flashings, penetrations, inside and outside corners, tie-ins with adjoining waterproofing, and other termination conditions.
- D. Samples: For each exposed product and for each color and texture specified, including the following products:
 - 1. 8-by-8-inch square of waterproofing and flashing sheet.
 - 2. 8-by-8-inch square of insulation.
 - 3. 4-by-4-inch square of drainage panel.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.

- B. Field quality-control reports.
- C. Sample Warranties: For special warranties.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by waterproofing manufacturer.

1.6 FIELD CONDITIONS

- A. Environmental Limitations: Apply waterproofing within the range of ambient and substrate temperatures recommended by waterproofing manufacturer. Do not apply waterproofing to a damp or wet substrate.
 - 1. Do not apply waterproofing in snow, rain, fog, or mist.
- B. Maintain adequate ventilation during preparation and application of waterproofing materials.

1.7 WARRANTY

- A. Manufacturer's Warranty: Manufacturer's standard materials-only warranty in which manufacturer agrees to furnish replacement waterproofing material for waterproofing that does not comply with requirements or that fails to remain watertight within specified warranty period.
 - 1. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Source Limitations for Waterproofing System: Obtain waterproofing materials, protection course, and molded-sheet drainage panels from single source from single manufacturer.

2.2 MODIFIED BITUMINOUS SHEET WATERPROOFING

- A. Modified Bituminous Sheet: Minimum 60-mil nominal thickness, self-adhering sheet consisting of 56 mils of rubberized asphalt laminated on one side to a 4-mil- thick, polyethylene-film reinforcement, and with release liner on adhesive side.
 - 1. Physical Properties:
 - a. Tensile Strength, Membrane: 325 psi minimum; ASTM D 412, Die C, modified.

- b. Ultimate Elongation: 350 percent minimum; ASTM D 412, Die C, modified.
- c. Low-Temperature Flexibility: Pass at minus 45 deg F; ASTM D 1970.
- d. Crack Cycling: Unaffected after 100 cycles of 1/8-inch movement; ASTM C 836.
- e. Puncture Resistance: 60 lbf minimum; ASTM E 154.
- f. Water Absorption: 0.2 percent weight-gain maximum after 48-hour immersion at 70 deg F; ASTM D 570.
- g. Water Vapor Permeance: 0.05 perms (2.9 ng/Pa x s x sq. m) maximum; ASTM E 96/E 96M, Water Method.
- h. Hydrostatic-Head Resistance: 230 feet minimum; ASTM D 5385.

2.3 AUXILIARY MATERIALS

- A. General: Furnish auxiliary materials recommended by waterproofing manufacturer for intended use and compatible with sheet waterproofing.
 - 1. Furnish liquid-type auxiliary materials that comply with VOC limits of authorities having jurisdiction.
- B. Primer: Liquid primer recommended for substrate by sheet-waterproofing material manufacturer.
- C. Surface Conditioner: Liquid, waterborne surface conditioner recommended for substrate by sheet-waterproofing material manufacturer.
- D. Liquid Membrane: Elastomeric, two-component liquid, cold fluid applied, of trowel grade or low viscosity.
- E. Substrate Patching Membrane: Low-viscosity, two-component, modified asphalt coating.
- F. Metal Termination Bars: Aluminum bars, approximately 1 by 1/8 inch thick, predrilled at 9-inch centers.

2.4 INSULATION

- A. Insulation, General: Comply with Division 7 Section "Thermal Insulation."
- B. Board Insulation: Extruded-polystyrene board insulation complying with ASTM C 578, square or shiplap edged.
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. DiversiFoam Products.
 - b. Dow Chemical Company (The).
 - c. Owens Corning Insulating Systems LLC.
 - d. Pactiv Building Products.

- e. T. Clear Corporation, a subsidiary of Fin Pan Inc.
- 2. Type IV, 25-psi minimum compressive strength.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance of the waterproofing.
 - 1. Verify that concrete has cured and aged for minimum time period recommended in writing by waterproofing manufacturer.
 - 2. Verify that substrate is visibly dry and within the moisture limits recommended in writing by manufacturer. Test for capillary moisture by plastic sheet method according to ASTM D 4263.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 SURFACE PREPARATION

- A. Clean, prepare, and treat substrates according to manufacturer's written instructions. Provide clean, dust-free, and dry substrates for waterproofing application.

3.3 INSULATION INSTALLATION

- A. Install one or more layers of board insulation to achieve required thickness over waterproofed surfaces. Cut and fit to within 3/4 inch of projections and penetrations.
- B. On vertical surfaces, set insulation units in adhesive or tape applied according to manufacturer's written instructions.
- C. On horizontal surfaces, loosely lay insulation units according to manufacturer's written instructions. Stagger end joints and tightly abut insulation units.

3.4 PROTECTION, REPAIR, AND CLEANING

- A. Protect waterproofing from damage and wear during remainder of construction period.
- B. Protect installed board insulation from damage due to UV light, harmful weather exposures, physical abuse, and other causes. Provide temporary coverings where insulation is subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

- C. Correct deficiencies in or remove waterproofing that does not comply with requirements; repair substrates, reapply waterproofing, and repair sheet flashings.
- D. Clean spillage and soiling from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 07131

2.21 LOW ENERGY ELECTRO-MECHANICAL AUTOMATIC OPERATORS

A. Acceptable manufacturers and respective catalog numbers:

	<u>LCN</u>	<u>Besam</u>	<u>Stanley</u>
1. Electro-Mechanical Operator	9500 Sr. Swing	900 Series	Magic Swing Series

- B. Where low kinetic energy, as defined by ANSI/BHMA Standard A156.19, power operators are indicated for doors required to be accessible to the disabled, provide electrically powered operators complying with the ADA for opening force and time to close standards.
- C. Operator operation shall consist of Push button, push plate, switch-activated, manual or manual/electric power assisted Push 'N' Go opening with power boost closing and holding as specified in hardware sets.
- D. Operators shall comply with ANSI A156.19, UL 325, and the American with Disabilities Act.
- E. In event of power failure, make door operate manually with controlled spring close as though equipped with a #3 manual door closer, without damage to operator components.
- F. Provide adjustment by microprocessor control for:
1. Opening speed.
 2. Backcheck.
 3. Hold-open, from 5 to 30 seconds.
 4. Closing speed.
 5. Opening force.
 6. Acceleration during opening and recycling, for soft start.
 7. Door will safely stop and reverse if an object is encountered in the opening or closing cycle.
- G. Operator equipment shall be completely electromechanical and include the following features:
1. Close and center door against stop after each cycle, and hold against drafts, winds and stack pressure.
 2. Manual opening force: 14 lb-force (62 N) maximum.
 3. Closing force: 6 lb-force (26.6 N).
 4. Factory-set door hold-open voltage.
 5. Control box and motor/gear box shall be contained in protective housing; utilize precision-machined gears and bearing seats, all-weather lubricant, and shall be mounted on vibration isolators.
 6. Gears shall be manufactured by operator manufacturer specifically for operators.
 7. Motor shall consist of a DC permanent magnet motor with shielded ball bearings. Motor shall stop when door stops or is fully open and when breakaway is operated.
 8. Door operating arm shall be fabricated from forged steel and attached at natural pivot point of door. Do not use slide block in top of door.
 9. Exposed arms shall be factory-polished and finished to match operator enclosure.
 10. Control circuits for actuators and safeties shall be low-voltage, NEC Class II.
 11. Power operators will require 115 VAC power supply.

- H. Enclosure shall consist of a extruded aluminum header concealing all operating parts except arms and manual control switches.
- I. Wall mounted actuators shall consist of a 4-1/2 inch diameter stainless steel touch plate with a blue filled handicapped symbol. Switches shall be weather resistant and mount on a single gang electrical box furnished by Division 16.
- J. Power Operators shall be warranted by the manufacture to be free from defects in material and workmanship for a period of two years.

ELEVATOR SCHEDULE - HYDRAULIC PASSENGER ELEVATORS:

EV-1 (Elevator 154)

Capacity:	3,500 pounds center opening.
Speed:	100 / 125 fpm.
Travel:	33'-8"
Landings Served:	3.
Openings:	
Front:	3.
Rear:	2.
Power Supplied:	480 volts AC, 3 phase, 60 hertz.
Machinery:	Twinpost, telescoping holeless hydraulic jacks, positive-displacement pump, AC motor.
Car Enclosure:	6'-8" wide by 5'-5" deep min. clear inside dimensions. 3'-6" wide by 7'-0" high stainless steel car doors. Center opening. Stainless steel front walls with integral stainless steel car door frames. Ceiling: Manufacturer's low voltage downlight with satin stainless steel laminate. Side and Rear Walls: Vertical applied panels with decorative trim – Mart wood panel wall system. Operating Panel: Satin stainless steel finish. Floor prepared to receive thinset resinous epoxy terrazzo. Handrail: 2" flat stainless steel bar w/ No. 4 satin finish.
Hoistway Entrances:	3'-6" wide by 7'-0" high. Satin stainless steel entrance doors and frames, rated and labeled for 30-minute temperature rise of 650 degrees F.
Fixture & Button Style:	Vandal Resistant Signal Fixtures. <u>Card reader rear door hall call.</u>
Special Operations:	<u>Keyed Card reader</u> operation of rear openings with lock-out of front openings in rear opening mode. <u>See security drawings.</u>
Additional Requirements:	Protective blanket hooks in car, 1 complete set of full-height blankets, dark tan color.

EV-2 (Elevator 118)

Capacity:	3,500 pounds center opening.
Speed:	100 / 125 fpm.
Travel:	17'-0"
Landings Served:	2.
Openings:	
Front:	2.
Rear:	None.
Power Supplied:	480 volts AC, 3 phase, 60 hertz.
Machinery:	Twinpost, telescoping holeless hydraulic jacks, positive-displacement pump, AC motor.
Car Enclosure:	6'-8" wide by 5'-5" deep min. clear inside dimensions. 3'-6" wide by 7'-0" high stainless steel car doors. Center opening. Stainless steel front walls with integral stainless steel car door frames.

	Ceiling: Manufacturer's low voltage downlight with satin stainless steel laminate.
	Side and Rear Walls: Vertical applied panels with decorative trim – Mart wood panel wall system.
	Operating Panel: Satin stainless steel finish.
	Floor prepared to receive thinset resinous epoxy terrazzo.
	Handrail: 2" flat stainless steel bar w/ No. 4 satin finish.
Hoistway Entrances:	3'-6" wide by 7'-0" high. Satin stainless steel entrance doors and frames, rated and labeled for 30-minute temperature rise of 650 degrees F.
Fixture & Button Style:	Vandal Resistant Signal Fixtures. <u>Card reader hall call at first floor.</u>
Special Operations:	None.
Additional Requirements:	Protective blanket hooks in car, 1 complete set of full-height blankets, dark tan color.

EV-3 (Elevator 105)

Capacity:	3,500 pounds center opening.
Speed:	100 / 125 fpm.
Travel:	17'-0"
Landings Served:	2.
Openings:	
Front:	1.
Rear:	1.
Power Supplied:	480 volts AC, 3 phase, 60 hertz.
Machinery:	Twinpost, telescoping holeless hydraulic jacks, positive-displacement pump, AC motor.
Car Enclosure:	6'-8" wide by 5'-5" deep min. clear inside dimensions.
	3'-6" wide by 7'-0" high stainless steel car doors. Center opening.
	Glazed front and rear walls with stainless steel trim and integral stainless steel car door frames.
	Ceiling: Manufacturer's low voltage downlight with satin stainless steel laminate.
	Side Walls: Glazed w/ stainless steel trim.
	Operating Panel: Satin stainless steel finish.
	Floor prepared to receive thinset resinous epoxy terrazzo.
	Handrails: 2" flat stainless steel bar w/ No. 4 satin finish.
Hoistway Entrances:	3'-6" wide by 7'-0" high. Satin stainless steel entrance doors and frames, rated and labeled for 30-minute temperature rise of 650 degrees F.
Fixture & Button Style:	Vandal Resistant Signal Fixtures.
Special Operations:	Keyed operation of rear openings with lock-out of front openings in rear opening mode.
Additional Requirements:	Protective blanket hooks in car, 1 complete set of full-height blankets, dark tan color.

END OF SECTION 14240

**NEW PASSENGER TERMINAL
DULUTH INTERNATIONAL AIRPORT
DULUTH, MINNESOTA**

SECTION 15410 - PLUMBING FIXTURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY REFER TO SCHEDULE ON DRAWINGS

- A. This Section includes the following conventional plumbing fixtures and related components:

1. Faucets for lavatories, showers and sinks.
2. Laminar-flow faucet-spout outlets.
3. Flushometers.
4. Toilet seats.
5. Protective shielding guards.
6. Fixture supports.
7. Interceptors.
8. Shower receptors.
9. Disposers.
10. Drinking fountain.
11. Urinals.
12. Lavatories.
13. Commercial sinks..
14. Individual showers.
15. Service sinks.
16. Mop receptor.

- B. Related Sections include the following:

1. Division 2 Section "Water Distribution" for exterior plumbing fixtures and hydrants.
2. Division 10 Section "Toilet and Bath Accessories."
3. Division 15 Section 15410 "Plumbing Fixtures."
4. Division 15 Section "Plumbing Specialties" for backflow preventers, floor drains, and specialty fixtures not included in this Section.

1.3 DEFINITIONS

- A. ABS: Acrylonitrile-butadiene-styrene plastic.
- B. Accessible Fixture: Plumbing fixture that can be approached, entered, and used by people with disabilities.
- C. Cast Polymer: Cast-filled-polymer-plastic material. This material includes cultured-marble and solid-surface materials.
- D. Cultured Marble: Cast-filled-polymer-plastic material with surface coating.
- E. Drinking Fountain: Fixture with nozzle for delivering stream of water for drinking.
- F. Fitting: Device that controls the flow of water into or out of the plumbing fixture. Fittings specified in this Section include supplies and stops, faucets and spouts, shower heads and tub spouts, drains and tailpieces, and traps and waste pipes. Piping and general-duty valves are included where indicated.
- G. Fixture: Plumbing unit connected to water and waste.
- H. FRP: Fiberglass-reinforced plastic.
- I. PMMA: Polymethyl methacrylate (acrylic) plastic.
- J. PVC: Polyvinyl chloride plastic.
- K. Remote Water Cooler: Electrically powered equipment for generating cooled drinking water.
- L. Solid Surface: Nonporous, homogeneous, cast-polymer-plastic material with heat-, impact-, scratch-, and stain-resistance qualities.
- M. Water Cooler: Electrically powered fixture for generating and delivering cooled drinking water.

1.4 SUBMITTALS

- A. Product Data: For each type of plumbing fixture indicated. Include selected fixture and trim, fittings, accessories, appliances, appurtenances, equipment, and supports. Indicate materials and finishes, dimensions, construction details, and flow-control rates.
- B. Shop Drawings: Diagram power, signal, and control wiring.
- C. Operation and Maintenance Data: For plumbing fixtures to include in emergency, operation, and maintenance manuals.
- D. Warranty: Special warranty specified in this Section.

1.5 QUALITY ASSURANCE

- A. Source Limitations: Obtain plumbing fixtures, faucets, and other components of each category through one source from a single manufacturer.
 - 1. Exception: If fixtures, faucets, or other components are not available from a single manufacturer, obtain similar products from other manufacturers specified for that category.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- C. Regulatory Requirements: Comply with requirements in ICC A117.1, "Accessible and Usable Buildings and Facilities"; Public Law 90-480, "Architectural Barriers Act"; and Public Law 101-336, "Americans with Disabilities Act" and local code; for plumbing fixtures for people with disabilities.
- D. Regulatory Requirements: Comply with requirements in Public Law 102-486, "Energy Policy Act," about water flow and consumption rates for plumbing fixtures.
- E. NSF Standard: Comply with NSF 61, "Drinking Water System Components--Health Effects," for fixture materials that will be in contact with potable water.
- F. Select combinations of fixtures and trim, faucets, fittings, and other components that are compatible.
- G. ARI Standard: Comply with ARI's "Directory of Certified Drinking Water Coolers: for style classifications.
- H. ARI Standard: Comply with ARI 1010, "Self-Contained, Mechanically Refrigerated Drinking-Water Coolers," for water coolers with ARI's "Directory of Certified Drinking Water Coolers" for type and style classifications.
- I. ASHRAE Standard: Comply with ASHRAE 34, "Designation and Safety Classification of Refrigerants," for water coolers. Provide HFC 134a (tetrafluoroethane) refrigerant, unless otherwise indicated.
- J. Comply with the following applicable standards and other requirements specified for plumbing fixtures:
 - 1. Enameled, Cast-Iron Fixtures: ASME A112.19.1M.
 - 2. Plastic Mop-Service Basins: ANSI Z124.6.
 - 3. Plastic Shower Enclosures: ANSI Z124.2.
 - 4. Slip-Resistant Bathing Surfaces: ASTM F 462.
 - 5. Solid-Surface-Material Lavatories and Sinks: ANSI/ICPA SS-1.
 - 6. Stainless-Steel Commercial, Handwash Sinks: NSF 2 construction.
 - 7. Vitreous-China Fixtures: ASME A112.19.2M.
 - 8. Water-Closet, Flush Valve, Trim: ASME A112.19.5.

- K. Comply with the following applicable standards and other requirements specified for lavatory and/or sink faucets:
1. Backflow Protection Devices for Faucets with Hose-Thread Outlet: ASME A112.18.3M.
 2. Faucets: ASME A112.18.1.
 3. Hose-Connection Vacuum Breakers: ASSE 1011.
 4. Hose-Coupling Threads: ASME B1.20.7.
 5. Integral, Atmospheric Vacuum Breakers: ASSE 1001.
 6. NSF Potable-Water Materials: NSF 61.
 7. Pipe Threads: ASME B1.20.1.
 8. Sensor-Actuated Faucets and Electrical Devices: UL 1951.
 9. Supply Fittings: ASME A112.18.1.
 10. Brass Waste Fittings: ASME A112.18.2.
- L. Comply with the following applicable standards and other requirements specified for bathtub and/or shower faucets:
1. Backflow Protection Devices for Hand-Held Showers: ASME A112.18.3M.
 2. Combination, Pressure-Equalizing and Thermostatic-Control Antiscald Faucets: ASSE 1016.
 3. Faucets: ASME A112.18.1.
 4. Hand-Held Showers: ASSE 1014.
 5. High-Temperature-Limit Controls for Thermal-Shock-Preventing Devices: ASTM F 445.
 6. Hose-Coupling Threads: ASME B1.20.7.
 7. Manual-Control Antiscald Faucets: ASTM F 444.
 8. Pipe Threads: ASME B1.20.1.
 9. Pressure-Equalizing-Control Antiscald Faucets: ASTM F 444 and ASSE 1016.
 10. Sensor-Actuated Faucets and Electrical Devices: UL 1951.
 11. Thermostatic-Control Antiscald Faucets: ASTM F 444 and ASSE 1016.
- M. Comply with the following applicable standards and other requirements specified for miscellaneous fittings:
1. Atmospheric Vacuum Breakers: ASSE 1001.
 2. Brass and Copper Supplies: ASME A112.18.1.
 3. Manual-Operation Flushometers: ASSE 1037.
 4. Plastic Tubular Fittings: ASTM F 409.
 5. Brass Waste Fittings: ASME A112.18.2.
 6. Sensor-Operation Flushometers: ASSE 1037 and UL 1951.
- N. Comply with the following applicable standards and other requirements specified for miscellaneous components:
1. Flexible Water Connectors: ASME A112.18.6.
 2. Floor Drains: ASME A112.6.3.
 3. Grab Bars: ASTM F 446.
 4. Hose-Coupling Threads: ASME B1.20.7.
 5. Off-Floor Fixture Supports: ASME A112.6.1M.

6. Pipe Threads: ASME B1.20.1.
7. Plastic Shower Receptors: ANSI Z124.2.
8. Plastic Toilet Seats: ANSI Z124.5.
9. Supply and Drain Protective Shielding Guards: ICC A117.1.

1.6 WARRANTY

- A. Special Warranties: Manufacturer's standard form in which manufacturer agrees to repair or replace components of whirlpools that fail in materials or workmanship within specified warranty period.

1.7 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 1. Faucet Washers and O-Rings: Equal to 10 percent of amount of each type and size installed.
 2. Faucet Cartridges and O-Rings: Equal to 5 percent of amount of each type and size installed.
 3. Flushometer Valve, Repair Kits: Equal to 10 percent of amount of each type installed, but no fewer than 12 of each type.
 4. Provide hinged-top wood or metal box, or individual metal boxes, with separate compartments for each type and size of extra materials listed above.
 5. Toilet Seats: Equal to 5 percent of amount of each type installed.

PART 2 - PRODUCTS

2.1 LAVATORY FAUCETS

- A. Lavatory Faucets:
 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. American Standard Companies, Inc.: Model 6056.105
 - b. Bradley Corporation: Aerada 1100 Series
 - c. Chicago Faucets: Model 116.112.21.1
 - d. Elkay Manufacturing Co.: Model LK736B
 - e. Speakman Company: Model S-8801
 2. Description: Electronic mixing valve. Coordinate faucet inlets with supplies and fixture holes; coordinate outlet with spout and fixture receptor, sensor operated with 0.5 GPM flow control and electronic soap dispenser. Hard-wired including transformer.

2.2 SHOWER FAUCETS

A. Shower Faucets:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Delta Faucet Company.
 - b. Hansgrohe Inc.
 - c. Leonard Valve Company.
 - d. Powers; a Watts Industries Co..
 - e. Speakman Company.
 - f. Symmons Industries, Inc.
2. Description: Single-handle thermostatic or thermostatic and pressure-balance valve. Include hot- and cold-water indicators; check stops; and shower head, arm, and flange. Coordinate faucet inlets with supplies and with 1.5 GPM flow control.

2.3 SINK FAUCETS

A. Sink Faucets:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Delta Faucet Company.
 - b. Grohe America, Inc.
 - c. Just Manufacturing Company.
 - d. Kohler Co.
 - e. Speakman Company.
 - f. Symmons
2. Description: Kitchen faucet with spray, three-hole fixture or kitchen faucet with spray, four-hole fixture, gooseneck spout and wrist paddles. Include hot and cold-water indicators; coordinate faucet inlets with supplies and fixture holes; coordinate outlet with spout and fixture receptor with 1.5 GPM flow control.

2.4 WHEELCHAIR USER LAVATORY FAUCETS

- a. Electronic
- b. Gooseneck
2. Manufacturers: Same as Lav Faucet.

2.5 FLUSHOMETERS

A. Flushometers:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Sloan Valve Company.
 - b. Zurn Plumbing Products Group; Commercial Brass Operation.
 - c. Hydrotek International, Inc.
 - d. Sloan Valve Company.
 - e. TOTO USA, Inc.
2. Description: Flushometer for urinal and water-closet-type fixtures. Include brass body with corrosion-resistant internal components, control stop with check valve, vacuum breaker, copper or brass tubing, and polished chrome-plated finish on exposed parts, touchless sensor operated with 1.28 GPM for urinal.

2.6 TOILET SEATS

A. Toilet Seats:

1. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. American Standard Companies, Inc.
 - b. Bemis Manufacturing Company.
 - c. Church Seats.
 - d. Eljer.
 - e. Kohler Co.
3. Description: White-open front.

2.7 PROTECTIVE SHIELDING GUARDS

A. Protective Shielding Pipe Covers:

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Engineered Brass Co.
 - b. Insul-Tect Products Co.; a Subsidiary of MVG Molded Products.
 - c. McGuire Manufacturing Co., Inc.
 - d. Plumberex Specialty Products Inc.
 - e. TCI Products.
 - f. TRUEBRO, Inc.
 - g. Zurn Plumbing Products Group; Tubular Brass Plumbing Products Operation.
3. Description: Manufactured plastic wraps for covering plumbing exposed fixture hot- and cold-water supplies and trap and drain piping. Comply with Americans with Disabilities Act (ADA) requirements.

2.8 FIXTURE SUPPORTS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 1. Josam Company.
 2. MIFAB Manufacturing Inc.
 3. Smith, Jay R. Mfg. Co.
 4. Tyler Pipe; Wade Div.
 5. Watts Drainage Products Inc.; a div. of Watts Industries, Inc.
 6. Zurn Plumbing Products Group; Specification Drainage Operation.
- B. Water-Closet Supports:
 1. Description: Combination carrier designed for accessible or standard mounting height of wall-mounting, water-closet-type fixture. Include single or double, vertical or horizontal, hub-and-spigot or hubless waste fitting as required for piping arrangement; faceplates; couplings with gaskets; feet; and fixture bolts and hardware matching fixture. Include additional extension coupling, faceplate, and feet for installation in wide pipe space.
- C. Urinal Supports:
 1. Description: Urinal carrier with fixture support plates and coupling with seal and fixture bolts and hardware matching fixture for wall-mounting, urinal-type fixture. Include steel uprights with feet.
 2. Accessible-Fixture Support: Include rectangular steel uprights.
- D. Lavatory Supports:
 1. Description: Lavatory carrier with exposed arms and tie rods, lavatory carrier with concealed arms and tie rod for wall-mounting, lavatory-type fixture. Include steel uprights with feet.
 2. Accessible-Fixture Support: Include rectangular steel uprights.

E. Sink Supports:

1. Description: Sink carrier with exposed arms and tie rods for sink-type fixture. Include steel uprights with feet.

2.9 INTERCEPTORS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Josam Company.
2. MIFAB Manufacturing Inc.
3. Smith, Jay R. Mfg. Co.
4. Tyler Pipe; Wade Div.
5. Watts Drainage Products Inc.; a div. of Watts Industries, Inc.
6. Zurn Plumbing Products Group; Specification Drainage Operation.

B. Sediment Interceptors:

1. Description: Manufactured unit with removable screens or strainer and removable cover; designed to trap and retain waste material.
 - a. Material: Cast-iron or steel body with acid-resistant lining and coating or carbon-steel body with acid-resistant lining and coating or stainless-steel.
 - b. Pipe Connections: 6".

2.10 SHOWER RECEPTORS

A. Shower Receptors:

1. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Crane Plumbing, L.L.C./Fiat Products.
 - b. Florestone Products Co., Inc.
 - c. Aker Plastics Co., Inc.
 - d. LASCO Bathware.
 - e. Mustee, E. L. & Sons, Inc.
 - f. Sterling Plumbing Group, Inc.
 - g. Swan Corporation (The).

2. Description: Cast-polymer or FRP or PMMA or Precast-terrazzo or Solid-surface base for built-up-type shower fixture.
 - a. Type: Standard or residential or Handicapped/wheelchair.
 - b. Size **36 by 36 inches (914 by 914 mm)**
 - c. Color: White.
 - d. Outlet: Cast-in-floor drain or Drain with **NPS 1-1/2 (DN 40)** or **NPS 2 (DN 50)** or **NPS 3 (DN 80)** outlet.

2.11 FIXTURE SUPPORTS

- A. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 1. Josam Co.
 2. MIFAB Manufacturing, Inc.
 3. Smith, Jay R. Mfg. Co.
 4. Tyler Pipe; Wade Div.
 5. Watts Drainage Products Inc.; a div. of Watts Industries, Inc.
 6. Zurn Plumbing Products Group; Specification Drainage Operation.

2.12 WATER CLOSETS

- A. Water Closets:
 1. Low flow type wall hung WC 1.28 GPF with white vitreous china, siphon jet, elongated bowl.
 2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Crane Plumbing, L.L.C./Fiat Products.
 - b. American Standard Companies, Inc.
 - c. Briggs Plumbing Products, Inc.
 - d. Kohler Co.
 - e. TOTO USA, Inc.
- B. Urinals:
 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following: Low flow 0.5 GPF - white vitreous china, siphon jet with integral flushing rim, top spud, integral trap.
 - a. American Standard Companies, Inc.
 - b. Kohler Co.
 - c. Mansfield Plumbing Products, Inc.: Model 421
 - d. TOTO USA, Inc.: Model UT104E

2.13 LAVATORIES

A. Lavatories:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. American Standard Companies, Inc. Models 0614.00 or Model 9482.00 white vitreous china, oval, under-counter.
 - b. Commercial Enameling Company.
 - c. Kohler Co. Model K-2214 or K-2211
 - d. Crane Plumbing, L.L.C./Fiat Products.: Model US1992
 - e. TOTO USA, Inc.: Model LT587

2.14 COMMERCIAL SINKS - STAINLESS STEEL

A. Commercial Sinks:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Advance Tabco.
 - b. Elkay Manufacturing Co.
 - c. Just Manufacturing Company.
 - d. Metal Masters Food service Equipment Co., Inc.

B. (4) Self-rimming, 18 gauge, stainless steel 15"x17" deep compartment undercoated, 3-hole.

C. Also: 33" x 19" x 7-1/2 double compartment.

2.15 SERVICE SINKS

A. Service Sinks:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. American Standard Companies, Inc.
 - b. Commercial Enameling Company.
 - c. Crane Plumbing, L.L.C./Fiat Products.
 - d. Eljer.
 - e. Kohler Co.

2.16 MOP RECEPTOR

A. Mop Receptor:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Acorn Engineering Company.
 - b. Crane Plumbing, L.L.C./Fiat Products.
 - c. Florestone Products Co., Inc.
 - d. Precast Terrazzo Enterprises, Inc.
 - e. Stern-Williams Co., Inc.
 - f. Mustee, E. L. & Sons, Inc.
 - g. Swan Corporation (The).
 - h. Zurn Plumbing Products Group; Light Commercial Operation.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine roughing-in of water supply and sanitary drainage and vent piping systems to verify actual locations of piping connections before plumbing fixture installation.
- B. Examine cabinets, counters, floors, and walls for suitable conditions where fixtures will be installed.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Assemble plumbing fixtures, trim, fittings, and other components according to manufacturers' written instructions.
- B. Install off-floor supports, affixed to building substrate, for wall-mounting fixtures.
 1. Use carrier supports with waste fitting and seal for back-outlet fixtures.
 2. Use carrier supports without waste fitting for fixtures with tubular waste piping.
 3. Use chair-type carrier supports with rectangular steel uprights for accessible fixtures.
 4. Use mounting frames for recessed water coolers, unless otherwise indicated.
- C. Install back-outlet, wall-mounting fixtures onto waste fitting seals and attach to supports.
- D. Install wall-mounting fixtures with tubular waste piping attached to supports.
- E. Install counter-mounting fixtures in and attached to casework.

- F. Install fixtures level and plumb according to roughing-in drawings.
- G. Install water-supply piping with stop on each supply to each fixture to be connected to water distribution piping. Attach supplies to supports or substrate within pipe spaces behind fixtures. Install stops in locations where they can be easily reached for operation.
 - 1. Exception: Use ball, gate, or globe valves if supply stops are not specified with fixture. Valves are specified in Division 15 Section "Valves."
- H. Install trap and tubular waste piping on drain outlet of each fixture to be directly connected to sanitary drainage system.
- I. Install tubular waste piping on drain outlet of each fixture to be indirectly connected to drainage system.
- J. Install flushometer valves for accessible water closets and urinals with handle mounted on wide side of compartment. Install other actuators in locations that are easy for people with disabilities to reach.
- K. Install toilet seats on water closets.
- L. Install faucet-spout fittings with specified flow rates and patterns in faucet spouts if faucets are not available with required rates and patterns. Include adapters if required.
- M. Install water-supply flow-control fittings with specified flow rates in fixture supplies at stop valves.
- N. Install faucet flow-control fittings with specified flow rates and patterns in faucet spouts if faucets are not available with required rates and patterns. Include adapters if required.
- O. Install shower flow-control fittings with specified maximum flow rates in shower arms.
- P. Install traps on fixture outlets.
 - 1. Exception: Omit trap on fixtures with integral traps.
 - 2. Exception: Omit trap on indirect wastes, unless otherwise indicated.
- Q. Install escutcheons at piping wall ceiling penetrations in exposed, finished locations and within cabinets and millwork. Use deep-pattern escutcheons if required to conceal protruding fittings. Escutcheons are specified in Division 15 Section "Basic Mechanical Materials and Methods."
- R. Seal joints between fixtures and walls, floors, and countertops using sanitary-type, one-part, mildew-resistant silicone sealant. Match sealant color to fixture color. Sealants are specified in Division 7 Section "Joint Sealants."

3.3 CONNECTIONS

- A. Piping installation requirements are specified in other Division 15 Sections. Drawings indicate general arrangement of piping, fittings, and specialties.

- B. Connect fixtures with water supplies, stops, and risers, and with traps, soil, waste, and vent piping. Use size fittings required to match fixtures.
- C. Ground equipment according to Division 16 Section "Grounding and Bonding."
- D. Connect wiring according to Division 16 Section "Conductors and Cables."

3.4 FIELD QUALITY CONTROL

- A. Verify that installed plumbing fixtures are categories and types specified for locations where installed.
- B. Check that plumbing fixtures are complete with trim, faucets, fittings, and other specified components.
- C. Inspect installed plumbing fixtures for damage. Replace damaged fixtures and components.
- D. Test installed fixtures after water systems are pressurized for proper operation. Replace malfunctioning fixtures and components, then retest. Repeat procedure until units operate properly.
- E. Install fresh batteries in sensor-operated mechanisms.
- F. Water Cooler Testing: After electrical circuitry has been energized, test for compliance with requirements. Test and adjust controls and safeties.
 - 1. Remove and replace malfunctioning units and retest as specified above.
 - 2. Report test results in writing.

3.5 ADJUSTING

- A. Operate and adjust faucets and controls. Replace damaged and malfunctioning fixtures, fittings, and controls.
- B. Adjust water pressure at faucets and flushometer valves to produce proper flow and stream.
- C. Replace washers and seals of leaking and dripping faucets and stops.
- D. Install fresh batteries in sensor-operated mechanisms.
- E. Adjust drinking fountain/water cooler fixture flow regulators for proper flow and stream height.
- F. Adjust water cooler temperature settings.

3.6 CLEANING

- A. Clean fixtures, faucets, and other fittings with manufacturers' recommended cleaning methods and materials. Do the following:
 - 1. Remove faucet spouts and strainers, remove sediment and debris, and reinstall strainers and spouts.
 - 2. Remove sediment and debris from drains.
- B. After completing installation of exposed, factory-finished fixtures, faucets, and fittings, inspect exposed finishes and repair damaged finishes.
- C. Clean fixtures, on completion of installation, according to manufacturer's written instructions.

3.7 PROTECTION

- A. Provide protective covering for installed fixtures and fittings.
- B. Do not allow use of plumbing fixtures for temporary facilities unless approved in writing by Owner.

END OF SECTION 15410

**DULUTH INTERNATIONAL AIRPORT
NEW PASSENGER TERMINAL
BID PACKAGE 2A – Addendum 2**

APPENDIX A

Item	Drwg. or Spec. Sect. No.	Bidder Questions	Responses
L.E. Ribar Co. – February 9, 2011			
1.	15000	The equipment schedule shows 4 air curtains tagged CAN-1.1,1.2,1.3 & 1.4 with the basis of design by Powered Aire. I have not been able to locate in the mechanical specifications anything on the air curtains, section 15000. Can you tell me the specific section I should be looking in? The L.E. Ribar Co. represents Berner International which is an industry leader in the air curtain business and I would like to get prior approval for our “Mark” series hot water product on this project.	Other air curtain manufacturers are acceptable provided that they meet the performance criteria indicated in the schedule.
Luma Sales, Inc. – February 10, 2011			
2.	FP2.03.06	When I looked at the fixture schedule I noticed I was spec'd on some of the types but not on all of the types. I was hoping that I could email you with my equals on all of the types that I am not on. Could you please let me know if I could do this?	The specifications indicate the acceptable manufacturers. The specifications also indicate the procedures that must be followed for substitutions.
Albany Door Systems – February 9, 2011			
3.	08385	I have reviewed your specifications for the Duluth International Airport expansion and understand that Albany's 670 is specified, among other manufacturers. The 670 is a good door that has been around for many years, however there are other styles that are much newer that we typically sell currently instead of model 670. Please let me know if these would be acceptable to bid.	Any product in compliance with the requirements of this Section of the Contract Documents may be bid.
Kelleher Construction, Inc. – February 11, 2011			
4.	15881	Regarding the specifications for Bid Package 2A. Section 15881 – In-Slab Air Duct section 2.2A calls for the Air-Domes to be 12" x 12" x ¾", it is our understanding that these domes are to be 12" x 12" x 3¾" high. Please verify what the required height of the domes are to be.	The dome height is 3-3/4".
Northern Door & Hardware, Inc. – February 14, 2011			
5.		Opening #129A is gone from the door sched (Sheet A701), but is still on the floor plan (Sheet A111)?	Door to room 129 is 127B.
6.		Opening #305B is added to the door sched (sheet A701), but where is it on the floor plan?	305B is on the third floor, off of room 305 as shown.
7.		Door schedule (Sheet A701), need hardware groups for the following openings; 214B, 225A, 226A, 226B, 226C, 305A, and 305B.	Addressed in Addendum.
8.		Door schedule (Sheet A701), need door and or frame elevation types for the following openings;	117a: Door A, Frame 1. 133a: Door A, Frame 1.

**DULUTH INTERNATIONAL AIRPORT
NEW PASSENGER TERMINAL
BID PACKAGE 2A – Addendum 2**

APPENDIX A

Item	Drwg. or Spec. Sect. No.	Bidder Questions	Responses																								
		117A, 133A, 140B, and 155B.	140b: Door B, Frame 2. 155b: Special.																								
9.		Door opening #317B – Bi-pass closet doors, Thickness? 1¼” or should it be 1¾”?	1¼” is acceptable.																								
10.		Door openings #301A, 301B, 301C, 301D – Confirm door & frame types, door type'B' and frame type '2'?	Styles are correct. Door and frame types will be changed to “as scheduled”.																								
11.		Hardware groups 51 & 52 call for an automatic door operator, but not specified in hardware section.	A new article specifying power operators is added in this Addendum.																								
12.		Some aluminum openings (100C, 100D, 101C, 101D) have a cylinder only (hdwe group 47). Some aluminum entries (100A, 100B, 101A, 101B) do not have hardware listed at all.	Openings 100C, 100D, 101C, 101D are sliding doors with cylinders only by Door Hardware section. Openings 100A, 100B, 101A, 101D are sliding doors not requiring keyed cylinders.																								
13.		Some aluminum entries (219F, 219I, 232A, 232B, 242C) are scheduled to receive finish hardware groups 50, 51, 4. Please confirm.	Openings 219F, 219I, 232A, 232B, and 242C are swing aluminum doors requiring material from Finish Hardware section.																								
14.		Some openings are a mix of hollow metal door in an aluminum frame, (219A, 231A, 233B) are scheduled to receive hardware groups 56, 52, and 15. Please confirm.	Kick plates should be removed from these groups where assigned to aluminum doors.																								
15.		The access doors & frames, section 08311, are listed in work scope 8.20A, this may sound ridiculous, but I cannot find the sizes and locations on the floor plans. Could you please direct me?	The sizes and locations of access doors and frames will be determined by the need for access to mechanical equipment located above GWB ceilings. This must be coordinated with the mechanical contractor, so an allowance will be provided. See Section 01210.																								
ReCarlson Inc. – February 14, 2011																											
16.		<table><tr><td colspan="3">We would like permission to quote the following equipment as an equal to the specified for the above mentioned project.</td></tr><tr><td>Section</td><td>Par.</td><td>Product</td></tr><tr><td>15500-24</td><td>2.8</td><td>MEPCO Steam Traps</td></tr><tr><td>15500-26</td><td>2.9</td><td>Dri-Steem Steam Humidifiers</td></tr><tr><td>15500-33</td><td>2.14</td><td>Rittling Propeller Unit Heaters</td></tr><tr><td>15500-35</td><td>2.16</td><td>Rittling Convectors</td></tr><tr><td>15500-36</td><td>2.17</td><td>Rittling Cabinet Unit Heaters</td></tr><tr><td>15500-36</td><td>2.18</td><td>Rittling Finned Tube Radiation</td></tr></table>	We would like permission to quote the following equipment as an equal to the specified for the above mentioned project.			Section	Par.	Product	15500-24	2.8	MEPCO Steam Traps	15500-26	2.9	Dri-Steem Steam Humidifiers	15500-33	2.14	Rittling Propeller Unit Heaters	15500-35	2.16	Rittling Convectors	15500-36	2.17	Rittling Cabinet Unit Heaters	15500-36	2.18	Rittling Finned Tube Radiation	MEPCO to be submitted as alternate to listed traps. Dri-Steem is acceptable, Rittling is acceptable. In general, if specification criteria can be demonstrated as being met, then product qualifies as equal.
We would like permission to quote the following equipment as an equal to the specified for the above mentioned project.																											
Section	Par.	Product																									
15500-24	2.8	MEPCO Steam Traps																									
15500-26	2.9	Dri-Steem Steam Humidifiers																									
15500-33	2.14	Rittling Propeller Unit Heaters																									
15500-35	2.16	Rittling Convectors																									
15500-36	2.17	Rittling Cabinet Unit Heaters																									
15500-36	2.18	Rittling Finned Tube Radiation																									

**DULUTH INTERNATIONAL AIRPORT
NEW PASSENGER TERMINAL
BID PACKAGE 2A – Addendum 2**

APPENDIX A

Item	Drwg. or Spec. Sect. No.	Bidder Questions	Responses
W.L. Hall Co. – February 14, 2011			
17.		The purpose of this letter is to request prior approval to bid products by McKeon Rolling Steel Door Company on your upcoming project. McKeon is already approved for the Overhead Coiling Door section and we would like to be able to bid both sections on this project Bid Package 8.22A – Coiling Doors.	Any manufacturer offering products in compliance with the requirements of the Contract Documents may bid products specified in the Sections included under Work Scope 8.22A.
Shannon's Inc. – February 15, 2011			
18.		The plumbing piping spec does not match the schedule on P501 for what is to be used for the different plumbing systems. Which is to be followed the specification or the print schedule?	The print schedule takes precedence.
19.		What is the difference between the building drains and sewer on the schedule?	Definitions contained in the plumbing code. Please note there are no building sewers or building drains in this bid package.
20.		Can no hub cast iron be considered for the underground plumbing inside the building?	Underground piping is not a part of this bid package.
21.		Can PVC be considered for the underground plumbing inside the building?	Underground piping is not a part of this bid package.
Titan Energy Systems Inc. – February 15, 2011			
22.		We would like Generac to be added to the suppliers list for the emergency back-up generator system.	Generac is acceptable. In general, if specification criteria can be demonstrated as being met, then product qualifies as equal.
Tekton Construction Company – February 16, 2011			
23.	Det 6/A540	Which work scope is responsible for the 1/8" metal backing?	Work Scope 9.20A under Section 09111.
Thurnbeck Steel – February 16, 2011			
24.		Asking if the AISC certification could be waived if special inspections were covered at their expense.	No.
Northern Industrial Erectors, Inc. - February 16, 2011			
25.		Are the following in the 5.20A work scope? -Pedestrian Ramp -Grating Platforms at ramps -Ornamental Railing Section 05720 -Ticket Counter Stainless Steel Tubing	No to all.
Lipe Brothers Construction, Inc. - February 16, 2011			
26.		#159A is this door an un-insulated door?	Yes.

**DULUTH INTERNATIONAL AIRPORT
NEW PASSENGER TERMINAL
BID PACKAGE 2A – Addendum 2**

APPENDIX A

Item	Drwg. or Spec. Sect. No.	Bidder Questions	Responses
27.		The specifications call for glazed slats do both of the service doors #126A and 159A have glazed slats, and does the whole door have glazed slats, or is there just 2-3 slats eye high.	Only the exterior door has slats. Provide 5 glazed slats centered approx. 5'-4" a.f.f.
Seimens Industry, Inc. - February 16, 2011			
28.		Specifications state that BMS bidders must have a service department of 10 servicemen within a 50 mile radius of the project site. Then later in the specification section N on the same page, the requirement is only 1 serviceman within a 50 mile radius of the project site. Must bidders comply to the article I number 2?	1 serviceman within a 50 mile radius is acceptable. Bidders shall comply with this requirement.
Ambassador Steel - February 16, 2011			
29.		Can you get me some clarification on what type of coupler the previous contractor used at the North Pedestrian Canopy? I'm figuring the circular column that sits on top of the square pier to be around 15'-3". The vertical bars we are providing will have to be lenton threaded. Do you think they might have used a transition coupler there?	Lenton couplers were used. Shop drawings are available for review by interested parties at the K-A site office. Top of pier elevations should be field verified as necessary.
Ambassador Steel - February 17, 2011			
30.		The paving outside the terminal calls for 2-guage mesh. What exactly is that?	There is NO woven wire fabric (WWF) in the sidewalk paving included in this bid package. The WWF is only in the pedestrian crosswalk pavement which is by others. Section D Pedestrian Curb Ramp (Type Special) Plan View on sheet C207 is for information purposes only to indicate sidewalk joint layout in area of pedestrian curb ramp.
31.		I will need clarification on whether or not the pedestrian handicap ramp foundations, slabs, and jetway foundations are included in this bid or if they will be in an upcoming package. The scope of work shows the ramp foundations as part of the includes but there is also a note stating all foundations north of Line H are excluded.	The pedestrian handicap ramp foundations, slabs, and jetway foundations are excluded from this bid package.
32.		This is in regards to the Tug Tunnels and how they intersect the existing foundations on both the east and west sides of the terminal. The blue and pink represent existing footings and walls. The green represents new concrete. The F15 Footing Pad and 36" Pier supports the upper Jetway Bridge. The F15	F15 and 36" pier are not to be poured monolithically with the terminal foundations (terminal foundations are in-place at this time). Pour F15 up against existing foundation. Smaller re-

APPENDIX A

Page 5 of 12

**DULUTH INTERNATIONAL AIRPORT
NEW PASSENGER TERMINAL
BID PACKAGE 2A – Addendum 2**

APPENDIX A

Item	Drwg. or Spec. Sect. No.	Bidder Questions	Responses
38.		I don't see any mention of the CATV equipment and displays anywhere in the specifications, besides the cabling; but the equipment is shown on ET605. Where does this equipment belong, as far as Bid Scopes?	See #33 – CATV equipment is not in scope.
39.		I believe the bid spec' are missing section 16714 – Communications Equipment Room Fittings. It is talked about in other sections but was not included with the bid docs. We need to find out if that is coming out in an addendum, or possibly under a different bid package.	See#33 – Communications room fittings are not in scope.
40.		This symbol "[triangle w/ single line though it]" shows up on the floor plans of the ET drawings, but does not on the legend. We need to find out the quantity of category 6 cables is needed for each of these.	This symbol indicates four RJ45 cable terminations. This work is not included in the scope.
Shannon's Inc. – February 19, 2011			
41.	M503	There is a detail on sheet M503 called Heat Recovery Detail. I cannot find any other information on this system. Is this part of the project? If so where is it located on the floor plans?	Information will be included in Addendum 1. Detail has been relocated to M301 with overall heating system piping diagram.
PerMar Security Inc. – February 21, 2011			
42.	13700	One point of concern that we have is this paragraph: "B. The system contractor integrator shall have previous experience in installation of systems of similar scope for at least 2 projects in the past five (5) years and airport security system under part 1542 (or FAR 107.14) for at least one (1) project in the past five (5) years. Contractor shall provide names of the project, year completed and references to the A/E for review and approval with bid." We can meet all of the specifications above except paragraph B.	See revision in this Addendum.
Diversified Conveyors Inc. – February 21, 2011			
43.	2.11.A	Acceptable BHS Contractors: DCI respectfully requests to be added to the list of acceptable BHS Contractors.	See revision in this Addendum.
Snow-Larson Inc. – February 14, 2011			
44.	07710	We respectfully submit the following product(s) for your consideration as equal to those materials specified for the above project: 07710 2.3 B High Temp Ice & Water Deckguard HT 07710 2.3B High Temp Ice & Water Metalayment.	Products meeting the requirements of the specification may be bid.
Parson Electric – February 22, 2011			

**DULUTH INTERNATIONAL AIRPORT
NEW PASSENGER TERMINAL
BID PACKAGE 2A – Addendum 2**

APPENDIX A

Item	Drwg. or Spec. Sect. No.	Bidder Questions	Responses
45.		This is from the “Work Scope Index- 01014”, is Division 16 responsible for cabling and rough ins only or are we to provide all equipment as well, or are the following under a separate section? “BS11.23B Computer Systems” (CATV and Displays?) are these under different Bid Scopes...? I cannot find these sections in the “Work Scope Description Index”.	See Comments and updates to WS 16.20A for clarification.
46.	E200	Detail 2 –RP-2D does not show up on the riser. Where is it to be fed from?	Panel is incorrectly labeled; correct panel designation is “LP-2B”.
47.	E300	General note 3. Are the conduits run all the way from the electric room and fire pump room to the generator and utility? Or are they stubbed out of the building per ET010 in bid pack #1? Are we to include equipment pads?	These conduits were completed in Bid Package 1 and are not a part of Bid Package 2A.
48.	Panel ELEV-1C	Panel ELEV-1C does not show up on the drawings. Where is this located?	This panel is located in Elevator Machine Rm 143, see drawing E110/E111 (panel is shown in middle of matchline).
49.	XFMR ET-1A	Does not show up on the drawings. Assuming it is hung above EPP-1D	Yes, transformer will go above panel “EPP-1D”.
50.	Panel EDRP-1	Is not shown on the drawings. Where is EDRP-1 located?	This should be located in Elec. Rm 149. See drawing E200 in upcoming BP2A addendum 1 for exact location.
51.	RPC-1A, ERP-1A, ERP-1B, ERP-2D, ERP-2B and ERP-3A	Per panel schedules panels RPC-1A, ERP-1A, ERP-1B, ERP-2D, ERP-2B and ERP-3A require 20% neutral and iso ground. The feeder schedule on E300 calls for a 4 wire a ground feed. Are these panels supposed to include the 200% neutral and iso ground?	Yes.
52.	Panel LP-2B	Does not show up on the plans. Where is LP-2B located?	This panel is located in Elec. Rm 230; it is shown incorrectly labeled as “RP-2D”.
53.		What is the estimated length of the feed for the parking lot panel. I the conduit already turned up in electric room 149?	Approximately 240 feet from the booth panel to the exterior wall of the building – This does not include the interior portion and any extra for bends, etc.
Diversified Automation Inc. – February 22, 2011			
54.	34 77 16-111-114	Is there a detailed drawing with dimensions and a cross-section of the computer workstation specified	Power to EDS units is not in BHSC Scope of work.

**DULUTH INTERNATIONAL AIRPORT
NEW PASSENGER TERMINAL
BID PACKAGE 2A – Addendum 2**

APPENDIX A

Item	Drwg. or Spec. Sect. No.	Bidder Questions	Responses
		in Section 2.13 (pgs 111-114) Please clarify if the power to the (2) EDS units is in the BHSC scope of work.	
55.	34 77 16-9	Please clarify if the power to the (2) EDS units is in the BHSC scope of work.	Power for the EDS units not in BHSC scope of work.
56.	34 77 16-13 5e	Please clarify if BHSC is to provide printer(s) for HMI s in CBRA	CBRA HMI Printers are required for each inline decision point screening station.
57.	34 77 16-13, 6a	Please clarify if in addition to control station layout detailed on drawing B7102, a stack light is required at OS1 chute. If so what type?	Amber stack light is required at the OS1 chute to indicate to the user airlines to check the chute for their oversize items. This needs to be installed along grid G just north of the wall between the two fire/security doors to be visible by the airlines making up flights.
58.	34 77 16-121, A,3	States centralized PLC with Hot Back-up (warm back-up) PLC requirements later stated as hot throughout the specification. Please clarify hot or warm PLC redundancy.	Hot backup is required for all outbound systems. Cold back-up is required for the inbound systems. This is updated in this Addendum.
59.	34 77 16-121 B, 1b and 34 77 16-129, E9	Please clarify-do these items mean that multiple redundant PLCs are required even if one redundant pair is sufficient for system I/O requirements?	No, one redundant pair would satisfy the specification requirements.
60.	34 77 16-123	Redundant Sortation servers are specified and mentioned throughout the specification . Please clarify if SACs are required on this project	SAC's are not required as there is no sortation. The BHSC does have to provide a redundant BHS server to provide all specification and PGDS reporting capabilities.
61.	34 77 16-129, E10	Please clarify if both inbound PLCs require their own primary PLC processor and cold back-up processor.	Yes, each inbound PLC will require a cold back-up processor.
62.	B701	It appears that MCPs for IB1 and IB2 are indoors-please clarify.	Correct.
63.		If there is any BHS controls contractors for this project, Diversified Automation, Inc. (DAI) respectfully requests to be included on this list.	Controls Contractors are listed in Addendum.
Automatic Systems Inc. - February 22, 2011			
64.		Please clarify/confirm that the BHS contractor will coordinate on the requirements of Fire Protection/	Correct, only coordination is required for the BHSC scope.

**DULUTH INTERNATIONAL AIRPORT
NEW PASSENGER TERMINAL
BID PACKAGE 2A – Addendum 2**

APPENDIX A

Item	Drwg. or Spec. Sect. No.	Bidder Questions	Responses
		Sprinkler system underneath the Platforms and Walkways, and it will be supplied and installed by others.	All FP to be installed by others.
65.	B8102	Please clarify/confirm that the BHS contractor will coordinate on the requirements of the 5" curb underneath the MU1, and it will be supplied and installed by others. Please refer to drawing B8102, Cross-section E.	No curb required to be installed. Ensure MU is at specified elevations above finished floor.
66.	IB1-09 and IB1-08	Please identify where the Inbound IB1-09 and IB1-08 starting visible to public that require the SS Cladding? Should Inbounds be IB1-09 and IB1-08 start at the South of collums " E" and "F", respectively?	Correct.
67.	B2101	Should the BHS contractor need to provide an Access Stairs on the south side of the Future Screening Line, Drawing B2101.	No stairs at this location required in BHSC's scope.
Glidepath – February 22, 2011			
68.	Work Scope 14.21A – Baggage handling Systems 1.03.F.	Composite Clean-up Crew- How many hours per week is the BHS contractor to include for composite clean-up?	Not identifiable. See updates to Work Scopes regarding clean up.
69.	Work Scope 14.21A – Baggage handling Systems 1.06.1	Unit Prices and Cost Break Downs-"...bidder must provide price breakout for baggage systems within building coordinate gridlines 7 to12. What price breakouts need to be provided? The entire outbound system?	Yes – the entire Outbound system.
70.	34 77 16 pg 13 1.04.c.4.	EDS Installation- Does the BHSC Scope of Work Include the transportation and rigging of the EDS machines? Does the BHSC Scope of Work include the supply of the elevating pads for the CT-80 DR machines? (Drawing B816 shows conflict between details A&B regarding the supply of the pads).	BHSC is required to provide the CT-80DR elevating pads. BHSC is to coordinate with TSA and Reveal for the transportation of the CT-80s to the screening room.
71.	34 77 16 pg 14 1.04.D.1.a.	BHS Allowances- Spec 34 77 16 states that BHSC is to include a \$100,000 allowance for spare parts but section 01210 3.3 ALLOWANCES does not show any allowances for BHSC. Does the BHSC need to include this spare allowance in their bid price?	BHSC is to provide the allowance for spare parts.
72.	34 77 16 pg 15 1.05.B.1.b	Bid proposal submissions- Unit Prices Schedule – Spec 34 77 16 requires the BHSC to provide Unit Price but Bid Form does not show any required unit pricing for the Baggage System. Is the BHSC to pro-	Yes, unit price required for all equipment components. Required component example attached at the bottom of these

**DULUTH INTERNATIONAL AIRPORT
NEW PASSENGER TERMINAL
BID PACKAGE 2A – Addendum 2**

APPENDIX A

Item	Drwg. or Spec. Sect. No.	Bidder Questions	Responses
		vide unit pricing and if so, what items need to be priced?	responses.
73.	34 77 16 pg 15 1.05.B.1	Bid Proposal Submissions- Are all the BNP Bid Proposal Submission items to be include in the proposal?	Yes.
74.	34 77 16 pg 56 2.01.C.2.i.	Flat Plate Make-Up Devices- We request approval of the Gildepath Flat Plate for this project. This equipment is approved by BNP.	BNP takes no exceptions to this.
75.	34 77 16 pg188 3.09.A.3.	Existing BHS Equipment- The drawings do not show any existing equipment or demolition of BHS equipment but specs refer to demo of the existing equipment. Is there any demolition required in the BHSC scope of work?	There is no demo of existing baggage equipment in the BHSC's scope of work.
76.	PLA Wage Rates	Baggage Handler Wage Rates- Under PLA, At what classification should Baggage Handlers be (Bldg construction type or Heavy Construction).	Building Construction
77.	Wage Rates	Millwrights Wage Rates- Under the PLA, at what classification should Millwrights be at (Bldg construction type or Heavy Construction) Please clarify.	Building Construction
78.	Bid Forms	When will the revised Bid Forms be released?	At the same time as Adden. # 2
79.	1.02.L &	Contract duration- Spec section calls for 2 different Contract durations time periods, 130 days vs. 90 days. Which is correct for the BHS Scope?	50 work days for installation and 80 work days for commissioning for a total of 130.
Ambassador Steel- Minneapolis – February 18, 2011			
80.	2/S502	Does this detail apply to the curbs within the Tug Tunnels or just inside the terminal building?	Curbs inside the terminal building only.

Example Unit Price List for all BHSCs (not to be considered all inclusive):

1. Standard Transport Conveyors \$_____/L.F.
2. Queue Conveyor \$_____/unit
3. Power Turns \$_____/unit
4. High Speed Paddle Diverter Unit \$_____/unit
5. 45 degree merge conveyors \$_____/unit

**DULUTH INTERNATIONAL AIRPORT
NEW PASSENGER TERMINAL
BID PACKAGE 2A – Addendum 2**

APPENDIX A

6. Ticket Counter Conveyor	\$_____/L.F.
7. Hinged Gravity Roller Conveyors	\$_____/L.F.
8. Flat Plate Make-Up Device	\$_____/L.F.
9. Incline Plate Claim Device	\$_____/L.F.
10. Oversize Chute	\$_____/Unit
11. Fire/Security Door	\$_____/Unit
12. Platform	\$_____/S.F.
13. TSA Access Stair	\$_____/unit
14. Computers	\$_____/unit
15. Baggage Dimensioner	\$_____/unit

In addition to the foregoing Unit Prices, the prices of certain pieces of equipment will be as follows:

Overall Price Schedule

TOTAL EQUIPMENT COST	\$_____
Engineering	\$_____
Program Management	\$_____
Shipping	\$_____
Insurance	\$_____
Bonds	\$_____
Taxes	\$_____
Mechanical Installation	\$_____
Electrical Installation	\$_____

**DULUTH INTERNATIONAL AIRPORT
NEW PASSENGER TERMINAL
BID PACKAGE 2A – Addendum 2**

APPENDIX A

Manuals

\$ _____

Training

\$ _____

Warranty Service

\$ _____

Terms and Conditions

\$ _____

Other (List): _____

\$ _____