

**STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION**

ADDENDUM NO. 1

TO

**PLANS AND SPECIFICATIONS
FOR
AIR TRAFFIC CONTROL TOWER REPAIRS
AT
KALAELOA AIRPORT
BARBERS POINT, OAHU, HAWAII**

STATE PROJECT NO. AO5024-03

November 4, 2022

The following amendment shall be made to the Plans and Specifications:

A. PRE-BID MEETING

1. Attached memorandum for the record summarizing the discussion of the Pre-Bid meeting held on October 31, 2022, and the accompanying attendance sheet and presentation.

B. REQUEST FOR INFORMATION (RFI)

1. Bidders are reminded that all questions, RFI's, and Substitution Requests for this project must be uploaded in HlePRO by the posted deadline (November 14, 2022). Responses to these inquiries will be included in a future addendum. Only written responses included in the addendum will be considered valid.

C. SPECIFICATIONS:

1. Table of Contents
 - a. Revised to include additional missing sections.
 - b. Removed Section 08210 – Wood Doors.
2. Proposal to the State of Hawaii DOTA (Page P-1)
 - a. Added Project DBE goal percentage.

3. Proposal Schedule (Pages P-8 and P-9)
 - a. Revised and added additional pay items.
4. Special Provisions
 - a. Revised Part 2.11 BID SECURITY (a)(3)(line 257) to read as follows.

“(4) Proposal Guaranty listed in (1) and (3) shall be in its original form, and shall be received at the Contracts Office, Department of Transportation, 869 Punchbowl Street, Honolulu, Hawaii 96813 before the bid deadline.”
5. Section 01010 – Description of Work
 - a. Revised the payment section to reflect the changes made to the Proposal Schedule.
6. Section 01700 – Mobilization and Demobilization
 - a. Revised the payment section to reflect the changes made to the Proposal Schedule.
7. Section 07560 – Fluid Applied Roofing
 - a. Added Section in entirety.
8. Section 08210 – Wood Doors
 - a. Removed Section in entirety.

D. DRAWINGS:

1. Sheet G001 Index to Drawings
 - a. Revised sheet index to include additional drawing sheets.
2. Sheet A002 Demolition Floor Plan & Renovated Floor plan
 - a. Revised to note that existing damaged Control Tower glazing to remain in lieu of removal.
 - b. Revised Renovated Floor Plan to maintain and repair existing damaged glazing. At damaged glazing, contractor shall provide an epoxy repair only.
3. Sheet A006 Renovated Ground Floor Lobby Plan
 - a. Added note to replace existing carpet flooring and rubber base.

4. Sheet A006.1 Renovated Second Floor Plan
 - a. Added drywall details for various conditions.
5. Sheet A007.1 Renovated Second Floor Reflected Ceiling Plan
 - a. Revised to provide new ½" gypsum board layer w/paint finish to existing 12" glue down ceiling tiles at stairwell ceiling only.
6. Mechanical Sheets
 - a. Added in entirety.
 1. Sheet M001 Mechanical General Notes and Legend
 2. Sheet MD101 Air Traffic Control Tower, 1st Level Mechanical Removal Plan
 3. Sheet M101 Air Traffic Control Tower, 1st Level Mechanical New Work Plan
 4. Sheet M102 Air Traffic Control Tower, 1st Level Mechanical Piping & Instrumentation Plan
 5. Sheet MD103 Air Traffic Control Tower, 2nd Level Mechanical Removal Plan
 6. Sheet M103 Air Traffic Control Tower, 2nd Level Mechanical New Work Plan
 7. Sheet M104 Air Traffic Control Tower, 2nd Level Refrigerant Piping & Instrumentation Plan
 8. Sheet MD105 Air Traffic Control Tower, 3rd Level Mechanical Removal Plan
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 11. Sheet M106 Air Traffic Control Tower, 4th Level Mechanical New Work Plan
 12. Sheet M501 HVAC Schematic Diagrams
 13. Sheet M502 Mechanical Details
 14. Sheet M601 Equipment Schedules

7. Plumbing Sheets
 - a. Added in entirety.
 1. Sheet P001 Plumbing General Notes, Schedules, and Legend
 2. Sheet P101 Air Traffic Control Tower, 2nd Level Plumbing Floor Plan
 3. Sheet P102 Air Traffic Control Tower, 4th Level Plumbing Floor Plan
 4. Sheet P901 Northwest ATCT Window Washdown Piping Isometric
8. Sheet E000 Electrical Symbols, Demolition Notes, Luminaire Schedule
 - a. Revised Luminaire Schedule Light Type EE.
 - b. Revised Electrical Symbols.
9. Sheet ED100 Control Tower Electrical Demolition Plan
 - a. Revised to indicate power for AC work.
10. Sheet E100 Control Tower Electrical Plan – New Work
 - a. Added power for new AC.
11. Sheet ED200 Ground Floor Power Demolition Plan
 - a. Revised to indicate power for AC work.
12. Sheet ED201 Second Floor Electrical Demolition Plan
 - a. Added Sheet in entirety.
13. Sheet ED202 Third Floor Electrical Demolition Plan
 - a. Added Sheet in entirety.
14. Sheet E200 Ground Floor Lighting Plan
 - a. Added fire alarm devices to additional areas.
15. Sheet E201 Second Floor Lighting Plan
 - a. Revised lighting layout.
16. Sheet E202 Ground Floor Power Plan – New Work
 - a. Added Sheet in entirety.

17. Sheet E203 Second Floor Power Plan – New Work
 - a. Added Sheet in entirety.
18. Sheet E204 Third Floor Electrical Plan - New Work
 - a. Added Sheet in entirety.
19. Sheet E300 Panel Schedules, Single line diagram
 - a. Added Sheet in entirety.

Please acknowledge the receipt of this Addendum No. 1 by recording the date of its receipt in the space provided on page P-4 of the Proposal.



JADE T. BUTAY
Director of Transportation

**STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION**

MEMORANDUM FOR THE RECORD

DATE: October 31, 2022

TIME: 10:00 a.m.

LOCATION: Teams Teleconference Meeting

PROJECT: Renovation of Airport Traffic Control Tower, JRF
Kalaeloa Airport
State Project No. AO5024-03
AIP Project No. 3-15-0014-XXX

PRESENT: See attached list

SUBJECT: Pre-Bid Meeting

MEETING SUMMARY:

I. GENERAL DISCUSSION

1. Attendees asked to input contact information (name, company, address, phone number, and email) into the shared word doc in the chat box. This information will be used to generate the pre-bid meeting attendance sheet, which will be included with the meeting minutes to be emailed to the participants shown on the attendance sheet and also uploaded to HlePro.

If anyone has problems accessing the shared word doc, please send an email to Nathan Kaneshige with contact information to populate the attendance sheet.

2. Introduction of project team members

State

Nathan Kaneshige, DOT-Airports, Design Engineer
Steve Tagupa, DOT-Airports, Project Manager

Design Team

Justin Matsukawa, YH Architects, Inc., Architect
Coffman Engineers, Inc. (Fire Protection)
Electech Hawaii, Inc. (Electrical)
Insynergy Engineering, Inc. (Mechanical)

Construction Management Team

Darek Kawamoto, ESH, Senior Project Manager
Irene Nohara, ESH, Construction Manager

Shaun Sato, ESH, Construction Manager

3. All questions must be submitted in writing to the State Project Manager by November 14, 2022 in HlePRO.

This meeting is to clarify general questions only. If there is a conflict between what was stated in this meeting and the bid documents, the bid documents shall govern. Any significant changes, as well as a copy of the meeting minutes will be issued through an addendum, uploaded in HlePRO. The goal is to issue two Addenda for this project:

- A. First Addendum to include this Meeting Minutes, Attendance, updated information for the Proposal Schedule and some Payment items to be more consistent with the Scope of work and to address DBE requirements.
 - B. Second Addendum: After Nov 14, last day to submit Questions and Substitution Requests, a Second Addendum will be issued to address all questions and substitution requests received.
4. Design Consultant, Yamasato Higa Architects, Inc, provided a brief description of the scope of work. ***[A copy of the presentation is included with this memorandum, labeled as Attachment "B"]***

A General narrative of the scope of work is highlighted as follows.

- A. There are other tenants who operate out of this building.
- B. Air Traffic Control Tower – 1st Level
Refurbish interior finishes of the spaces.
Cosmetic upgrades. No moving of walls or structural construction.
 - i. Refurbish restroom.
 - ii. Replace / add light fixtures, as needed.
 - iii. Install fire alarm system and other life safety devices throughout.
 - iv. Door hardware replacement, as required, within DOTA operated spaces.
 - v. Restore existing fire hose cabinets.
 - vi. Repair air conditioning system, as required.
 - vii. Reroof lower roof.
- C. Air Traffic Control Tower – 2nd Level
 - i. Existing wood paneling to remain.

- ii. Concerns about hazardous materials.
- iii. New drywall to encapsulate existing walls.
 - a. Ceiling panels to be fixed, refer to plans for limits.

D. Air Traffic Control Tower – 3rd Level

- i. Minimal repairs, duct work replacement as specified in the plans.

E. Air Traffic Control Tower – Cab

- i. Replace split system AC.
- ii. Install new shades at every windowpane.
- iii. Replace hatch door & panic hardware attached to it.
- iv. Replace/install new stair treads (non-slip surface/strips).
- v. Replace cabinets.
 - a. Existing equipment on cabinets to remain
- vi. Upgrade window film on glazing throughout.
 - a. Not sure if any film is existing. If so, existing will need to be removed before new film is applied.
- vii. Reinstate existing window washer/sprayers which surrounds the cab. Specified in mechanical drawings.
 - a. Clarification will be provided through an upcoming addendum.
- viii. No repainting.

F. Upper roof

- i. Previously repaired, to remain.

G. Lower roof section replacement

- i. Was not replaced previously and shall be replaced during this project.
- ii. Organics on roof. Refer to some of the photos for conditions

- iii. Existing duct work & AC to remain. Reroofing work to coordinate around existing duct work directly on the roof.
- iv. No info on existing roof.
- v. Gutter replacement as specified in plans.
- vi. Front entry shall be protected.

H. Windows

- i. Window AC units are to be removed (see locations on bid documents)
Where window units are removed windows need to be re-glazed.
Window opening is filled with painted plywood panels at window AC locations.

I. Building Exterior:

- i. No exterior painting or exterior work.

Mechanical Drawings will be provided as part of the Addendum.

- 5. This is a State project utilizing FAA funds. Prospective bidders are reminded to comply with all federal requirements including using the correct federal wage rates and labor classifications. The more stringent wage classification will be applied when comparing Federal and State rates. The Federal funds are from the Bipartisan Infrastructure Law (BIL), so Federal documents need to be submitted through the course of the project.
- 6. Discussion of Disadvantage Business Enterprise (DBE) goals and requirements by the Airport DBE Program Manager, Daryl Fujita. The policy of the State and the DBE Program is to ensure equal opportunity and non-discrimination in the award and administration of US DOT assisted contracts.
 - A. DBE Project Goal is 10.5%
 - B. All DBEs must be certified by bid opening date
 - C. All Contractors, subcontractors, trucking companies, material suppliers shall be listed on respective DBE forms to receive credit
 - D. Contractor to document details as to dates, times, form of contact and person contacted. More info the better. Helps with the Good Faith Effort documentation if unable to achieve 10.5%.
 - E. DBE directory provided in chat: <https://hdot.dbesystem.com/>
Double check that companies listed on DBE form are actually certified.

- F. DBE confirmation and commitment agreement, DBE Contract Goal Verification, Good Faith Effort Documentation for Construction are due five days after Bid Opening; 4:30 PM Hawaii Standard Time Dec 05, 2022.

The Contractor shall make sure that the DBE paperwork is readily available after bid opening. Working with lapsing Federal Funds, so the State will expedite the award process. If the documents are not provided in a timely manner, the Project will need to work with the next lowest bidder(s).

7. Important items brought to attendees' attention:

- A. Last day for the submission of Questions, and Substitution Requests is November 14, 2022 in HlePRO.
- B. Bid Opening is November 30, 2022, 2:00 pm Hawaii Standard Time (HST)
- C. Hardcopy of Bid Bond will need to be hand delivered to DOT Punchbowl Contracts office by bid opening date/time. [***The address to the DOT Punchbowl office is 869 Punchbowl Street, Honolulu, HI 96813.***]

- 8. The Notice to Proceed (NTP) will be issued immediately upon the execution of the contract. Thereafter, 60 calendar days have been allocated towards pre-construction activities, followed by 180 calendar days for construction activities. Therefore, all work under this contract shall be completed within 240 calendar days from the date indicated on the NTP. Liquidated damages in the amount of \$2,000 per calendar day will be assessed if work is not completed within the contract time.
- 9. Unless there is a problem with the award process, the State intends to issue the Notice to Proceed date approximately 45 calendar days from Bid Opening date or January 14, 2023. Other special project requirements are specified in Paragraph 1.9 of Section 01010.
- 10. Demolition work shall be restricted between the hours of 10:00 pm to 6:00 am. Other requirements are stated on Section 01010. The most critical is work involving the 4th floor Air Traffic Control Tower cab. There may be restrictions on the type of work in the cab depending on nighttime flight activity and other personnel who may be working within the general area.
- 11. Security plan shall be submitted within 14 calendars days after award of contract as specified in Paragraph 1.3 of Section 01565. Other requirements are stated in Section 01565.
- 12. All of the work is in a secured area. Due to heightened security requirements, there are new security procedures in place. The contractor shall ensure that all access gates are secured at all times. Under no circumstances shall tools, equipment or materials are left in areas where the public can gain access to

these items. Other security requirements are stated in Section 01565, Security Measures.

13. Requests for AOA badges, AOA stickers, ramp licenses, etc. shall be submitted within 14 calendar days after award of contract. In addition to the requirements stated in the Contract Bid Documents, all Contractors shall comply with the requirements and procedures of the Contractor's Training Guide. The Contractor's Training Guide can be found online at <https://hidot.hawaii.gov/airports/files/2012/12/Contractors-Training-Guide-July-2013.pdf>.
14. Pending the availability of space on airport property, the State will issue a permit to the Contractor for the use of the space, at no charge, to be used specifically for a field office and/or storage of materials and equipment. Since space on airport property is extremely limited, the State does not guarantee that the space provided to the Contractor will be in close proximity to the project site. The State will make every effort to provide the Contractor with space on airport property, however, should the State determine that no space is available for such use(s), the responsibility shall then be on the Contractor to find space outside of airport property. Staging areas shall be secured at all times.
15. Billings must be submitted on a monthly basis through the course of the project (Federal requirement).
 - A. Billings shall be submitted on a monthly basis.
 - i. 60 day or more gap in billing cycles is considered a closed grant.

II. QUESTIONS

Site visit to the Air Traffic Control Tower at Kalaeloa Airport was requested. Site visit was scheduled on Tuesday, November 1, 2022, at 10:00 am. Meet at the parking lot fronting the Air Traffic Control Tower.

Questions from Pre-Bid Meeting

Submitted through Teams Chat, Marla Yoshihiro [10:50 AM]

Question: We cannot make the meeting tomorrow. Can another meeting please be scheduled for the contractors?

Response: Please send some proposed dates and times when you will be available, and we can try to see if any Design Consultant or CM Team members can accommodate the site visit. ***[Additional site visit scheduled on Thursday, November 3, 2022, at 10:00 am. Meet at the parking lot fronting the Air Traffic Control Tower.]***

Question: Is the In-Person site walk-through mandatory?

Response: Attendance at the site visit walk-through is not mandatory to bid on the project.

Question: We would like to be able to visit the site after issuance of the updated drawings?

Response: This may be tough but we will see what we can do. Areas on the ground level are accessible to the general public. Secured areas are from the second floor and above.

Updated latest drawings will be issued as soon as the Design Team is able to incorporate all the questions received through the bid process.

May address a second site visit in the Addendum No. 2 documents.

Submitted through Teams Chat, Marla Yoshihiro [10:53 AM]

Question: Will we be allowed to submit RFI's after the issuance of the updated drawings? Also, will DOT allow for an extended POP, pending updated drawings? HVAC lead times are quite long.

Response: No, once addendum No. 2 documents are published there will be no additional RFI's received. The State was given very stringent bid document deadlines and bidding deadlines in order to obtain federal funds. With the bid documents that all the bidders received, please try to understand the general intent. The purpose is to perform interior renovations and roof repairs, as the building has not been renovated since DOTA has taken over Kalaeloa Airport from the military. Unfortunately, there is not enough time to address more questions beyond the November 14 deadline for RFI's and Substitution Requests.

Submitted through Teams Chat, Marla Yoshihiro [10:55 AM]

Question: OK. Thanks. We will do our best. The concern is the extent of other trades affected by the HVAC upgrades mentioned that are forthcoming.

Response: Trying to stop short of full HVAC replacement. The area is generally cool. An allowance to capture all the HVAC improvements will be included in the Proposal Form. Our plan involves the development for the HVAC scope of work in collaboration with the Design Team and Contractor.

Submitted through Teams Chat, Percival Libed Jr. [10:55 AM]

Question: Drawing A008 calls for the Fluid-Applied Roofing System and Waterproofing. Please provide specifications for the fluid-applied roofing and waterproofing.

Response: Specification is currently being developed and will be included in the upcoming Addendum No. 1.

Upload any additional technical questions, RFI's and substitution requests to HlePRO by the deadline posted. These will be addressed in the upcoming Addendum.

[Important reminder: Make sure that all Contractors upload all required attachments to HlePRO in order for the bid submittal to qualify.]

III. SITE VISIT

The site visit to the Air Traffic Control Tower at the Kalaeloa Airport was conducted on Tuesday, November 1, 2022 at 10:00 a.m. The following general comments were made during the site visit.

1. Additional details/information regarding the placement of the gypsum board walls over the decorative wood paneling will be provided through upcoming addenda, focused on transitions to electrical outlets, door openings, access panels, and other "protrusion" placed along the existing decorative wood panel walls.
2. The note on the plan to remove and replace a glass pane on the 4th Floor of the Air Traffic Control Tower will be deleted, and repair details will likely be included in upcoming addenda.

[Bold Italicized] Denotes responses/items not discussed during the Pre-Bid Meeting.

If there are any omissions or corrections to be made to the minutes of the meeting, please respond in writing by November 14, 2022.

Meeting adjourned at: 11:00 a.m.

APPROVED:



Nathan Kaneshige
Design Engineer
State DOT, Airports Division

11/2/22
Date

Attachments: Attachment "A" – Meeting Attendance Sheet
Attachment "B" – Design Team Presentation

c: All attendees (See Attachment "A")

MEETING ATTENDANCE SHEET

Pre-Bid Meeting

Project Name: Renovation of Airport Traffic Control Tower, JRF
Kalaeloa Airport

Project No. AO5024-03

AIP Project No: 3-15-0014-XXX

Meeting Location: Teams Teleconference Meeting

Date: October 31, 2022

Name: Nathan Kaneshige Title: Design Engineer	Company: DOT-A Address: 400 Rodgers Blvd., Suite 700 Honolulu, HI 96819	Phone: (808) 838-8868 Fax: (808) 838-8751 E-Mail: nathan.c.kaneshige@hawaii.gov
Name: Marla Yoshihiro Title: Estimator	Company: Elite Pacific Construction, Inc. Address: 46-174 Kahuhipa St, B2, Kaneohe, HI 96744	Phone: 808-235-8600 Fax: 808-235-8613 E-Mail: estimator@elitepacific.net
Name: Jeremiah Elsfelder Title: Operations manager	Company: NORPAC Walls & Ceilings Address: 520 Lunalilo Home Road Honolulu, HI. 96825	Phone: 808-462-1767 Fax: E-Mail: jeremiah@norpachawaii.com
Name: Darek Kawamoto Title: Project Manager	Company: Engineers Surveyors Hawaii, Inc. Address: 1320 North School Street,	Phone: (808) 479-0686 Fax: E-Mail: darek@esh-inc.com
Name: Irene Nohara Title: Construction Manager	Company: Engineers Surveyors Hawaii Address:	Phone: 808.554.0883 Fax: E-Mail: Irene@esh-inc.com
Name: George Baxter Title: Estimator	Company: Kitsap Construction Address: 2696 Kilihau St. Unit D Honolulu HI 96819	Phone: 808-864-6892 Fax: E-Mail: baxter@kitsapconst.com
Name: Shaun Sato Title: Construction Manager	Company: Engineers Surveyors Hawaii, Inc. Address: 1320 North School Street,	Phone: (808) 591-8116 ext. 221 Fax: E-Mail: shaun@esh-inc.com
Name: Title:	Company: Address:	Phone: Fax: E-Mail:
Name: Daryl Fujita Title: Civil Rights Spec.	Company: DOT-Airports Div. Address:	Phone: 808-838-8884 Fax: E-Mail: daryl.a.fujita@hawaii.gov
Name: Steve Tagupa Title: State Project Manager	Company: DOT-Airports Address: 400 Rodgers Blvd, Suite 700, Hon, HI 96819	Phone: 808-838-8805 Fax: 808-838-8017 E-Mail: Steve.Tagupa@hawaii.gov

MEETING ATTENDANCE SHEET

Pre-Bid Meeting

Project Name: Renovation of Airport Traffic Control Tower, JRF
Kalaeloa Airport

Project No. AO5024-03

AIP Project No: 3-15-0014-XXX

Meeting Location: Teams Teleconference Meeting

Date: October 31, 2022

Name: Matthew Clark Title: Estimator	Company: Statewide General Contracting & Construction Address: 746 Bannister St. Honolulu, HI	Phone: (808) 253-8218 Fax: E-Mail: estimator1@sgcchawaii.com
Name: Daniel Williams Title: DBE Program Supervisor	Company: HDOT OCR Address:	Phone: 808-831-7914 Fax: E-Mail: daniel.k.williams@hawaii.gov
Name: Spencer Colburn Title: PM	Company: Colburn Construction Address: 643 Alexander Rd Kahuku, Hi, 96731	Phone: (808)372-3519 Fax: E-Mail: spencer@colburnconstruct.com
Name: Ralph Sakauye Title: Estimator	Company: BORA, Inc. Address:	Phone: (808) 453-0765 Fax: E-Mail: rs.bora002@gmail.com
Name: Percival Libed Jr. Title: Estimator	Company: Close Construction Inc. Address: 91-229 Kuhela St. Kapolei Hi 96707	Phone: (808) 492-3332 Fax: 808 678 0723 E-Mail: perci@closeconstruction.com
Name: Title:	Company: Address:	Phone: Fax: E-Mail:
Name: Title:	Company: Address:	Phone: Fax: E-Mail:
Name: Title:	Company: Address:	Phone: Fax: E-Mail:
Name: Title:	Company: Address:	Phone: Fax: E-Mail:
Name: Title:	Company: Address:	Phone: Fax: E-Mail:

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Section 13852 –Digital Addressable Fire Alarm System	13852-1 to 13852-25
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DIVISION 16 – ELECTRICAL WORK

Section 16010 –Electrical Work	16010-1 to 16010-7
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PROPOSAL TO THE
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION

PROJECT: AIR TRAFFIC CONTROL TOWER REPAIRS
KALAELOA AIRPORT
BARBERS POINT, OAHU, HAWAII

PROJECT NO: AO5024-03

COMPLETION DATE: SIXTY (60) calendars days for pre-construction activities followed by;

ONE HUNDRED EIGHTY (180) additional calendar days for construction activities, whereby;

All work under this contract shall be completed within TWO HUNDRED FORTY (240) calendar days from the date indicated in the Notice to Proceed from the State.

DBE PROJECT GOAL: 10.5%

LIQUIDATED DAMAGES: Refer to Section 8.8 of the Special Provisions in these specifications.

PROJECT MANAGER: Nathan Kaneshige
Address: Department of Transportation Airports Division
400 Rodgers Blvd, Suite 700
Honolulu, Hawaii 96819
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AIR TRAFFIC CONTROL TOWER REPAIRS
KALAELOA AIRPORT
BARBERS POINT, OAHU, HAWAII
STATE PROJECT NO. AO5024-03
AIP PROJECT NO. 3-15-0014-XX

PROPOSAL SCHEDULE

Item No.	Description	Approx. Quantity	Unit	Unit Price	Total
<u>I. Basic Scope of Work</u>					
01010.01	Wall Treatment	L.S.	L.S.	\$ _____	\$ _____
01010.02	Door & Door Hardware	L.S.	L.S.	\$ _____	\$ _____
01010.03	Window Treatment	L.S.	L.S.	\$ _____	\$ _____
01010.04	Casework	L.S.	L.S.	\$ _____	\$ _____
01010.05	Signage	L.S.	L.S.	\$ _____	\$ _____
01010.06	New Flooring	L.S.	L.S.	\$ _____	\$ _____
01010.07	Restroom Improvements	L.S.	L.S.	\$ _____	\$ _____
01010.08	Roofing	L.S.	L.S.	\$ _____	\$ _____
01010.09	Fire Protection	L.S.	L.S.	\$ _____	\$ _____
01010.10	Electrical Power & Lighting	L.S.	L.S.	\$ _____	\$ _____
01010.11	Air Conditioning & Ventilation	L.S.	L.S.	\$ _____	\$ _____
01010.12	Plumbing	L.S.	L.S.	\$ _____	\$ _____
<u>II. General Requirements</u>					
01561.01	Construction Site Runoff Control Program	L.S.	L.S.	\$ _____	\$ _____
<u>III. Allowances</u>					
01010.13	Unforeseen Conditions	Allow.	Allow.		\$ <u>100,000.00</u>
01010.14	Material Short Supply	Allow.	Allow.		\$ <u>25,000.00</u>
01010.15	Air Conditioning Repair/Replacement	Allow.	Allow.		\$ <u>100,000.00</u>

Item No.	Description	Approx. Quantity	Unit	Unit Price	Total
01010.16	Fire Hose Cabinet Restoration	Allow.	Allow.		\$ <u>25,000.00</u>
01562.01	Management of Contaminated Medias	Allow.	Allow.		\$ <u>25,000.00</u>
01565.01	Security Measures	Allow.	Allow.		\$ <u>25,000.00</u>
TOTAL AMOUNT FOR COMPARISON OF BIDS					\$ _____

The bid prices herein shall include all labor, materials, equipment, and incidentals necessary to construct all items in place, including installation and testing of equipment, complete and ready for operation, all in accordance with the plans and specifications.

- Note 1: Bid shall include all Federal, State, County and other applicable taxes.
- Note 2: The TOTAL AMOUNT FOR COMPARISON OF BIDS will be used to determine the lowest responsible bidder.
- Note 3: Bidders must complete all unit prices and amounts. Failure to do so may be grounds for rejection of bid.
- Note 4: If a discrepancy occurs between the unit price and the total, the unit price shall govern.
- Note 5: The State reserves the right to reject any or all Bids and to waive any defects in said Bids in the best interest of the State.
- Note 6: Submission of a Bid is a warranty that the bidder has made an examination of the project site and is fully aware of all conditions to be encountered in performing the work and the requirements of the plans and specifications.
- Note 7: The bidder's attention is directed to Section 2.11 – BID SECURITY and Section 2.24 – REQUIREMENTS OF CONTRACT BONDS of the "General Provisions", as amended by the Special Provisions.
- Note 8: Bidders shall be paid for actual work performed as directed by the Engineer for allowance items. Bidder will not be paid overhead and profit for unused allowance funds.
- Note 9: If the TOTAL AMOUNT FOR COMPARISON OF BIDS exceeds the funds available for the project, then the State reserves the right to negotiate with the lowest, responsive, responsible bidder as permitted under Section 103D-302, Hawaii Revised Statutes (HRS), to further reduce the scope of work and award a contract thereafter.
- Note 10: Proposal Sheets P-1 through P-23 shall be submitted at the time of bid. Failure to submit all pages shall result in rejection of bid.

SPECIAL PROVISIONS

The following additional amendments to the General Provisions are applicable to this project:

1.3 DEFINITIONS is amended as follows:

The definition for Subcontractor is deleted in its entirety and replaced with the following:

Subcontractor – An individual, partnership, firm, corporation, joint venture or other legal entity, as licensed or required to be licensed under Chapter 444, Hawaii Revised Statutes, as amended, which enters into an agreement with the Contractor to perform a portion of the work.

The following definitions shall be added:

AASHTO - The American Association of State Highway and Transportation Officials.

Access Road - The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public roadway.

Airport Improvement Program (AIP) - A grant-in-aid program, administered by the Federal Aviation Administration (FAA).

Air Operations Area (AOA) - The term air operations area (AOA) shall mean any area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft. An air operation area shall include such paved or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiway, or apron.

Apron - Area where aircraft are parked, unloaded or loaded, fueled and/or serviced.

ASTM International (ASTM) - Formerly known as the American Society for Testing and Materials (ASTM).

Building Area - An area on the airport to be used, considered, or intended to be used for airport buildings or other airport facilities or rights-of-way together with all airport buildings and facilities located thereon.

Certificate of Analysis (COA) - The COA is the manufacturer's Certificate of Compliance (COC) including all applicable test results required by the specifications.

Certificate of Compliance (COC) - The manufacturer's certification stating that materials or assemblies furnished fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer's authorized representative.

Contractors Quality Control (QC) Facilities - The Contractor's QC facilities in accordance with the Contractor Quality Control Program (CQCP).

Contractor Quality Control Program (CQCP) - Details the methods and procedures that will be taken to assure that all materials and completed construction required by the contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors.

Control Strip - A demonstration by the Contractor that the materials, equipment, and construction processes results in a product meeting the requirements of the specification.

Construction Safety and Phasing Plan (CSPP) - The overall plan for safety and phasing of a construction project developed by the airport operator, or developed by the airport operator's consultant and approved by the airport operator.

Drainage System - The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the airport area.

Extra Work - An item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, but which is found by the Owner's Engineer or Resident Project Representative (RPR) to be necessary to complete the work within the intended scope of the contract as previously modified.

FAA - The Federal Aviation Administration. When used to designate a person, FAA shall mean the Administrator or their duly authorized representative.

Federal Specifications - The federal specifications and standards, commercial item descriptions, and supplements, amendments, and indices prepared and issued by the General Services Administration.

Force Account – a) Contract Force Account - A method of payment that addresses extra work performed by the Contractor on a time and material basis. b) Owner Force Account - Work performed for the project by the Owner's employees.

Intention of Terms - Whenever, in these specifications or on the plans, the words “directed,” “required,” “permitted,” “ordered,” “designated,” “prescribed,” or words of like import are used, it shall be understood that the direction, requirement, permission, order, designation, or prescription of the Engineer and/or Resident Project Representative (RPR) is intended; and similarly, the words “approved,” “acceptable,” “satisfactory,” or words of like import, shall mean approved by, or acceptable to, or satisfactory to the Engineer and/or RPR, subject in each case to the final determination of the Owner. Any reference to a specific requirement of a numbered paragraph of the contract specifications or a cited standard shall be interpreted to include all general requirements of the entire section, specification item, or cited standard that may be pertinent to such specific reference.

Lighting - A system of fixtures providing or controlling the light sources used on or near the airport or within the airport buildings. The field lighting includes all luminous signals, markers, floodlights, and illuminating devices used on or near the airport or to aid in the operation of aircraft landing at, taking off from, or taxiing on the airport surface.

Major and Minor Contract Items - A major contract item shall be any item that is listed in the proposal, the total cost of which is equal to or greater than 20% of the total amount of the award contract. All other items shall be considered minor contract items.

Modification of Standards (MOS) - Any deviation from standard specifications applicable to material and construction methods in accordance with FAA Order 5300.1.

Owner - The term “Owner” shall mean the party of the first part or the contracting agency signatory to the contract. Where the term “Owner” is capitalized in this document, it shall mean airport Sponsor only. The Owner for this project is the State of Hawaii, Department of Transportation, Airports Division.

Passenger Facility Charge (PFC) - Per 14 Code of Federal Regulations (CFR) Part 158 and 49 United States Code (USC) § 40117, a PFC is a charge imposed by a public agency on passengers enplaned at a commercial service airport it controls.

Pavement Structure - The combined surface course, base course(s), and subbase course(s), if any, considered as a single unit.

Project - The agreed scope of work for accomplishing specific airport development with respect to a particular airport.

Quality Assurance (QA) - Owner's responsibility to assure that construction work completed complies with specifications for payment.

Quality Control - Contractor's responsibility to control material(s) and construction processes to complete construction in accordance with project specifications.

Quality Assurance (QA) Inspector - An authorized representative of the Engineer and/or Resident Project Representative (RPR) assigned to make all necessary inspections, observations, tests, and/or observation of tests of the work performed or being performed, or of the materials furnished or being furnished by the Contractor.

Quality Assurance (QA) Laboratory - The official quality assurance testing laboratories of the Owner or such other laboratories as may be designated by the Engineer or RPR. May also be referred to as Engineer's, Owner's, or QA Laboratory.

Resident Project Representative (RPR) - The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for all necessary inspections, observations, tests, and/or observations of tests of the contract work performed or being performed, or of the materials furnished or being furnished by the Contractor, and acting directly or through an authorized representative.

Runway - The area on the airport prepared for the landing and takeoff of aircraft.

Runway Safety Area (RSA) - A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to aircraft.

Safety Plan Compliance Document (SPCD) - Details how the Contractor will comply with the CSPP.

Sponsor - A Sponsor is defined in 49 USC § 47102(24) as a public agency that submits to the FAA for an AIP grant; or a private Owner of a public-use airport that submits to the FAA an application for an AIP grant for the airport.

Subgrade - The soil that forms the pavement foundation.

Supplemental Agreement - A written agreement between the Contractor and the Owner that establishes the basis of payment and contract time adjustment, if any, for the work affected by the supplemental agreement. A supplemental agreement is required if: (1) in scope work would increase or decrease the total amount of the awarded contract by more than 25%; (2) in scope work would increase or decrease the total of any major contract item by more than 25%; (3) work that is not within the scope of the originally awarded contract; or (4) adding or deleting of a major contract item.

Taxilane - A taxiway designed for low speed movement of aircraft between aircraft parking areas and

terminal areas.

Taxiway - The portion of the air operations area of an airport that has been designated by competent airport authority for movement of aircraft to and from the airport's runways, aircraft parking areas, and terminal areas.

Taxiway/Taxilane Safety Area (TSA) - A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an aircraft.

2.7 REQUEST FOR SUBSTITUTION OF SPECIFIED MATERIALS AND EQUIPMENT BEFORE BIG OPENING is amended as follows:

1. The last sentence in the first paragraph (line 147 to 152) shall be replaced with the following:

“Where a bidder intends to use a material or equipment of an unspecified brand, make, or model, the bidder must submit a request to the Department for review and approval at the earliest date possible. Requests shall be submitted via email to the Contact person listed in HlePRO for the solicitation and also posted as a question in HlePRO under the question/answer tab referencing the email with the request. The request must be posted in HlePRO no later than seventeen (17) calendar days before the bid opening date, not including the bid opening date.”

2. The first sentence in the second paragraph (line 154 to 156) shall be replaced with the following:

“It shall be the responsibility of the bidder to submit sufficient evidence based upon which a determination can be made by the Department that the alternate brand is a qualified equivalent.”

2.8 PREPARATION AND DELIVERY OF BID is amended as follows: Last Paragraph (line 189 to 192) shall be replaced with the following:

“The bidder shall submit the proposal in HlePRO. Bids received after said due date and time shall not be considered.”

2.11 BID SECURITY is amended by adding the following after (a)(3)(line 257)

“(4) Proposal Guaranty listed in (1) and (3) shall be in its original form, and shall be received at the Contracts Office, Department of Transportation, 869 Punchbowl Street, Honolulu, Hawaii 96813 before the bid deadline.”

2.12 PRE-OPENING MODIFICATION OR WITHDRAWAL OF BIDS is amended by deleting 2.12 PRE-OPENING MODIFICATION OR WITHDRAWAL OF BIDS in its entirety and replacing with the following:

“2.12 PRE-OPENING MODIFICATION OR WITHDRAWAL OF BIDS. A bidder may withdraw or modify a proposal after the bidder submits the proposal in HlePRO. Withdrawal or modification of proposal must be completed before the time set for the receiving of bids.

2.14 PUBLIC OPENING OF BIDS is amended by deleting 2.14 PUBLIC OPENING OF BIDS in its entirety.

4.12 UTILITIES AND SERVICES is amended as follows:

Add the following after the last paragraph:

"(e) Repairs and Outages.

- (1) The Contractor shall have available on 24-hour call sufficient specialty contractors, such as electrical and plumbing contractors, to repair any, damage to existing facilities that might occur as a result of construction operations regardless of when the damage might occur.
- (2) Outage: Written requests for power outage, communication changes, and water and sewer connection outages shall be submitted to the Engineer at least seven (14) days in advance or as specified in other sections of these specifications. Outages will be restricted to non-peak operational hours between midnight and 6:00 a.m."

5.16 SUBCONTRACTS is amended as follows:

Add the following after the last paragraph:

"(e) The Specialty Items of work for this project are as follows:

Counter/Cabinetry
Glazing
Air Conditioning
Fire/Smoke Alarm
Flooring
Doors & Finish hardware
Suspended Ceiling Tile/Grid
Plumbing
Electrical
Hazardous Material Abatement

7.4 WORKING HOURS; NIGHT WORK is amended as follows: Paragraph shall be replaced with the following:

"7.4 Working Hours. Working hours shall be as defined in Specification Section 01010 Description of Work."

7.21 PUBLIC CONVENIENCE AND SAFETY - is hereby added to the General Provisions:

"It shall be especially noted by the Contractor that the area directly adjacent to the existing in use runways and taxiways, is an extremely hazardous area and that very strict controls will apply throughout the entire period required to complete all work within 500 feet from the edge of an in use runway and 180 feet from the edge of an in use taxiway.

The Contractor shall familiarize himself with the Airport Certification Manual available for review at the Airport Manager's Office and shall comply with its requirements.

The Contractor is responsible for the security of access points to the Airport Operational Area that are located within the limits of construction and will be fined \$1,000 per incident for any breach of security at these locations. All gates leading into the AOA shall be kept locked and if required to be open, the Contractor shall provide professional security guards to attend gates. The guards must be approved by the Director and shall be required to attend a training session conducted by the Airport Manager prior to gate assignment."

8.8 LIQUIDATED DAMAGES FOR FAILURE TO COMPLETE THE WORK OR PORTIONS OF

THE WORK ON TIME: The General Provisions is hereby amended to include the following:

The schedule of liquidated damages provided in Section 8.8 of the General Provisions in these specifications shall be amended to include the following:

TWO THOUSAND DOLLARS (\$2,000.00) per calendar day for failure to complete the work within the duration (calendar days) noted on Proposal Schedule page P-1.

8.20 LIMITATION OF OPERATIONS: is hereby added to the General Provisions:

"The following limitations shall be observed by the Contractor when operating within 75 feet from the edge of any taxiway.

General - The Contractor shall schedule his operations to minimize interference with the movement of aircraft or passengers as may be required by the Engineer. The Contractor shall be responsible to alert all of his personnel to the location of power and signal cables installed for the operation of the airport. The Contractor shall control his operations in a manner to preclude any possible damage to those cables. Utility companies shall be notified by the Contractor one week before commencement of work. The Contractor shall give notice to the Engineer in writing, at least 168 hours before operating within 75 feet from the edge of any taxiway and the Engineer will assure himself that the Airport Management personnel are notified in sufficient time to publish the warning (NOTAM). The Contractor shall immediately repair any damages to the existing perimeter fence to prevent inadvertent entry to the Airport Operation Area (AOA).

Work in Vicinity of Runways and Taxiways in Use - Under the terms of this contract, it is intended that work shall be completed without disturbing the paved surface of existing runways and taxiways, unless shown otherwise on the plans.

Aircraft traffic shall not be interrupted. The Contractor shall schedule to work within 75 feet of the taxiway as directed by the Airport Management. No ruts, holes, or open trenches of 3 inches or more in depth and no objects or material 3 inches or more in height shall be permitted within the safety area when the airfield is in operation in conformance to Federal Aviation Regulation Part 139. The Contractor is also informed that Airport Zoning Regulations dictate that a 'clear zone' be maintained 500 feet on each side of an active runway, to be known as a hazardous area. The Contractor shall comply with all regulations governing ground operations within hazardous areas. The following FAA Advisory Circulars or later versions and FAA Regulations specify these requirements.

AC 150/5210-5D Painting, Marking, and Lighting Vehicles Used on an Airport, dated April 2010

AC 150/5340-1M Standards for Airport Markings, dated May 2019

AC 150/5370-2G Operational Safety on Airports During Construction, dated December 2017

FAA Regulations Objects Affecting Navigable Airspace Part 77

The Contractor shall keep all personnel and equipment off the areas not specifically designated for work under this Contract. At all times when the Contractor's equipment is not in use, the equipment shall be moved outside the hazardous areas to an area designated by the Engineer. Under no condition shall equipment be parked or material stored within the hazardous areas.

Failure on the part of the Contractor to abide by the above will result in suspension of work.

Authority of Control Tower Personnel - With the exception of actual construction methods, the airport control tower personnel will have full authority to control the Contractor's movements within the existing taxiway. When required, the Contractor shall maintain a constant radio vigil within all work areas and in addition shall keep at least one flagman on duty with the radio man. When notified by the control

tower to temporarily halt operations, it shall be the duty of the flagman, through the use of appropriate methods (lighted flares shall not be used under any circumstances), to notify all operators of equipment and other personnel to cease work and move men and equipment off of hazardous areas. Contractor shall provide, at his own expense, the necessary radio and equipment including a radio equipped mobile vehicle to maintain contact with control tower personnel at all times during job performance. A transceiver operating at a frequency designated by the Engineer to communicate with the Control Tower.

Marking of Hazardous Areas - The Engineer will designate areas that are hazardous for aircraft. The Contractor shall provide red blinker lights spaced not more than 50 feet apart around all hazardous areas and areas of work within 75 feet of any taxiway. Such systems shall be subject to approval by the Engineer. The Contractor shall have personnel on call 24 hours per day for the emergency maintenance of hazard markings.

The Contractor shall provide red flags not less than 20 inches square in addition to the red blinker lights. When danger flags are made of fabric, a wire stiffener shall be used to hold the flags in an extended position. Flags shall be so mounted that they do not produce a hazard. The red danger flags shall be spaced not more than 50 feet apart around all areas of work within 75 feet of any taxiway.

All systems proposed by the Contractor for lighting and barricading shall be submitted to the Engineer for review prior to installation. The Contractor shall install all flags, lighting and barricades as required by the Engineer. Such systems shall be subject to approval by the Engineer.

Storage of Equipment and Materials - At the end of each working shift, all of the Contractor's equipment shall be withdrawn to an area designated by the Engineer. The Contractor shall park all equipment in an orderly fashion and place a sufficient number of red flasher lights to identify these areas. Materials stored within the airport shall be so placed and the work shall, at all times, be so conducted as to cause no greater obstruction to the air and ground traffic than is considered necessary by the Engineer. No runways, taxiways or roadways shall be closed or opened, except by permission of the Engineer.

Blasting Operations - The Contractor shall notify the Engineer at least three (3) days before performing blasting operations as to the extent and timing of such operations, so that the Control Tower and other concerned parties can be informed.

Utilities - The Contractor shall provide for the protection of all utilities from damages in areas to be traversed by his vehicles and equipment. If required, buried cables and utility lines shall be protected by mounding earth over the cables or by any other method approved by the Engineer.

The Contractor shall notify representatives of the owner, agencies, and other affected organizations at least 48 hours prior to working in any area containing the facilities of these organizations.

Failure to notify the owning organization will prevent authorization to work in a specific area.

Archaeological Features - Any archaeological features such as petroglyphs, burial sites, and artifacts discovered or unearthed during the performance of the work shall immediately be brought to the attention of the Engineer and all work that would damage or destroy these features shall be discontinued. The Engineer will decide, after proper investigation, to salvage or abandon such artifacts."

8.21 OPERATION OF CONTRACTOR'S MOTOR VEHICLE AND PERSONNEL IN RESTRICTED AIR OPERATIONS AND MOVEMENT AREAS is hereby added to the General Provisions:

"The contractor shall conform with the all sections of the "State of Hawaii, Department of Transportation, Airports Division, Contractor's Training Guide" pertaining to access and operation in the Airport Operation Area (AOA) hereinafter described as follows:

"A. Motor Vehicles in Airport Operation Area

For safety reasons, the operation of motor vehicles in the AOA must conform with all applicable State Airport rules and regulations."

B. Motor Vehicle Access Permit

Each motor vehicle operated in the AOA is required to:

1. Meet all State licensing registration and safety requirements and be specifically licensed for operation in the AOA.
2. Meet all insurance requirements.
3. Be restricted to operation by those persons qualified to drive the vehicle and in possession of a current Ramp Driver's License and applicable Motor Vehicle Operator's License.

C. The operators of motor vehicles in the AOA shall be responsible for meeting the following insurance requirements.

1. Licensed Vehicles

As a condition for authorization to enter the AOA, the Contractor shall provide evidence of vehicle liability insurance in the form of a Certificate of Insurance issued by an authorized insurance carrier. Automobile Liability and general Liability (combined single limit, Bodily Injury and Property Damage, per occurrence) shall be required in the applicable minimum limits specified below:

a. Daniel K. Inouye International Airport

- (1) Standard AOA clearance.....\$5,000,000
- (2) Limited AOA clearance\$1,000,000 Limited AOA clearance is defined as operations restricted to Diamond head and Ewa Concourses second level roadways and connecting third level main terminal roadway only, with entry and exit via Security Access Point "C" (Primary) and Access Point "A" (Secondary)

b. Other Airports

Standard AOA clearance.....\$1,000,000

Standard AOA clearance is defined as any portion of a public Airport from which the public is restricted by fences or appropriate signs and no leased or demised to anyone for exclusive use and shall include runways, taxiways, all ramp and apron areas, aircraft parking and storage areas, fuel storage areas, maintenance areas, and any other area of a public Airport used or intended to be used for landing, takeoff, or surface maneuvering of aircraft or used for embarkation or debarkation of passengers.

2. Unlicensed Vehicles

Airport Liability (or General Liability) shall be required in the applicable minimum limits specified below:

a. Daniel K. Inouye International Airport, Kahului Airport and Ellison Onizuka Kona International Airport at Keahole

AOA clearance.....\$5,000,000

b. All other Airports

AOA clearance.....\$1,000,000

3. Specifically name the State of Hawaii as additionally insured.
4. Indicate that the Airport Engineer will be provided with a 30-day written prior notice of policy cancellation or material change in coverage or conditions.

D. Operator's Permit

1. No person shall operate a motor vehicle on the AOA unless he holds and carries on his person a current Airport Motor Vehicle operator's permit issued by the State of Hawaii, Department of Transportation, Airports Division.
2. Operator's permits will only be issued to persons who apply through the Airport District Security Office and pass a written exam covering those portions of the Airport Rules and Regulation relating to the operation of vehicles in Airport Operations Areas.

E. Authorized Vehicles

1. Only vehicles considered operationally safe and necessary for the performance of this contract may be allowed to operate in the AOA.
2. All motor vehicles must be painted in such a manner so as to be easily identifiable and must carry the Contractor's name on each side. These signs may be of a temporary nature applied to the side windows or doors.

The lettering shall be in bold characters of a minimum of four (4) inches in height and one and one-half (1-1/2) inches in widths, the height of logos should be a minimum of six (6) inches.
3. The Contractor's operations on, over, across, and/or immediately adjacent to any runway and/or taxiway at a towered airport shall require the use of two-way radio communication. The Contractor shall obtain the necessary equipment at his own expense.
4. No person shall operate a motor vehicle on the AOA unless he holds and carries on his person a current Motor Vehicle Operator's Permit issued by the Airport Manager.
 - a. The Motor Vehicle Operator's Permit will be issued only to persons who apply through the Airport Security Section and pass a written exam covering those portions of the Airport Rules and Regulations relating to the operation of vehicles in the AOA.
 - b. Permits issued may be suspended or revoked for cause at any time by the Airports Division.

F. Airport Operation Area Construction Pass

1. Issuance of Airport Operation Area (AOA) Construction Passes shall be limited to contractors, subcontractors, companies, organizations, individuals engaged in authorized and approved construction activity which requires a continuing need

for entry into the AOA or Airfield Movement Areas Request letters for such passes must be made to the Airport District Manager's Office in accordance with the Contractors Training Guide or applicable District requirements.

2. As a condition for security area clearance, applicants must comply with Transportation Security Regulation 1542 which requires a ten-year background Criminal History Records Check for those individuals employed under this contract.

G. Access to Movement Areas

1. Movement areas shall mean all of the runways and taxiways of the Airport which are utilized for taxiing, takeoff, and landing of aircraft.
 - a. Any vehicle which requires access to the movement area shall be equipped with operational radio equipment capable of positive two-way contact with Tower/Ground Control.
 - b. Operators of vehicles in movement areas must possess knowledge and familiarity with restricted and airfield movement areas, operational rules, regulations, and procedures, or be under direct escort by individuals meeting all of the above requirements.
2. Vehicle Operations on Movement Areas
 - a. No vehicle shall proceed across any runway unless specifically cleared by Tower/Ground Control.
 - b. The operator of a vehicle in the movement area shall not leave his vehicle unless continuous radio contact is maintained with the Tower/Ground Control while he is away from his vehicle.
 - c. Any vehicle proceeding onto the movement area between the hours of sunset and sunrise shall be equipped with an overhead flashing light which is visible for one (1) mile, unless such vehicle is being escorted by another vehicle so equipped.
 - d. All vehicles operated on the movement area between sunrise and sunset except those being escorted, shall operate an overhead amber or red flashing beacon visible for at least one (1) mile; or display a flag at least three (3) feet square with orange and white checkered squares of not less than one (1) foot on each side.

H. Runway and Taxiway Closure

1. Requests for runway or taxiway closures, or for any work which affect operational conditions at the airport must be made in writing through the Airport Engineering Branch.
2. Temporarily closed runways require placement of a lighted "X" runway closure marker on top of the runway identification numerals at both ends of the closed runway.

3. Taxiway closures require placement of barricades with alternate orange and white markings at each end of the closed taxiway segment. Barricades must be supplemented with flashing red lights. The intensity of the lights and spacing for barricades, and lights must adequately define and delineate the hazardous area.

I. Gate Guards Furnished by Contractors

1. If a contractor is permitted by the airport to maintain operational control of an AOA Access Gate, entry through such gate shall be controlled by the posting of a gate guard.
 - a. Written instruction will be provided, outlining the guard's duties to enforce those requirements and provisions prescribed by the airport's security program to include all personnel and vehicle entry and access requirements.
 - b. Procedures will be established to identify the actions which will be undertaken by the guard in calling for assistance.
 - c. An approved emergency communications procedure will be established.

J. Compliance

1. The contractor shall comply with all regulations and rules governing the Air Operations Areas during construction, as specified in the following or later versions:
 - a. Hawaii Revised Statutes, Title 19, Administrative Rules for Public Airports.
 - b. Federal Aviation Administration Advisory Circular AC 150/5340-1, Standards for Airport Markings; AC 150/5370-2, Operational Safety on Airports During Constructions.

K. Enforcement Authorization

Act 21, Section 1, Section 261-17(a), HRS; Federal Aviation Administration Regulations, Part 139, Part 107.

L. Right of Rejection or Revocation

The State of Hawaii, Airports Division, reserves the right to withhold, deny or revoke any airport security clearance, licenses or permits to any individual or organization who fails to meet the prescribed or required access area clearance criteria to include background investigation information, or fails to observe or comply with established rules, regulations, and directives.

It should be clearly understood that such denial or revocation is based solely on airport security or safety considerations and does not in any way constitute a determination by the State with regard to private employment by any individual or organization."

-----END OF SECTION-----

DIVISION 1 – GENERAL REQUIREMENTS

SECTION 01010 – DESCRIPTION OF WORK

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

The General Provisions of the contract, including the General Provisions for Construction Projects (2016), Special Provisions, and General Requirements of the Specifications, apply to the work specified in this section.

1.02 SUMMARY

A. Section Includes:

1. Location of the work.
2. Hours of work
3. Safety
4. Operation of airport facilities during construction
5. Disposal of excess soil materials
6. Construction stakes, lines and grades.
7. Special project requirements

1.03 SCOPE OF WORK

A. The work involves renovations to the Kalaleloa Airport Air Traffic Control Tower but not limited to the following:

1. Air Traffic Control Tower:

Interior Improvements to include new flooring, paint, ceiling tile/grid, lighting, casework and utilities as required.

B. The work to be performed under this Contract shall also include preparing and obtaining all permits required to complete this project and other related works as called for on the plans and these specifications.

1.04 PERMITS

- A. The Contractor is responsible for any permits, if required, before starting the construction. DOTA anticipates that the following permits will be required for this project.

1. None anticipated at this time.

If any of these permits are found to be unnecessary, the Contractor shall provide documentation from the appropriate permitting agency showing that the permit is not required for this project before any construction operations take place.

- B. The Contractor is responsible for the preparation and submittal of application document(s) to the appropriate permitting agency, payment of application fee(s), and all other work necessary to obtain all required permit(s) prior to starting construction operations at the project site. Construction operations shall not start until all required permits are approved by the appropriate permitting agencies and copies submitted to the Engineer for the record.
- C. Bidders are responsible for researching and confirming which permits are and are not necessary for this project. Bidders shall exercise due diligence in researching what permits, if any, are required beyond those mentioned in Part 1.3(A) above. If a permit beyond those mentioned in Part 1.3(A) above is found to be necessary for this project, then bidders shall factor the additional cost of obtaining this permit into their bid. Permits that are found to be required after bid opening shall be obtained at no additional cost to the State.
- D. All fines levied against this project as a result of failing to apply for a required permit prior to starting work shall be borne entirely by the Contractor.
- E. All work necessary for researching permits, determining their necessity for this project, preparation and submittal of permit application document(s), payment of application fee(s), etc. up to the issuance of the approved permit(s) are considered incidental to the Contract.

1.05 ALLOWANCE

- A. Allowance includes, but not limited to, works required for environmental measures, when required by the regulation(s); unforeseen conditions and other measures, such as temporary traffic controls, temporary safety measures, security measures, and material short supply when approved by the Engineer.
- B. Use the allowance only as directed by the Engineer for the airport's purposes and only by Change Orders that indicate amounts to be charged to the allowance.

- C. Contractor's overhead, profit, and related costs for products and equipment ordered by the Airport under the contingency allowance are included in the allowance and are not part of the Contract Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.
- D. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit margins.
- E. At project closeout, any unused amounts remaining in the Allowance will be credited back to the State.

1.06 VEHICLE PARKING

Subject to availability of space and approval by the Airport Manager, parking may be made available at a designated parking structure for vehicle parking. The General Contractor shall submit the parking request to the Airport Manager through the State Project Manager (SPM) for review. The SPM will verify the list against the General Contractor's approved subcontractor list and forward it to Airport Manager for approval. Upon approval by the Airport Manager, 2 temporary parking passes per subcontractor and 3 passes for the General Contractor will be issued at no charge. At the Airport Manager's discretion, the parking passes are good for either three (3) months or six (6) months and must be renewed before the passes expire.

All passes will be signed out and become the responsibility of the General Contractor. The General Contractor will distribute the parking passes among their subcontractors.

Additional parking passes beyond the temporary parking passes may be purchased at a monthly rate of \$100.00. These passes are subject to approval by the Airport Manager and availability of parking spaces. All costs associated with obtaining parking passes shall be the responsibility of the Contractor.

1.07 PROVISIONS FOR FIELD OFFICE/STORAGE SPACE

Pending the availability of space on airport property, the State will issue Revocable Permit(s) to the Contractor for the use of the space, assessed at a monthly fee of \$25 for each Revocable Permit issued. The space(s) may be used for a field office, staging of materials and equipment, vehicle parking or other uses subject to the approval of the State. All spaces shall be subject to the requirements of Section 01561 - CONSTRUCTION SITE RUNOFF CONTROL PROGRAM.

Since space on airport property is extremely limited, the State does not guarantee that space(s) provided to the Contractor will be in close proximity to the project site. The State will make every effort to provide the Contractor with space on airport property, however, should the State determine that no space is available for such use(s), the responsibility shall then be on the Contractor to find space outside of airport property.

1.08 LOCATION OF THE WORK

- A. The work to be performed under this contract is located at Kalaeloa Airport, Barbers Point, Oahu, Hawaii.

1.09 HOURS OF WORK

- A. Work hours for construction are subject to the following:
1. Normal work hours for Kalaeloa Airport are between 8:00 AM to 5:00 PM Monday to Friday. Bidders shall not assume that they will be given work windows during these hours. The Airport reserves the right to adjust work hours in order to provide minimum interruption to Airport Operations with no additional cost to the State.
 2. Work hours shall be coordinated with the Airport Manager to provide minimum interruption to facility operations while performing work.
 3. The Contractor will be required to shift to night work hours, at no additional cost to the State, for any work that negatively impacts airport operations especially passenger movement and or comfort. Night work hours may be from Sunday night to Friday morning 10:00 PM to 6:00 AM the following day. However, starting and ending times as well as duration may be adjusted by the Airport Manager depending on the actual flight schedules and airport operational considerations. Contractor vehicles and equipment are not allowed on the aircraft apron fronting the terminal from midnight to 6:00 AM.
 4. Work hours shall be coordinated with the Airport Manager in order to protect the general public and airport employees from excessive dust and noise levels unless protective measures are taken by the Contractor (e.g. noise and/or dust control) to reduce the impact to a level acceptable to the Airport Manager.
- B. The Contractor shall submit a proposed construction schedule to Engineer for review and approval within 14 calendar days prior to start of work. The Contractor shall coordinate their schedule with the Engineer if rescheduling of work or intermittent work is required, and such work shall be performed at no extra cost to the State. If the Contractor elects to work overtime, compensation for State employees and for construction management consultant as authorized by the State shall be the Contractor's obligation to pay in accordance with Section 7.6 of the General Provisions.
- C. Contractor shall clean work areas at the end of each working shift. Rubbish, loose materials, etc. shall be disposed of daily. Materials shall be safely secured and stored in an area designated by the Airport Manager.

1.10 SITE VISIT

- A. The Contractor shall visit the work site and verify all conditions pertinent to the Project he/she is bidding on.

1.11 COORDINATION

- A. The Contractor shall coordinate the work of different trades and shall be solely responsible for fulfillment of requirements specified herein.

1.12 SAFETY

- A. The Contractor shall take the necessary precautions to protect his workers and other personnel from injuries. The rules and regulations promulgated by the Occupational Safety and Health Acts are applicable and made a part of these specifications.
- B. Barricades and warning signs shall be erected by the Contractor in the work area to properly protect all personnel in the area.
- C. During the progress of the work debris, empty crates, waste, material drippings, etc., shall be removed by the Contractor at the end of each work day, and the work area shall be left clean and orderly.

1.13 PROTECTION OF EXISTING STRUCTURES AND IMPROVEMENTS

- A. The Contractor shall preserve and protect all structures, equipment, and vegetations on/or adjacent to the work site, which are not to be removed and which do not unreasonably interfere with the work required under this Contract. The Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limb or branches of trees are broken during Contract performance, or by the careless operation of equipment, or by workmen, the Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the Engineer.
- B. The Contractor shall protect from damage all existing improvements and utilities at/or near the work site.

1.14 TEMPORARY CONSTRUCTION SIGNS

- A. The Contractor shall install temporary construction signs where the presence of planned construction areas will obstruct the existing signage or cause the closing of an existing method of egress or ingress and/or as directed by the State. Such signs shall be in accordance with the Department of Transportation – Airports Signage and Graphics Manual, highway standards for construction warning signs for background and text colors (white letters on fluorescent yellow background). Signs may be

mounted on suitable approved material other than aluminum panels. The Contractor will be responsible to fabricate and install such signs. Costs related to this activity will be considered as incidental to and included in the bid price for the various items of work in this project.

1.15 OPERATION OF AIRPORT FACILITIES DURING CONSTRUCTION

- A. The Contractor shall coordinate the phases of work under this contract with the Engineer to permit the continuing operation of existing Airport facilities and to minimize disruption to pedestrian and vehicular traffic.
- B. Utility Maintenance: During the construction of this contract, existing utility services serving occupied or used facilities shall not be disrupted except where authorized in writing by authorities having jurisdiction. Contractor shall provide temporary services during interruptions to existing utilities, as acceptable to the Engineer. Damages to the existing utility facilities by the Contractor will be repaired at the Contractors expense.
- C. Outages for water, power, communications, air conditioning or any other utility, if necessary, shall be kept to a minimum and scheduled for off-peak hours, generally from 12:00 a.m. to 6:00 a.m. The Contractor shall submit written requests to the Engineer for such outages no later than fourteen (14) calendar days in advance. The request shall include a description of work and the duration of the outage. The Contractor shall not proceed with such outages until written approval is received from the State.

1.16 DISPOSAL OF EXCESS SOIL MATERIALS

- A. At the Engineer's discretion, excess usable soil materials may be disposed of by filling areas within the Airport.
- B. Off-Site Disposal of Excess Soil Material

Any excess soil material and rubbish disposed of outside the Airport property shall be the responsibility of the Contractor. The Contractor shall make all arrangements and bear all costs involved therewith.

1.17 CONSTRUCTION STAKES, LINES AND GRADES

- A. The Contractor shall perform all construction layout and reference staking necessary for the proper control and satisfactory completion of all structures, grading, paving, drainage, sewer, water, and all other appurtenances required for the completion of the work.
- B. Existing horizontal and vertical survey control points for the project are shown on the plans. The Contractor shall verify the location of all control points prior to the

start of construction.

- C. The Department will not be responsible for delays in setting stakes and marks.
- D. All control points and stakes or marks which the Engineer may set shall be preserved by the Contractor. If such control points, stakes or marks are destroyed or disturbed by the Contractor, the cost of replacing such stakes or marks will be charged against the Contractor and deducted from payments due the Contractor.
- E. The Contractor shall be responsible for the placement and preservation of adequate ties to all control points whether established by the Contractor or by the Engineer.
- F. All original, additional or replacement stakes, marks, references and batter-boards which may be required for the construction operations, shall be furnished, set and properly referenced by the Contractor. The Contractor shall be solely and completely responsible for the accuracy of the line and grade of all features of the work. Any errors or apparent discrepancies found in previous surveys, the plans and specifications shall be called to the Engineer's attention by the Contractor for correction or interpretation prior to proceeding with the work.
- G. Before construction is started on any structure which is referenced to an existing structure or topographical feature, the Contractor shall check the pertinent locations and grades of the existing structures or topographical features to determine whether the locations and grades shown on the plans are correct.
- H. All construction staking shall be performed by qualified personnel under the direct supervision of a person with an engineering background who is experienced in the direction of such work and is acceptable to the Engineer.
- I. All stakes and markers used for control staking shall be of the same quality as used by the Department for this purpose. For slope limits, pavement edges, gutter lines, et cetera, where so called "working" stakes are commonly used, stakes of different quality may be acceptable.
- J. The Department may check the Contractor's control of the work at any times as the work progresses. The Contractor will be informed of the results of these checks, but the Department by doing so will in no way relieve the Contractor of his responsibility for the accuracy of the layout work. The Contractor shall at his expense correct or replace any deficient or inaccurate layout and construction work. If, as a result of these deficiencies or inaccuracies, the Department is required to make further studies, redesign, or both, all expenses incurred by the Department due to such deficiencies or inaccuracies, will be deducted from any payments due the Contractor.
- K. The Contractor shall furnish all necessary personnel, engineering equipment and supplies, materials, and transportation incidental to the accurate and satisfactory

completion of this work.

Unless otherwise provided, all requirements imposed by this section and performed by the Contractor shall be considered incidental to the various contract items and not separate or additional payment will be made thereof.

1.18 OPERATIONS AND STORAGE AREAS

- A. Storage and staging areas may be available on a limited basis. Due to the number of projects in progress or projected to be in progress, the State does not guarantee the availability of such areas on airport property. The Contractor may request storage & staging area(s) within AOA fence once the Notice to Proceed date is set.
- B. The Contractor shall confine all operations (including storage of material) on the Airport premises to areas authorized or approved by the Engineer. The Contractor shall hold and save the Airports Division free and harmless from liability of any nature occasioned by the Contractor's performance.
- C. The Contractor shall use only established roadways. When materials are transported in prosecuting the work, vehicle shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any Federal, State, or local laws or regulations. When it is necessary to cross curbs or sidewalks, the Contractor shall protect them from damage. The Contractor shall repair or pay for the repair of any damaged curbs, sidewalks, and roadways.

1.19 CLEANING UP

- A. The Contractor shall at all times keep the work area, including storage areas, free from accumulations of waste materials. Before completing the work, the Contractor shall remove from the work and premises any rubbish, tools, scaffolding, equipment, and materials that are not the property of the Airports Division. Upon completing the work, the Contractor shall leave the work area in clean, neat, and orderly condition satisfactory to the Engineer.

1.20 VERIFICATION OF DIMENSIONS

- A. The Contractor shall be responsible for the coordination and proper relation of his work to the work of all trades. The Contractor shall visit the premises and thoroughly familiarize himself with all details of the work and working conditions, to verify all dimensions in the field, and to advise the Owner's Representative of any discrepancy between the field measurements and the plan dimensions before performing any work.

1.21 STANDARDS AND CODES

- A. Wherever references are made in the contract to the respective standards, specifications and advisory circulars in accordance with which work is to be performed or tested, it is to be understood that the edition or revision of the standards, specifications and advisory circulars in effect on the date of the bidder's proposal shall apply unless otherwise expressly set forth in the contract. Unless otherwise specified, reference to such standards is solely for technical information.
- B. In case of conflict among any such referenced standards and codes or between any such standard(s) or code(s) and the requirements of the Contract, the stricter requirement shall govern.

1.22. SPECIAL PROJECT REQUIREMENTS

- A. Upon receipt of the Contract, the Contractor shall process and return the Contract to the State' Contract Office within five (5) calendar days.
- B. The State intends to issue the Notice to Proceed for the Project to the Contractor within 35 calendar days after bid opening. The Contractor shall be able to commence work on this date.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

PART 4 – MEASUREMENT AND PAYMENT

4.01 METHOD OF MEASUREMENT

- A. Work under this section will be measured for payment and paid for at the pre-approved contract price.

4.02 BASIS OF PAYMENT

- A. All payments shall be full compensations for all work described under this Section, and all materials, labors, tools, equipment, and incidentals needed to complete the Contract.
- B. Payment will be made under:

<u>Item No.</u>	<u>Item</u>	<u>Unit</u>
01010.01	<u>Wall Treatment</u> (Pay Item shall include Specification Section 09250 – GYPSUM BOARD, Section 09841 – FIXED SOUND ABSORBING PANELS, and other incidental specification sections).	Lump Sum

<u>Item No.</u>	<u>Item</u>	<u>Unit</u>
01010.02	<u>Door & Door Hardware</u> (Pay Item shall include Specification Section 08111 – STEEL DOOR/FRAME, Section 08710 – FINISH HARDWARE, and other incidental specification sections).	Lump Sum
01010.03	<u>Window Treatment</u> (Pay Item shall include Specification Section 08871 – SUN CONTROL WINDOW FILM, Section 12410 – ATCT TRANSPARENT PLASTIC WINDOW SHADES, and other incidental specification sections).	Lump Sum
01010.04	<u>Casework</u> (Pay Item shall include Specification Section 06410 – CABINET WORK and other incidental specification sections).	Lump Sum
01010.05	<u>Signage</u> (Pay Item shall include Specification Section 10990 – MISCELLANEOUS SPECIALTIES and other incidental specification sections).	Lump Sum
01010.06	<u>New Flooring</u> (Pay Item shall include Specification Section 09652 – RESILIENT TILE FLOORING, Section 09681 – CARPET TILE, and other incidental specification sections).	Lump Sum
01010.07	<u>Restroom Improvements</u> (Pay Item shall include Specification Section 08800 – GLAZING, Section 10280 – WASHROOM ACCESSORIES, Section 10211 – TOILET COMPARTMENTS, and other incidental specification sections).	Lump Sum
01010.08	<u>Roofing</u> (Pay Item shall include Specification Section 07560 – FLUID APPLIED ROOFING SYSTEM, Section 07620 – SHEET METAL FLASHING AND TRIM, and other incidental specification sections).	Lump Sum

<u>Item No.</u>	<u>Item</u>	<u>Unit</u>
01010.09	<u>Fire Protection</u> (Pay Item shall include Specification Section 10520 – FIRE EXTINGUISHERS AND CABINETS, Section 13852 – DIGITAL ADDRESSABLE FIRE ALARM SYSTEM, and other incidental specification sections).	Lump Sum
01010.10	<u>Electrical Power & Lighting</u> (Pay Item shall include Specification Section 16010 – ELECTRICAL WORK and other incidental specification sections).	Lump Sum
01010.11	<u>Air Conditioning & Ventilation</u> (Pay Item shall include all Mechanical work on Drawing Sheets numbered 32 thru 45. See Drawing Sheet Index)	Lump Sum
01010.12	<u>Plumbing</u> (Pay Item shall include all Plumbing work on Drawing Sheets numbered 46 thru 49. See Drawing Sheet Index)	Lump Sum
01010.13	<u>Unforeseen Conditions</u>	Allowance (ALLOW)
01010.14	<u>Material Short Supply</u>	Allowance (ALLOW)
01010.15	<u>Air Conditioning Repair/Replacement</u>	Allowance (ALLOW)
01010.16	<u>Fire Hose Cabinet Restoration</u>	Allowance (ALLOW)

END OF SECTION

SECTION 01700 – MOBILIZATION AND DEMOBILIZATION

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. The General Provisions of the contract, including the General Provisions for Construction Projects (2016), Special Provisions, and General Requirements of the Specifications, apply to the work specified in this section.

1.02 GENERAL REQUIREMENTS

- A. Section 699 of "Hawaii Standard Specifications for Road and Bridge Construction, 2005," are hereby incorporated into and made a part of these specifications by reference unless otherwise modified hereinafter.

1.03 MOBILIZATION

- A. The Contractor shall mobilize and transport his construction plant and equipment including materials and supplies for operation to the site of work, construct temporary buildings and facilities as necessary, and assemble the equipment at the site as soon as possible after receipt of Notice to Proceed, subject to the provisions of the General Provisions.

1.04 DEMOBILIZATION

- A. The Contractor shall demobilize and transport his construction plant and equipment including materials, supplies and temporary buildings off the site as soon as possible after construction is completed. Demobilization shall include all cleanup required under this contract and as directed by the Engineer. Demobilization and final cleanup shall be completed prior to final acceptance.

1.05 PERFORMANCE BOND

- A. The Contractor shall file and pay for the performance and payment bonds according to Section 7.24 of the General Provisions, except that the value of the bonds shall equal one hundred percent (100%) of the amount of the contract basic bid amount plus one hundred percent (100%) of the amount of the extra work.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

PART 4 – MEASUREMENT AND PAYMENT

4.01 METHOD OF MEASUREMENT

- A. Mobilization shall not be measured for payment.
- B. Demobilization will not be measured for payment. A separate line item called “Demobilization” will be added to the Contractor’s Schedule of Values after the contract has been awarded. The total amount for this item shall be 2.5% of the Contractor’s total bid amount and will be deducted from other line items in the schedule of values as negotiated between the Contractor and the State. **THE CONTRACTOR SHALL NOT MODIFY THE PROPOSAL SCHEDULE BY ADDING A “DEMOBILIZATION” BID ITEM TO THE PROPOSAL SCHEDULE.**

4.02 BASIS OF PAYMENT

- A. Mobilization shall be considered incidental to and included in the prices bid for the various items of work in this project.
- B. Partial payment will not be paid for Demobilization. Full payment will be made on the Contractor’s final payment request. This will occur after the Contractor has fulfilled all of the requirements of the Contract bid documents to the satisfaction of the State and issuance of the Final Acceptance letter to the Contractor by the State.

END OF SECTION

SECTION 07560 – FLUID APPLIED ROOFING SYSTEM

PART 1 – GENERAL

1.01 RELATED SECTIONS

The General Provisions of the contract, including the General Provisions for Construction Projects (2016), Special Provisions, and General Requirements of the Specifications, apply to the work specified in this section

1.02 DESCRIPTION

- A. Furnish and install an instant-setting, liquid-applied, roof membrane system complete, in place, as shown on the drawings, specified herein, or needed for a complete and proper watertight and warrantable installation. The two-component, cold spray-applied rubber membrane shall be monolithically applied in one spray coat to the field and flashing areas at specified rate to create a membrane. The one-component, brush-applied rubber is used as a patching and flashing reinforcement compound to the system as needed after it has cured. An energy efficient and sustainable acrylic elastomeric topcoat will then be applied to the entire roof surface for UV protection, water resistance, and thermal shock reduction. In some climate zones, there are options for either a granulated wear layer or no topcoat.

1.03 QUALITY ASSURANCE

- A. Standards: Comply with standards specified in this section and as listed in the General Requirements.
- B. Qualifications of Manufacturer: The core products used in the roofing work and included in this section shall be manufactured directly by the manufacturer and not through a third-party mixing company or private label. Quality control measures include testing and retaining samples of every product batch by the manufacturer.
- C. Qualifications of Installers: The Contractor and his personnel shall be currently approved by the manufacturer and only those spray technicians that have been certified through the manufacturer's training program are to spray the roof membrane.
- D. Roofing Inspections: Make all required notifications and secure all required inspections by the manufacturer of the approved materials to facilitate issuance of the specified roof warranty.
- E. Manufacturer's Pre-Review: The manufacturer shall review and approve the existing roof substrate that is to be recovered with the two-component, cold spray-

applied rubber system with respect to the appropriateness of the substrate for use of their recover system on this project.

- F. Spray Equipment: The two-component, cold spray-applied rubber membrane and acrylic elastomeric topcoat may only be applied with spray equipment specifically manufactured for and supplied by the coating's manufacturer.

1.04 SUBMITTALS

A. Product Data: Prior to project starting, submit:

1. Complete material list of all items proposed to be furnished and installed under this section, along with product data and SDS sheets for each.
2. Manufacturer's pre-review comments and other data required to demonstrate compliance with specified requirements.
3. Moisture scan findings using a Tramex moisture meter or an infrared camera to check for pre-existing moisture in the old roofing system that will require replacement prior to installation of the two-component, cold spray-applied rubber system over it.

1.05 PRODUCT HANDLING

A. Delivery and Storage

1. Deliver all packaged materials to the job site in their original, unopened containers with all labels intact and legible at the time of the inspection.
2. Store all materials in an approved manner and protected from freezing or extreme heat. Storage temperature to be maintained above 50 degrees Fahrenheit (10°C).
3. Protect materials during handling and application to prevent damage or contamination.

B. Protection: Use all necessary means to protect the materials in this section before, during, and after installation, and to protect the work and materials of all other trades.

C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to be approval of and at no additional cost to the Owner.

1.06 SCHEDULING

- A. Work is to be performed on a daily basis with appropriate scheduling of product applications to prevent contamination of the surfaces between applications. Products shall be installed only if temperatures do not dip below freezing for 72 hours after applying, and daytime temperature reaches 50 degrees Fahrenheit (10° C) or higher.
- B. Final completion of work shall be defined as the installation of all specified primer, roof membrane, top coating, flashing, counterflashing, sheet metal, fasteners, and caulking.
- C. Contractor shall complete installation of the two-component, cold spray-applied rubber products within two (2) days after cleaning the existing substrate. After installation of the two-component, cold spray-applied rubber, a light rinsing of the surface to remove dry accelerator is required prior to top coating, no earlier than 6 hours after the two-component, cold spray-applied rubber installation. Top coating not to occur before the two-component, cold spray-applied rubber and the one-component, brush-applied rubber are completely dried. If top coating is performed later than three (3) days after completion of the two-component, cold spray-applied rubber and the one-component, brush-applied rubber, another rinsing may be required to remove dust and dirt accumulations depending on the environment.

1.07 WARRANTY

- A. As part of the work of this section, pay all required fees, secure all required inspections, and complete all items necessary to secure and deliver to the Owner a manufacturer's warranty of 20 years. All warranties are eligible for extensions.

Duration	Covers*	Two-component, cold spray-applied rubber thickness	Topcoat Thickness	Extendable
20 Years	Material & Labor Costs	130 wet/80 dry mil	50 wet/20 dry mil	Yes

- B. Contractor to provide photographs of areas to receive liquid membrane before start of work, during surface preparation, during spray application, and at completion of work for warranty acceptance.
- C. The Surety shall not be held liable beyond 2 years from project acceptance date.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Minimum product requirements have been listed. All of these components must be used and bid. Products not supplied by the manufacturer are to be purchased from a manufacturer approved source.

2.02 PRODUCTS SUPPLIED BY WARRANTY MANUFACTURER

A. Liquid Membrane – Two-Component, Cold Spray-Applied Synthetic Rubber

Spray-applied, instant-setting liquid-applied membrane and applied by a manufacturer certified installer to create a waterproofing membrane. The two-component, cold spray-applied rubber is water-based and solvent-free, which transforms into an instant-setting seamless rubberized roof membrane as it is spray-applied to the substrate and catalyzed by an accelerator component. The liquid is spray-applied in a single coat to achieve a minimum monolithic membrane thickness of either 60 dry mils for 10-year or 15-year warranties, or 80 dry mils for 20-year warranties, and possess physical properties of no less than the values listed below:

Property	Test Method	Value
Solid Content	Vacuum cure	63%
Flame Exposure	ASTM E108	Class A, Self-Extinguishing
Water Vapor Permeability	ASTM E96	0.1 perms
Elongation	ASTM D412	1200% or greater
Tensile Strength	ASTM D412	500 psi or greater
Hydrostatic Pressure	BS EN 12390-8	Pass – No penetration
Impact and Hail Resistance	ASTM D3746	Pass
Dynamic Puncture Resistance	ASTM D5635	2.80 J/mm or greater
Pull-off Adhesion to EPDM (1000 hr UV)	ASTM D4541	700 psi or greater
1000 hr UV Exposure (Xenon)	ASTM G155	No effect
Cured to the Touch	After Sprayed	Instantly
VOC Content	--	None
Wind, Fire, Hail, Foot Traffic, UV	FM 4470	Pass (Class A, Severe Hail)

B. Patching and Flashing Membrane – One-Component, Brush-Applied Rubber

1. One-Component, Brush-Applied Rubber – Brush-applied, water-based, solvent-free, single-component waterproofing membranes used for touch-up

patching and reinforcing of flashing areas in the two-component, cold spray-applied rubber membrane.

C. Reflective/ Protective Topcoat (Select the appropriate coating that meets the building requirements)

1. Highly reflective, instant-setting, water-based acrylic elastomeric topcoat: It is spray-applied to the substrate using specialized equipment and catalyzed by an accelerator component. Color: White
2. Highly reflective, water-based acrylic elastomeric topcoat: It is spray-applied using standard airless spray equipment, brush-applied, or roller-applied. Typically provided in white, gray, or tan. Custom colors available upon request.
3. Thermal insulating, reflective, water-based acrylic elastomeric white top coating: Ceramic and glass microspheres within the top coating not only reflect UV rays, but also reduce heat transfer, making it a superior energy saving solution when used as part of the two-component, cold spray-applied rubber membrane system.

D. Catalyst (Accelerator)

1. ACCELERATOR: Specialty non-toxic, food-grade Calcium Chloride (CaCl) and water mixture used as the catalyst component in conjunction with spraying the two-component, cold spray-applied rubber and acrylic elastomeric topcoat, allowing for the rapid build-up of the membrane to any thickness desired in one coat.

E. Repair Tape

1. Premium-grade butyl repair tape with TPO-facer. Available in black or white. Used to repair existing substrate in a variety of situations.

F. Walkways

1. Water-based acrylic elastomeric coating used as a seamless walkway coating. Contains on aggregate to form a textured, non-slip surface with high abrasion resistance. Can be reinforced with polyester fabric to provide a higher level of protection from equipment damage in areas of high abuse. Available in gray or yellow.

G. Reinforcement Fabric

1. High-strength polyester fabric, used to reinforce high-stress and high-movement areas underneath the two-component, cold spray-applied rubber product or within the one-component, brush-applied rubber product.

2.03 EQUIPMENT SUPPLIED BY MANUFACTURER

A. Spray machine and testing gauges/meters

1. Dual-component spray rig consisting of spray gun, hoses, pumps, and cart.
2. High Production Spray Machine: dual-component spray rig consisting of spray gun, hoses, pumps, and cart.
3. Two-component, cold spray-applied rubber mil gauge for testing wet mil thickness while spraying the instant set liquid membrane.
4. Standard paint mil gauge for testing wet mil thickness of topcoat.

PART 3 – EXECUTION

3.01 DESCRIPTION

- A. The latest manufacturer application techniques are to be followed along with the following requirements. These specific minimum requirements must be included in the bid and are not to be altered.

3.02 INSPECTION

- A. Examine the existing roof conditions under which work in this section will be installed. Correct conditions detrimental to the proper and timely completion of the work such as wet underlying insulation, loose membrane, and severe degradation. Do not proceed until such conditions have been corrected.

3.03 SURFACE CONDITIONS

- A. Surfaces scheduled to receive waterproofing are to be sound, clean, dry and free of any dust, grease, oil, laitance, and other contaminants.
- B. Substrate is to be free of sharp projections and free of loose components.
- C. The existing roof system is to be scanned for moisture to locate and replace any wet areas of insulation, trapped moisture, or, if applicable, wet gypsum deck, with new insulation and membrane to match existing. Insulation and membrane

replacement must be properly attached prior to application of the two-component, cold spray-applied rubber system.

3.04 INSTALLATION – PREPARATION OF SUBSTRATE

- A. Protect all adjacent surfaces from overspray at all times. Taping off surfaces with painter plastic to prevent overspray onto surfaces and to establish clean, straight edge termination lines on the new liquid membrane flashings is required. Use care when masking air intakes and HVAC units so as not to block all ventilation and potentially damage the unit.
- B. Repair all defects in existing substrates, including loose field membrane and flashings, open seams and corners, deteriorated pipe boots and sealant pockets as required by manufacturer. Use like materials to the existing roof type to make repairs. Hot-air weld all repairs where possible. Like materials to the existing roof type should be welded in properly (i.e. PVC membrane should be used to patch an existing PVC roof).
- C. All existing metal flashings that are specified to remain must be inspected for watertightness. Any flashing metal such as counterflashing, termination bar, coping caps, edge metal, etc., shall be properly repaired or replaced to achieve a watertight condition. Consult with Manufacturer for further clarification.
- D. Remove all dirt, debris, and loose materials from the surface of the roof.
- E. Existing surfaces shall be cleaned with pressure washing equipment to a condition conducive to positive adhesion of the two-component, cold spray-applied rubber, per manufacturer's requirements prior to application of the liquid-applied system. Unapproved curing compounds, form release agents, petroleum distillates, animal fats, and other contaminants shall not come into contact with approved substrate after cleaning. Contractor shall complete installation of two-component, cold spray-applied rubber membrane within two (2) days after cleaning of substrate.
- F. Verify the substrate is visibly dry on the surface and free of moisture within its components. Moisture meters, infrared scanning, or capillary moisture tested by plastic sheet method according to ASTM D-4263, may be necessary. If moisture is present on the substrate it must be allowed to dry prior to proceeding with the two-component, cold spray-applied rubber application. If moisture is present within the old roofing system components, it must be removed and replaced with same materials prior to installation of the two-component, cold spray-applied rubber. It is also important that shrinkage or stress in the old roofing material be relieved after it is cut open to prevent additional movement/shrinkage after installation.
- G. Install one-way vents every 1,200 sq. ft. to allow relief of vapor pressure. Cut a hole through the existing membrane and insulation, but not through the deck. The

hole should not be larger than the diameter of the venting space. Fill the hole with loose-fill insulation to prevent condensation. Place the flange of the one-way vent on top of the roofing membrane and fasten to the roof deck with appropriate fasteners. Immediately seal to a watertight condition with the two-component cold spray-applied rubber, the one-component brush-applied rubber, or approved heat-welded single-ply flashing material.

3.05 INSTALLATION OF LIQUID MEMBRANE

A. General:

1. Stir materials prior to application using a drill and mixing paddle in accordance with manufacturer's instructions.
2. Spray the instant-set two-component, cold spray-applied rubber and Accelerator as a continuous, monolithic membrane of uniform thickness, beginning at the lowest point and terminating at the highest point. Final membrane thickness after full cure must be a minimum, on all surfaces, 97 wet/60 dry mils for 10-year and 15-year warranties and 130 wet/80 dry mils for 20-year warranties.
3. When a spot repair is required during application, re-spray defect area within 15 minutes of initial spray application so entire membrane cures monolithically.

B. Horizontal and Vertical Application:

1. Spray-apply one continuous layer of the two-component, cold spray-applied rubber waterproofing membrane, covering all areas of the field and flashings to achieve a cured dry mil membrane thickness of 60 or 80 mils, depending on warranty requirements.
2. Perform wet mil thickness tests (with a manufacturer supplied mil gauge) at regular intervals while spraying to assure a minimum of 97 wet mils throughout for 60 dry mils, and 130 wet mils for 80 dry mils. Immediately re-spray spots checked with gauge to fill in void.
3. If necessary, chalk-line or spray-paint a grid across the roof prior to application to gauge product use per drum within a particular section of the roof area. To achieve 60 dry mils, the average rate shall be 800 sq. ft per drum. To achieve 80 mil dry, the average rate shall be 600 sq. ft. per drum. This application rate will vary based on number of seams, penetrations, surface texture and conditions, etc.

Wet/Dry Mil Thickness	Coverage Rate Per Drum
97/60	800 square feet
130/80	600 square feet

4. If reinforcement fabric is to be used, first apply a thin base layer of the one-component, brush-applied rubber (or the two-component, cold spray-applied rubber liquid with no Accelerator) on the surface. Embed 4” or 6” polyester fabric into the wet, coating and use a brush to smooth and saturate the fabric with the coating. Apply more product, if needed, to fully saturate the fabric, but not create any pooling. Immediately apply the two-component, cold spray-applied rubber with the Accelerator on top of the reinforcement to create the final membrane. Please consult with Manufacturer or Designer for details on where reinforcement is required.
5. Refer to manufacturer’s recommendations and details for proper membrane terminations.

3.06 INSTALLATION OF BUSH-GRADE ON FLASHING, PENETRATIONS, AND TRANSITIONS

- A. Transition Detailing and Flashing, including Pipes, 90-Degree Angles, Gutter Transitions, Penetrations, Curbs, Inside and Outside Corners, etc.: All flashing details and transition changes shall be prepared as follows:
 1. After the two-component, cold spray-applied rubber membrane is fully dry to the touch with no moisture coming out of the membrane when pressed by hand, all flashing transitions shall receive an additional brush application of the one-component brush-grade. Additionally, apply one-component, brush-applied rubber to any visible voids, imperfections, or thin spots in the two-component, cold spray-applied rubber membrane prior to rinsing and applying top coatings. one-component, brush-applied rubber to be installed by brush or trowel at 97 wet mils to achieve 60 mils dry.
 - a. Brush apply a 97 wet mil course of the one-component, brush-applied rubber to extend 3” on each side of all curb corner transitions, 90-degree angles, under metal flashings, base and top edge of all pipe penetrations.
 - b. The field of the roof shall be checked over for imperfections in the two-component, cold spray-applied rubber and the one-component, brush-applied rubber shall be brush-applied wherever needed to reinforce suspected thin spots or spray defects. the one-component, brush-applied rubber shall be allowed to cure fully prior to top coating applications. Typical cure time allowance is 24 hours with good weather conditions.

B. Roof Drain Flashing:

1. Check existing drain ring bolts and ensure all are tight. After the two-component, cold spray-applied rubber roof membrane installation is completed on area outside of drain and after proper cure time and rinsing, the one-component, brush-applied rubber shall be applied around inside and outside of the drain ring as well as within the drain bowl to fully seal under the existing membrane to prevent water back-up under the membrane.
 - a. Apply 97 wet mils to achieve 60 mils dry of the one-component, brush-applied rubber over the two-component, cold spray-applied rubber roof membrane, extending from inside of drain to 3” outside of clamping ring.

3.07 INSTALLATION OF TOPCOAT FINAL CHECK

- A. After the two-component, cold spray-applied rubber and the one-component, brush-applied rubber products are fully dry to the touch with no moisture coming out of the material when pressed on with a hand, rinse dried accelerator from all the two-component, cold spray-applied rubber surfaces with clean water until dried accelerator residue is rinsed completely off of the roof. The surface should be completely dry prior to applying top coatings.
- B. Following the application of the two-component, cold spray-applied rubber roof membrane described above, apply the specified reflective, sacrificial topcoat: the instant-setting, water-based acrylic elastomeric topcoat, the water-based acrylic elastomeric topcoat or the thermal insulating, reflective, water-based acrylic elastomeric white top coating. All topcoats are to be installed per the manufacturer's guidelines to achieve a final minimum dry film thickness of 30 wet/20 dry mils for 10-year and 15-year warranties. 20-year warranties require a topcoat applied at 50 wet/30 dry mils.
 1. instant-setting, water-based acrylic elastomeric topcoat is installed in one coat to the thickness required.
 2. The thermal insulating, reflective, water-based acrylic elastomeric white top coating or the water-based acrylic elastomeric topcoat are installed in two coats and the first coat is to be back-rolled when applying by sprayer, to assure full coverage to textured surface.
- D. Installation of top coating shall occur after the two-component, cold spray-applied rubber membrane and the one-component, brush-applied rubber flashings are fully dry, cured, and rinsing of Accelerator has dried. If top coating is performed later than three (3) days after completion of the two-component, cold spray-applied rubber membrane, another rinsing may be required to remove dust and dirt accumulations depending on the environment.

- E. In certain climate zones, a reflective topcoat may not be required when approved in writing by the manufacturer. In this event, a thorough rinsing of dried Accelerator should still occur after the two-component, cold spray-applied rubber and the one-component, brush-applied rubber are applied and dry.
- F. If applying a granulated wear layer, broadcast 40-50 lbs. of roof granules per 100 sf in a 15 wet mil layer of the two-component, cold spray-applied rubber with no Accelerator over the entire surface. The granules must be supplied by the manufacturer and approved for use in the specific climate zone and project location.

3.08 FIELD QUALITY CONTROL

- A. Use of specialized equipment such as a mil gauge supplied by the manufacturer to check the liquid membrane thickness during application and a good quality digital camera to provide photos to manufacturer of installation is required.
- B. Contractor to provide photographs of areas to receive liquid membrane before start of work, during surface preparation, during spray application, and at completion of work for warranty acceptance.

3.09 CLEAN-UP

- A. All debris shall be removed from the premises promptly and the construction area left clean daily.
- B. All overspray of products must be cleaned from surfaces not scheduled to receive the waterproofing membrane.
- C. At the completion of the contract, Contractor is to remove and dispose of all equipment or temporary facilities related to their contract within 3 days.

PART 4 – MEASUREMENT AND PAYMENT

4.01 BASIS OF MEASUREMENT AND PAYMENT

- A. Work under this section will not be measured nor paid for separately, but shall be considered incidental to and included in the price bid for the various items of work in this project.

END OF SECTION