

DEPARTMENT OF HAWAIIAN HOME LANDS  
STATE OF HAWAII

NOVEMBER 18, 2015

**ADDENDUM NO. 1**

TO

PLANS, BID FORM, SPECIFICATIONS, CONTRACT AND BOND

FOR

**2-BEDROOM HOUSE RENOVATION (LOT 58-B-1)  
AND  
3-BEDROOM HOUSE RENOVATION (LOT 131-A-3)**

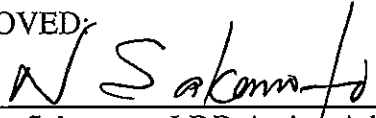
HILO, COUNTY OF HAWAII, HAWAII

**RFQ NO.: IFB-16-HHL-005**

**NOTICE TO ALL PROSPECTIVE BIDDERS**

This addendum is hereby made a part of the PLANS, BID FORM, SPECIFICATIONS, CONTRACT AND BOND for the WAIMANALO DETENTION BASIN CLEARING, WAIMANALO, OAHU, HAWAII, and it shall amend the said contract documents as detailed within this Addendum document.

APPROVED:

  
\_\_\_\_\_  
Norman Sakamoto, LDD Acting Administrator  
Department of Hawaiian Home Lands

Date: November 18, 2015

Please detach, execute, and return immediately, the receipt below, to the Department of Hawaiian Home Lands, Hale Kalanianaʻole, 91-5420 Kapolei Parkway, Kapolei, Hawaii or transmit facsimile to (808) 620-9299.

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Receipt of Addendum No. 1 for the 2-BEDROOM HOUSE RENOVATION AND 3-BEDROOM HOUSE RENOVATION, HILO, COUNTY OF HAWAII, HAWAII, is hereby acknowledged.

Signed \_\_\_\_\_ Title \_\_\_\_\_

Firm \_\_\_\_\_ Date \_\_\_\_\_

**ADDENDUM NO. 1**  
**NOVEMBER 18, 2015**

TO

PLANS, BID FORM, SPECIFICATIONS, CONTRACT AND BOND

FOR

**2-BEDROOM HOUSE RENOVATION (LOT 58-B-1)**  
**AND**  
**3-BEDROOM HOUSE RENOVATION (LOT 131-A-3)**

HILO, COUNTY OF HAWAII, HAWAII

**IFB NO.: IFB-16-HHL-005**

**ITEM NO. 1 PRE-BID SITE VISIT MINUTES AND SIGN IN SHEET**

A Pre-bid meeting and site visit was held at on November 12, 2015 at 9:30 am at the DHHL East Hawaii District Office Conference Room, 160 Baker Avenue, Hilo, Hawaii. The minutes and sign-in sheet is attached to **ADDENDUM NO 1 (November 18, 2015)**.

**ITEM NO. 2 REQUEST FOR INFORMATION**

1. Sheet A3.2 for the 3-Bedroom House Repair shows the existing wood fascia "REPAIR AS REQ." Please clarify the extent of the fascia repair work.

**Response:** Fascia replacement – 60 linear feet. The rest of the fascia needs cleaning and painting.

2. Elevation A on sheet A6.1 for the 3-Bedroom House Repair shows remove and replace existing sink, upper cabinets, and counter. Are the existing sink, upper cabinets, and counter to be installed? If not, please provide details and specs for the new sink, upper cabinets, and counter.

**Response:** Cabinets, sink, and countertop replacement. These items need to be removed and discarded and not re-installed. New cabinets, sink, and countertops need to be installed in its place. The specs (price ranges) for these new items are:

- a. Cabinets – Upper cabinets (up to \$1000 total) and Lower cabinets (up to \$1500 total).
- b. Sink – All in one (includes faucet and sink), 33" wide, 18 gauge, double bowl, 2-hole, \$300 to \$400 total.
- c. Countertops – 16 lin. ft. of laminate countertop, \$500 to \$800 total.
- d. Electric range – Whirlpool, 4.8 to 5.3 cu. ft., \$500 to \$700 (medium price).
- e. Top Freezer Refrigerator – 18.2 cu. ft., \$600 to \$800 (medium price).

**2-Bedroom House Renovation (LOT 58-B-1)**  
**And**  
**3-Bedroom House Renovation (LOT 131-A-3)**  
**IFB-16-HHL-005**

Pre-bid Conference and Site Visit  
9:30 a.m., Thursday, November 12, 2015  
East Hawaii District Office  
TMK: (3) 2-1-021:072 & (3) 2-1-021:010

1.     **Introductions**

Department of Hawaiian Home Lands

- Kehaulani Quartero, Project Manager/Labor Compliance
- Richard Speer, Project Manager
- Louis Hao, Acting District Supervisor

Wesley R. Segawa & Associates, Inc.

- Dennis Lee, Project Manager
- Dan Bautista, Civil Designer

Other Attendees: See Attached Sign-In Sheet

2.     **Purpose of Pre-Bid Conference**

- To provide potential bidders with a project overview and job site visit.
- To review procurement requirements and allow potential bidders to ask questions and obtain clarification on the bid documents. A written summary of this pre-bid conference will be issued to all plan holders as an Addendum.
- Requests for clarifications and any questions after this meeting shall be turned in no later than 4:00 pm, November 16, 2015, written response to requests will be published no later than 4:00 pm, November 18, 2015.

3.     **Scope of Work**

- See Attached Scope of Work Description for details.
- Revised Construction Plan Sheets:
  - a. Sheet TS, Combined House Renovations
  - b. Sheet TS-1, 2-Bedroom House Renovation (LOT 58-B)
  - c. Sheet TS-2, 2-Bedroom House Renovation (LOT 58-B)
  - d. Sheet A1.1, 2-Bedroom House Renovation (LOT 58-B-1)
  - e. Sheet TS-1, #-Bedroom House Renovation (LOT 131-A-1)
  - f. Sheet A1.1, 3-Bedroom House Renovation (LOT 131-A-1)
- Revised Specification Table of Contents, Sheet TC-2
- Specification Sections Added:
  - a. Section 07410, Prefinished Metal Roofing
  - b. Section 09550, High Pressure Laminate Flooring
  - c. Section 09610, Floor Treatment
  - d. Section 09655, Sheet Vinyl Flooring
  - e. Section 09660, Resilient Tile Flooring
  - f. Section 09680, Carpet

g. Copies of the Added Specs weren't available at the meeting and will be sent to the Meeting Attendees via email and posted on the website as an Addendum for other interested parties.

- Please be aware of the construction notes denoted on the plan.
- Except as noted in the bid proposal, all work indicated on the construction notes are incidental to the bid proposal items and are made part of this contract.

4. Bid Offer Submittal

- The Bid Offer shall be submitted in a Sealed Envelope with the Bid Package Envelope Cover provided in the Contractor's Submittal portion of the IFB.
- Use the Bid Offer Form provided in the Contractor's Submittal portion of the IFB. Do not re-create the Bid Offer Form, all re-created bids shall be deemed to be non-responsive and will be rejected.
- The Bid Offer Form shall be submitted with the acknowledgement of any addenda.
- Bid Offer shall include all taxes and your full registered company name.
- Please double check your math on the bid offer form.
- Submit your Corporate Resolution with your bid offer form

5. Award

- The award will go to the lowest responsive, responsible offeror
- Will be posted on the State Procurement Office Website
- Bid Protests are due within 5 working days after the posting of the Award.

6. Procurement reminders

- This project is not tax exempt. Your bid proposal must be inclusive of General Excise Tax.
- This project is subject to Chapter 104 HRS, Department of Labor and Industrial Relations (DLIR) prevailing wages and salaries.
- Weekly certified payroll will be required.
- Substitution Request are due November 20, 2015, by 4:00 pm. Follow the instructions for, Substitution of Materials and Equipment Before Bid Opening, located in the "Instructions for Bid Submittal" item I.H.
- After bid opening and prior to award of the contract, the Department shall verify compliance with Sections 103D-310 and 103D-328 HRS via Hawaii Compliance Express (HCE) for the bidder and all subcontractors. Therefore it is recommended that the bidder and all subcontractors register with HCE. Instructions for registration are at the HCE website: <http://vendors.ehawaii.gov>.
- Failure by the bidder and/or any subcontractor to rectify a non-compliant status within ten business days of notification will be considered as sufficient for the disqualification of the bidder and rejection of its proposal.

5. Completion Schedule and Liquidated Damages

- Time to complete: 180 calendar days from Notice to Proceed
- Liquidated damages: \$300 per calendar day

6. Questions/Answers issued by Addenda

- Written answers to questions will be provided to all plan holders via addenda posted on our website; any verbal responses by the Department and Consultant shall not be binding.
- Interested bidders are responsible to check our website for issuance of any addenda.

7. Deadlines

- See attached Submittals and Deadlines Table.

8. Questions and Answers

- No questions were asked during the meeting or during the site visits.

Dennis K. W. Lee, P.E.  
WRSA, Hilo Office

**2-Bedroom House Renovation (LOT 58-B-1)**  
**And**  
**3-Bedroom House Renovation (LOT 131-A-3)**  
**IFB-16-HHL-005**

Submittals and Deadlines Table

SUBMITTAL	DEADLINE
Issuance of Addenda containing pre-bid meeting minutes <ul style="list-style-type: none"><li>Interested bidders are required to check the website for any Addenda issued.</li></ul>	4:00 pm, November 18, 2015
Request for Substitutions	4:00 pm, November 20, 2015
Written questions	4:00 pm, November 20, 2015
Notice of Intention to Bid	4:00 pm, November 24, 2015
Standard Qualification Questionnaire <ul style="list-style-type: none"><li>SQQ submittals for previous projects <b>not</b> valid</li></ul>	4:00 pm, November 24, 2015
Issuance of Final Addenda	4:00 pm, November 25, 2015
Bid Opening <ul style="list-style-type: none"><li>Held at DHHL East Hawaii District Office</li><li>160 Baker Ave., Hilo, HI</li></ul>	10:00 am, December 4, 2015
Award of contract will be made to the lowest responsible and responsive "Total Sum Bid", approximately two weeks following bid opening and after certification of the bid tabulation.	

ATTACHMENT

Pre-Bid Sign-In Sheet

2-Bedroom House Renovation (LOT 58-B-1) and  
3-Bedroom House Renovation (LOT 131-A-1)

PRE-BID CONFERENCE SIGN-IN SHEET

NAME	ORGANIZATION	PHONE	EMAIL ADDRESS
Richard Speer <i>RS</i>	DHHL, Land Development Division	(808) 620-9287	<a href="mailto:richard.a.speer@hawaii.gov">richard.a.speer@hawaii.gov</a>
Kehaulani Quartero <i>KQ</i>	DHHL, Land Development Division	(808) 620-9284	<a href="mailto:kehaulani.a.quartero@hawaii.gov">kehaulani.a.quartero@hawaii.gov</a>
Louis Hao <i>✓</i>	DHHL East Hawaii	(808) 974-4250	<a href="mailto:Louis.Hao@hawaii.gov">Louis.Hao@hawaii.gov</a>
Dennis K. W. Lee <i>DW</i>	Wesley R. Segawa & Associates, Inc.	(808) 938-6264	<a href="mailto:dennis.lee@wrsasolutions.com">dennis.lee@wrsasolutions.com</a>
Dan Bautista <i>✓</i>	Wesley R. Segawa & Associates, Inc.	(808) 747-2657	<a href="mailto:Dan@wrsasolutions.com">Dan@wrsasolutions.com</a>
<i>Robert Yamada</i>	<i>Wesley R. Segawa &amp; Associates, Inc.</i>	<i>(808) 960-9129</i>	<i>Robert.Yamada@wrsasolutions.com</i>
<i>Lester Bondallian</i>	<i>Constructors Hawaii Inc</i>	<i>935-2855/960-5229</i>	<i>lester@constructorshawaii.com</i>
<i>Tracey Carvalho</i>	<i>GW Construction</i>	<i>966-4582</i>	<i>tracey@gwconstruction.net</i>



ATTACHMENT

Scope of Work Description

2-Bedroom House Renovation (LOT 58-B-1) And  
3-Bedroom House Renovation (LOT 131-A-1)  
IFB-16-HHL-005

SCOPE OF WORK DESCRIPTION: 2-Bedroom House Renovation (LOT 58-B-1)

<u>Item</u>	<u>Name</u>	<u>Description</u>
1	General Requirements	General Requirements include all work not specified in the Construction Plans and Specifications but are part of required work or incidental to the required work. General Requirements also requires the Contractor to inspect and assess the working condition of the Electrical and Plumbing systems and list work necessary to make these systems perform in a safe and proper operating condition. This Contractor shall submit a written Change Request to the Department of Hawaiian Home Lands for this additional work. See Revised Sheet A1.1 for existing locations of the water meter and sewer hookup. The sewer connection (from house to street) and the abandonment of the cesspool and part of the existing sewer line will be part of the Change Request.
2	Demolition	Demolition of work items on the Basement and Upper Level are indicated on Sheets A2.1, A3.1, A4.1, A5.1, A6.1, A7.1 and A7.3 of the Construction Plans.
3	Landscape	Landscape include planting of ground cover and grass to the damaged work areas around the house.
4	Construction of Concrete	Construction of Concrete include structural concrete installation as indicated on Sheets A2.1, A2.2, A3.1, A3.2, A5.1, A6.1, A7.0, A7.2, and A7.3 of the Construction Plans.
5	Finish Carpentry	Finish Carpentry include furnishing and installing all carpentry, millwork, and related items as indicated on the Construction Plans.
6	Sealants	Sealants include furnishing and installing all exterior and interior caulking and sealing for thermal and moisture protection as indicated on the Construction Plans.
7	Doors	Doors include furnishing and installing doors according to the Door Schedule on Sheet A2.3 and New Work as indicated on Sheets A2.2, A3.2, A6.1, and A6.2 of the Construction Plans.
8	Windows	Windows include furnishing and installing windows according to the Window Schedule on Sheet 2.3 and New Work as indicated on Sheets A2.2, A3.2, A6.1, and A6.2 of the Construction Plans.
9	Gypsum Board	Gypsum Board includes furnishing and installing gypsum board, complete with all related accessories and fasteners as indicated on the Construction Plans.
10	Painting	Paint includes furnishing of materials and equipment and completion of painting and painter's finish on exposed exterior and interior surfaces as required to complete finishing of the Work. See Sheets TS.2, A3.2, A5.2, A6.1 and A6.2 of the Construction Plans. Paint colors will be selected by Richard Speer during construction.
11	Smoke Detectors	Smoke detectors include removal and replacement of smoke detector with battery backup as indicated on Sheets A2.1, A2.2, and A5.2 of the Construction Plan.
12	Hazardous Materials	Hazardous Materials include Lead-Based Paint and Asbestos abatement and all work necessary to minimize exposure to existing hazardous materials on the work site. See Section 01715 of the Specifications for both Lead-Based Paint and Asbestos Surveys and Section 13280 of the Specifications for Hazardous Waste Remediation.
13	HVAC Flooring	<b>DELETE THIS PROPOSAL ITEM AND REPLACE WITH FLOORING</b> Flooring include furnishing and installing 3 different types of flooring as indicated on Sheets A2.2, and A7.3 of the Construction Plans.

<u>Item</u>	<u>Name</u>	<u>Description</u>
14	Plumbing	Plumbing work includes furnishing and installing plumbing components as indicated on the Construction Plans. This work also include tightness test, disinfection of potable water lines, and clean-up.
15	Electrical	The Contractor shall furnish all labor, materials, tools, equipment, and appliances required to provide and install all electrical work, complete, as indicated on Sheets TS.2, A2.2, and A5.2. The Contractor shall provide LED light fixtures for new fixtures and LED light bulbs for existing fixtures to remain.
16	Roofing	The Contractor shall furnish all labor, materials, tools, and equipment required to replace and install new roof as indicated on Sheets A2.3, A3.1, A3.2, A4.1, and A7.3 of the Construction Plans.

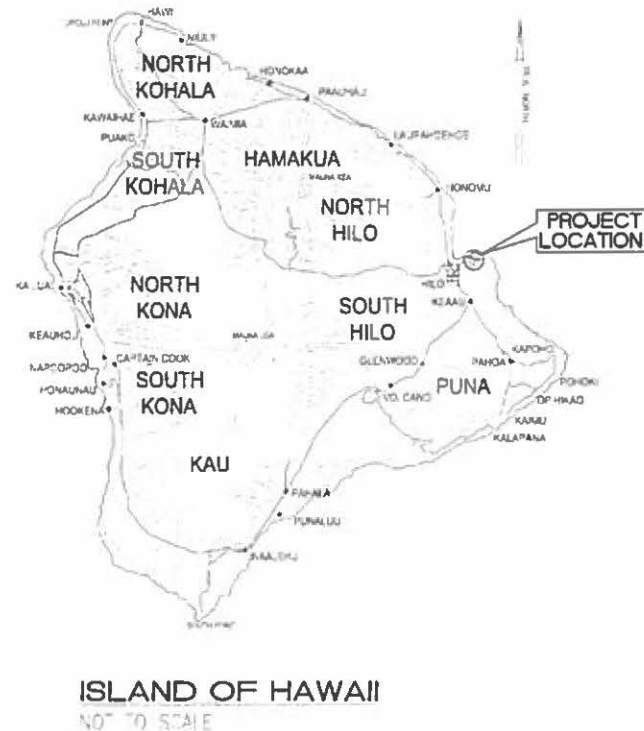
SCOPE OF WORK DESCRIPTION: 3-Bedroom House Renovation (LOT 131-A-1)

<u>Item</u>	<u>Name</u>	<u>Description</u>
17	General Requirements	General Requirements include all work not specified in the Construction Plans and Specifications but are part of required work or incidental to the required work. General Requirements also requires the Contractor to inspect and assess the working condition of the Electrical and Plumbing systems and list work necessary to make these systems perform in a safe and proper operating condition. This Contractor shall submit a written Change Request to the Department of Hawaiian Home Lands for this additional work. See Revised Sheet A1.1 for existing locations of the water meter and cesspool. If the cesspool abandonment is required, the Contractor shall submit a written Change Request. The replacement of the water service line (from house to street) shall be included in Item 30, Plumbing.
18	Demolition	Demolition of work items on the Basement and Upper Level are indicated on Sheets A2.1, A3.1, A4.1, A5.1, and A6.1 of the Construction Plans.
19	Landscape	Landscape include planting of ground cover and grass to the damaged work areas around the house.
20	Construction of Concrete	Construction of Concrete include structural concrete installation as indicated on Sheet A3.2 of the Construction Plan.
21	Finish Carpentry	Finish Carpentry include furnishing and installing all carpentry, millwork, and related items as indicated on the Construction Plans.
22	Sealants	Sealants include furnishing and installing all exterior and interior caulking and sealing for thermal and moisture protection as indicated on the Construction Plans.
23	Doors	Doors include furnishing and installing doors according to the Door Schedule on Sheet A2.2 and New Work as indicated on Sheets A2.2, A3.2, A6.1, and A6.2 of the Construction Plans.
24	Windows	Windows include furnishing and installing windows according to the Window Schedule on Sheet 2.2 and New Work as indicated on Sheets A2.2, A3.2, A6.1, and A6.2 of the Construction Plans.
25	Gypsum Board	Gypsum Board includes furnishing and installing gypsum board, complete with all related accessories and fasteners as indicated on the Construction Plans.

<u>Item</u>	<u>Name</u>	<u>Description</u>
26	Painting	Paint includes furnishing of materials and equipment and completion of painting and painter's finish on exposed exterior and interior surfaces as required to complete finishing of the Work. See Sheets TS.2, A3.2, A5.1, and A6.2 of the Construction Plans. Paint colors will be selected by Richard Speer during construction.
27	Smoke Detectors	Smoke detectors include furnishing and installing one smoke detector with battery backup near the Kitchen location, to be determined by Richard Speer.
28	Hazardous Materials	Hazardous Materials include Lead-Based Paint and Asbestos abatement and all work necessary to minimize exposure to existing hazardous materials on the work site. See Section 01715 of the Specifications for both Lead-Based Paint and Asbestos Surveys and Section 13280 of the Specifications for Hazardous Waste Remediation.
29	<b>HVAC</b> Flooring	<b>DELETE THIS PROPOSAL ITEM AND REPLACE WITH FLOORING</b> Flooring include furnishing and installing 3 different types of flooring as indicated on Sheet A2.2 of the Construction Plans.
30	Plumbing	Plumbing work includes furnishing and installing plumbing components as indicated on the Construction Plans. This work also include tightness test, disinfection of potable water lines, and clean-up. Replacement of the water service line (from street to house) and Propane Tank connection are included in this proposal item.
31	Electrical	The Contractor shall furnish all labor, materials, tools, equipment, and appliances required to provide and install all electrical work, complete, as indicated on Sheet A5.1. The Contractor shall provide LED light fixtures for new fixtures and LED light bulbs for existing fixtures to remain.
32	Roofing	The Contractor shall furnish all labor, materials, tools, and equipment required to replace and install new roof as indicated on Sheets A3.2, A4.1, and A5.1 of the Construction Plans.

ATTACHMENT

Revised Construction Plans Sheets



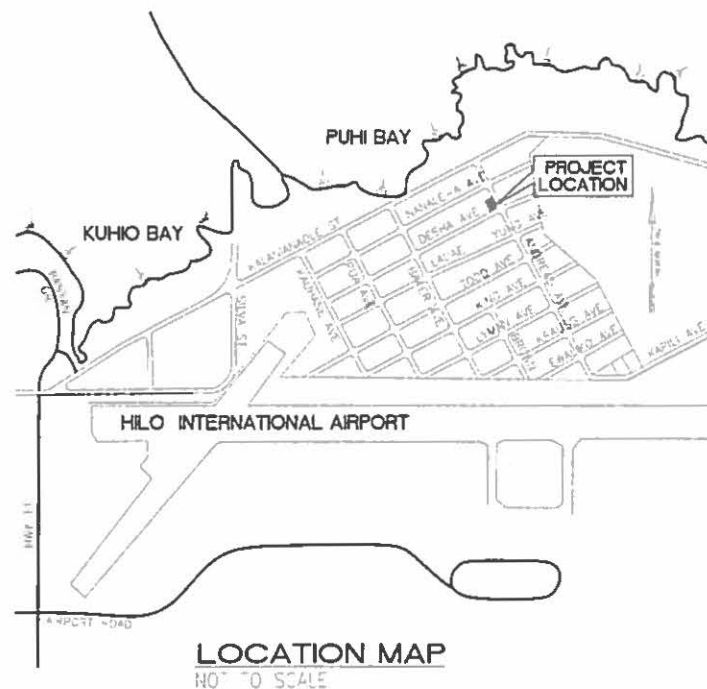
STATE OF HAWAII  
DEPARTMENT OF HAWAIIAN HOME LANDS  
IFB-16-HHL-005  
**2 BEDROOM HOUSE RENOVATION  
LOT 58-B-1**

TAX MAP KEY: (3) 2 - 1 - 021: 072  
82 ANDREWS AVENUE  
SUBDIVISION APPLICATION NO: SUB-15-001465

**AND  
3 BEDROOM HOUSE RENOVATION  
LOT 131-A-3**

TAX MAP KEY: (3) 2 - 1 - 021: 010  
372 DESHA AVENUE  
SUBDIVISION APPLICATION NO: SUB-15-001463

**WAIAKEA, SOUTH HILO,  
ISLAND OF HAWAII, HAWAII**



**LOT 58-B-1**

SHEET NO.	DRAWING NO.	DESCRIPTION
1	TS1	TITLE SHEET, ADEY, MAP
2	TS2	NOTES
<b>ARCHITECTURAL</b>		
3	A1.1	EXISTING SITE PLAN, ARCHITECTURAL ABBREVIATIONS & SYMBOLS
4	A2.1	EXISTING / DEMOLITION FOUNDATION & FLOOR PLAN / BASEMENT LEVEL, EXISTING / DEMOLITION FLOOR PLAN UPPER LEVEL
5	A2.2	EXISTING / NEW WORK FOUNDATION & FLOOR PLAN / BASEMENT LEVEL, EXISTING / NEW WORK FLOOR PLAN UPPER LEVEL, ROOF DRAINAGE PLAN (CARPORT)
6	A2.3	DOOR & WINDOW SCHEDULE, LIGHT & VENTILATION REQ. FLASHING DETAILS
7	A3.1	EXISTING / DEMOLITION EXTERIOR ELEVATIONS
8	A3.2	EXISTING / NEW WORK EXTERIOR ELEVATIONS
9	A4.1	EXISTING / DEMOLITION / NEW WORK ROOF PLAN, DETAILS
10	A5.1	EXISTING / DEMOLITION REFLECTED CEILING PLAN / BASEMENT & UPPER LEVEL
11	A5.2	EXISTING / NEW WORK REFLECTED CEILING PLAN / BASEMENT & UPPER LEVEL
12	A6.1	EXISTING / DEMOLITION / NEW WORK INTERIOR ELEVATIONS
13	A6.2	INTERIOR ELEVATIONS
14	A7	WALL SECTION, DETAILS
15	A7.2	STAIR DETAILS
16	A7.3	SECTION THRU BUILDING DETAIL
16 TOTAL SHEET		

**LOT 131-A-3**

SHEET NO.	DRAWING NO.	DESCRIPTION
1	TS1	TITLE SHEET, ADEY, MAP
<b>ARCHITECTURAL</b>		
2	A1.1	EXISTING SITE PLAN
3	A2.1	EXISTING / DEMOLITION FLOOR PLAN
4	A2.2	EXISTING / NEW WORK FLOOR PLAN
5	A3.1	EXISTING / DEMOLITION EXTERIOR ELEVATIONS
6	A3.2	EXISTING / NEW WORK EXTERIOR ELEVATIONS
7	A4.1	EXISTING / DEMOLITION / NEW WORK ROOF PLAN, DETAILS
8	A5.1	REFLECTED CEILING PLAN
9	A6.1	EXISTING / DEMOLITION INTERIOR ELEVATIONS
10	A6.2	EXISTING / NEW WORK INTERIOR ELEVATIONS
10 TOTAL SHEET		

APPROVED BY:

*[Signature]*  
CHAIRMAN, HAWAIIAN HOMES COMMISSION  
STATE OF HAWAII

10/7/15  
DATE

Project Title:

DHHL KEAUKAHA LOT 58-B-1 & LOT 131-A-3  
2 & 3 BEDROOM HOUSE RENOVATION  
TMK: (3) 2-1-021:072 & TMK: (3) 2-1-021:010

Sheet Title:

TITLE SHEET, INDEX MAP, APPROVED BY

DESIGN BY: WRS  
DRAWN BY: WRS  
CHECKED BY: WRS  
APPROVED BY: CL  
DATE: 10/7/15  
SCALE: AS NOTED  
FILE NO: 10/02/14

DRAWING NO.  
**TS**

STATE OF HAWAII  
DEPARTMENT OF HAWAIIAN HOME LANDS  
IFB-16-HHL-005

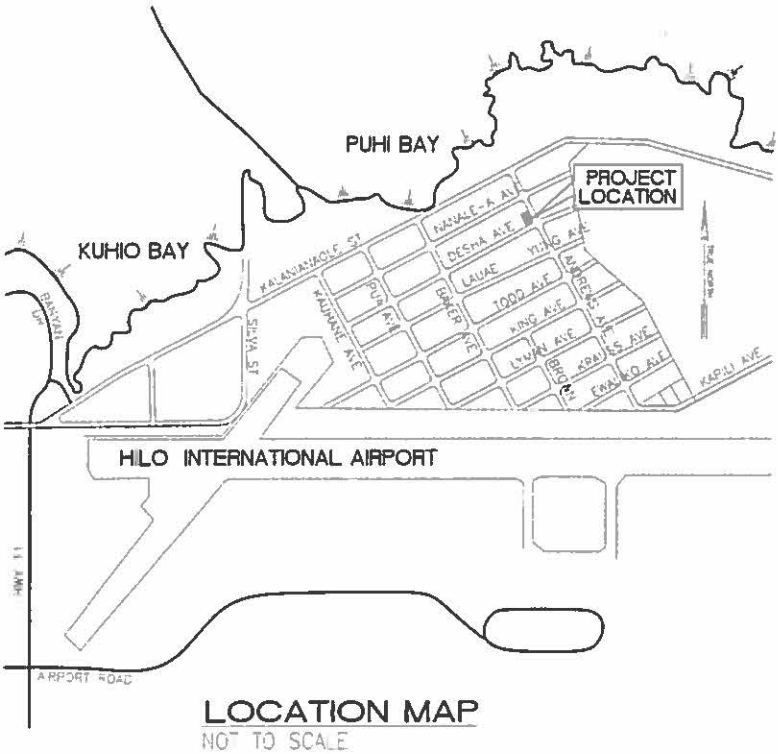
2 BEDROOM HOUSE RENOVATION  
LOT 58-B-1

WAIAKEA, SOUTH HILO,  
ISLAND OF HAWAII, HAWAII

TAX MAP KEY: (3) 2 - 1 - 021: 072  
82 ANDREWS AVENUE  
SUBDIVISION APPLICATION NO: SUB-15-001465



ISLAND OF HAWAII  
NOT TO SCALE



LOCATION MAP  
NOT TO SCALE

SHEET I.O.	DRAWING NO.	DESCRIPTION
1.	TS1	TITLE SHEET, INDEX, MAP
2.	TS2	NOTES
<b>ARCHITECTURAL</b>		
3.	A1.1	EXISTING SITE PLAN, ARCHITECTURAL ABBREVIATIONS & SYMBOLS
4.	A2.1	EXISTING / DEMOLITION FOUNDATION & FLOOR PLAN / BASEMENT LEVEL, EXISTING / DEMOLITION FLOOR PLAN UPPER LEVEL
5.	A2.2	EXISTING / NEW WORK FOUNDATION & FLOOR PLAN / BASEMENT LEVEL, EXISTING / NEW WORK FLOOR PLAN UPPER LEVEL, ROOF FRAMING PLAN (CARPORT)
6.	A2.3	DOOR & WINDOW SCHEDULE, LIGHT & VENTILATION REQ, FLASHING DETAILS
7.	A3.1	EXISTING / DEMOLITION EXTERIOR ELEVATIONS
8.	A3.2	EXISTING / NEW WORK EXTERIOR ELEVATIONS
9.	A4.1	EXISTING / DEMOLITION / NEW WORK ROOF PLAN, DETAILS
10.	A5.1	EXISTING / DEMOLITION REFLECTED CEILING PLAN / BASEMENT & UPPER LEVEL
11.	A5.2	EXISTING / NEW WORK REFLECTED CEILING PLAN / BASEMENT & UPPER LEVEL
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13.	A6.2	INTERIOR ELEVATIONS
14.	A7.1	WALL SECTION, DETAILS
15.	A7.2	STAIR DETAILS
16.	A7.3	SECTION THRU BUILDING, DETAIL

16 TOTAL SHEET

APPROVED BY:

*[Signature]*  
CHAIRMAN, HAWAIIAN HOME LANDS COMMISSION  
STATE OF HAWAII

10/15/15  
DATE:

Project Title:  
DHL KEAUKAHA LOT 58-B-1  
2 BEDROOM HOUSE REPAIR  
TAX: (3) 2-1-021: 72

Sheet Title:  
TITLE SHEET, INDEX MAP, APPROVED BY

DESIGN BY: WRS  
DRAWN BY: KK  
CHECKED BY: WRS  
APPROVED BY: DL  
DATE: 10/15/15  
SCALE: AS NOTED  
SHEET NO. 1 OF 16

TS1



## CODE DATA

OWNER HAWAIIAN HOME LANDS  
JESSIE JONES

MAILING ADDRESS 3212 CALIFORNIA STREET  
EUREKA, CALIFORNIA 95503-5265

BUILDING ADDRESS 82 ANDREWS AVENUE

(3) 2-1-021:072  
TAX MAP KEAUKAHA TRACT NO 1  
KEY WAIKAE, SOUTH HILO, HAWAII

HAWAII COUNTY WATER,  
ZONING RS-10 (ZONING X)  
LAND AREA: 0.4915 ACREAGE (21,409 SQ FT)

2006 IRC, 2006 IRC  
County of Hawaii Amendment - Chapter 5 Building

Occupancy Group	R-3
Type of Construction	V-B
Allowable Area	Unlimited
Allowable Number of stories	3
Allowable Height	35'-0"
	2 ACTUAL (EXIST)
	18'-8" ACTUAL (EXIST)

No Fire Sprinkler (180) Amending Section 903.2.7

Number of Stories	Existing
Number of Bedroom	2
Number of Bathroom	1

### EXISTING AREA

Number and Room Name	Area (Gross)
101	101
102	102
103	103
104/105	104/105
106	106
107	107
108	108
109	109
110	110
111	111
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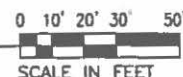
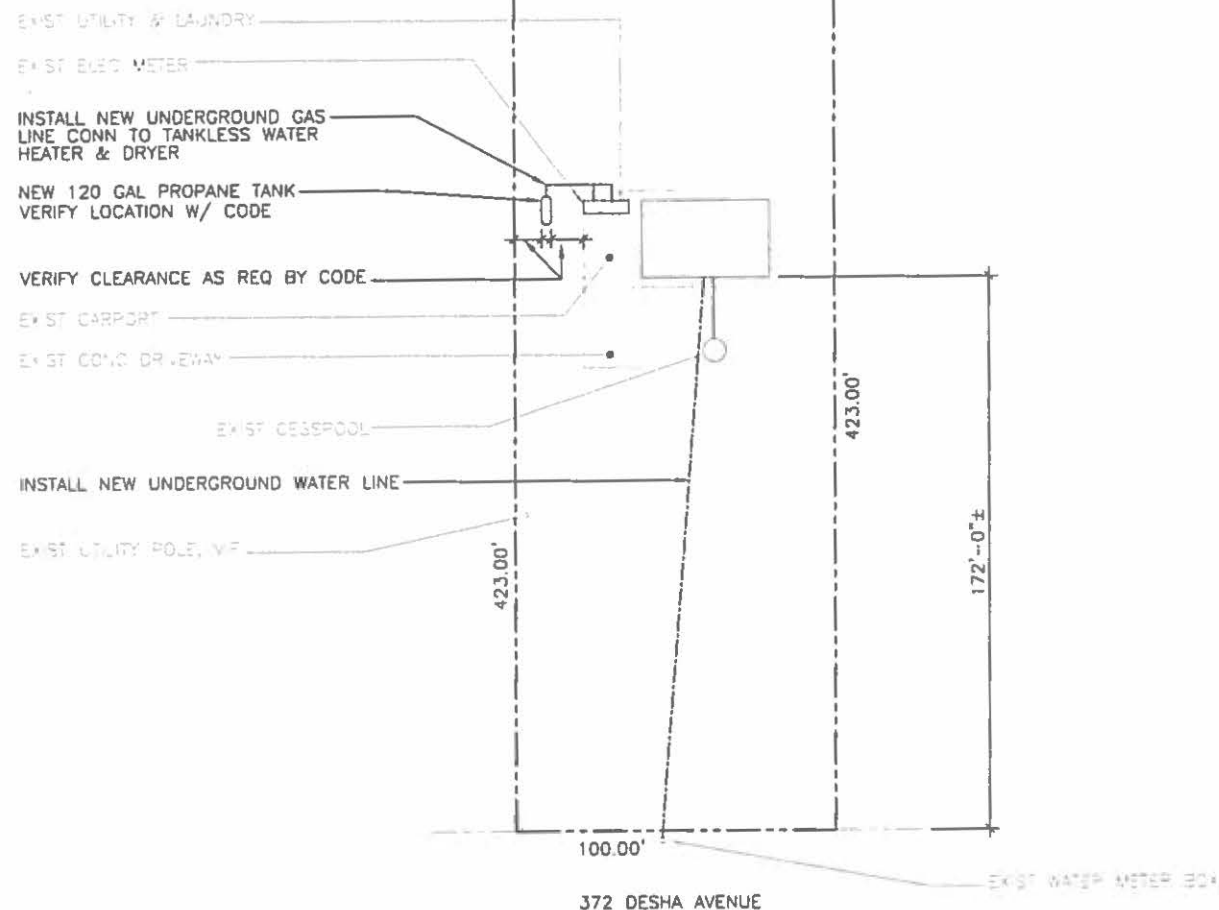
# 3 BEDROOM HOUSE RENOVATION

## LOT 131-A-3

SUBDIVISION APPLICATION NO: SUB-15-001463



**EXISTING SITE PLAN**  
SCALE 1" = 30'



**ARCHITECTURAL ABBREVIATIONS**

& and  
° degree  
# pound / number

**A**  
AB Anchor Bolt  
ADJ Adjustable  
ADJA Adjacent  
ALUM Aluminum  
APPROX Approximate

**B**  
BD Board  
BLDG Building  
BLK Block  
BLKG Blocking  
BM Beam  
BOT Bottom  
BR Bedroom  
BRKT Bracket

**C**  
CAB Cabinet  
CCJ Crack Control Joint  
CHAN Channel  
CI Cast Iron  
CJ Control Joint  
CK Caulking  
CL Centerline /  
Clearance /  
Class / Closet  
CLG Ceiling  
CLR Clear  
CLS Closure  
CMU Concrete Masonry  
Unit  
CNTR Counter  
CO Cleanout / Cased  
Opening  
COL Column  
CONC Concrete  
CONN Connection  
CONT Continuous  
CONTR Contractor  
CORR Corridor / Corrugate  
CP Carpet  
CR Closet Rod / Curtain  
Rod  
CT Ceramic Tile  
CTR Center / Counter  
CTSK Countersunk

**D**  
d Penny (nails)  
DBL Double  
DET Detail  
DIA Diameter  
DIAG Diagonal  
DIM Dimension  
DN Down  
DR Door  
DS Downspout  
DW Dishwasher  
DWG Drawings  
DWR Drawer

**E**  
EA Each  
EJ Expansion Joint  
EL Elevation  
ELEC Electrical  
EP Electric Panel  
EQ Equal  
EQPT Equipment  
EW Each Way  
EXH Exhaust  
EXIST Existing  
EXP Expansion  
EXT Exterior

**F**  
FAST Fastener  
FDN Foundation  
FIN Finish / Finished  
FIXT Fixture  
FLASH Flashing  
FLG Flooring  
FLR Floor  
FLUOR Fluorescent  
FO Face of  
FOC Face of Concrete  
FOM Face of Masonry  
FOS Face of Slab / Face  
of Studs  
FR Frame / Front  
FT Foot / Feet  
FTG Footing  
FURR Furring / Furred  
FUT Future

**G**  
G Gas / Girder /  
Gutter  
Gage  
GAL Gallon  
GALV Galvanized  
GB Grab Bar  
GL Glass  
GLU-LAM Glued Laminated  
Wood  
GND Ground

**H**  
HB Hose Bibb  
HC Hollow Core  
HDWD Hardwood  
HDWE Hardware  
HGR Hanger  
HGT Height  
HORIZ Horizontal  
HTR Heater

**I**  
ID Inside Diameter  
(dimension)  
IN Inch  
INSUL Insulation  
INT Interior

**J**  
JAL Jalousie  
JST Joist  
JT Joint

**K**  
KIT Kitchen

**L**  
LAM Laminate /  
Laminated  
LAV Lavatory  
LOC Location  
LT Laundry Tray  
LTG Lighting

**M**  
MAX Maximum  
MC Medicine Cabinet  
MECH Mechanical  
MET Metal  
MFR Manufacture /  
Manufacturer  
MIN Minimum  
MIR Mirror  
MR Moisture Resistant  
MTD Mounted  
MTG Mounting

**N**  
NIC Not in Contract  
NO Number  
NS No Scale  
NTS Not To Scale

**O**  
OC On Center  
OBS Obscure  
OD Outside Diameter  
(dimension)  
OPNG Opening

**P**  
PL Plate / Plan  
PLAM Plastic Laminate  
PLAS Plaster  
PLBG Plumbing  
PNL Panel  
PR Pair  
PPROP Property  
PRV Pressure Relief Valve  
PSF Pounds Per Square  
Foot  
PT Paint / Point  
PTN Partition

**Q**  
PVC Polyvinyl Chloride

**R**  
R Radius / Riser  
RCP Reflected Ceiling Plan  
REBAR Reinforcing Bar  
REFR Refrigerator  
REINF Reinforced /  
Reinforcing  
REQ Required  
RESIL Resilient  
REV Revised / Revision  
RF Roof  
RFG Roofing  
RH Robe Hook / Round  
Head  
RLG Railing  
RM Room

**S**  
S South  
SC Scale / Solid Core  
SCHED Schedule  
SCR Screen / Shower  
Curtain Rod  
SD Smoke Detector /  
Soap Dispenser /  
Shower Drain  
SECT Section  
SF Square Feet  
SH Shelf  
SHR Shower  
SHT Sheet  
SHTG Sheathing

**T**  
T&G Tongue and Groove  
T/S Tub / Shower  
TB Tower Bar  
TEL Telephone  
TFMR Transformer  
THK Thick / Thickness  
THR Threshold  
TLT Toilet  
TV Television  
TYP Typical

**V**  
VERT Vertical  
VTR Vent Through Roof  
VF Verify in the Field

**W**  
W/ With  
W/O Without  
WC Wallcovering / Water  
Closet  
WD Wood  
WDP Wood Paneling  
WDW Window  
WH Water Heater  
WP Waterproof  
WSCT Wainscot  
WWF Welded Wire Fabric

**SIM** Similar  
**SL** Slope  
**SLDG** Siding  
**SLNT** Sealant  
**SPEC** Specification  
**SPKR** Speaker  
**SPRK** Sprinkler  
**SQ** Square  
**SSK** Service Sink  
**SST** Stainless Steel  
**STD** Standard  
**STL** Steel  
**STOR** Storage  
**STRUC** Structural  
**STRUC** Structure  
**SUSP** Suspended  
**SW** Switch  
**SYM** Symmetrical

**T**  
T&G Tongue and Groove  
T/S Tub / Shower  
TB Tower Bar  
TEL Telephone  
TFMR Transformer  
THK Thick / Thickness  
THR Threshold  
TLT Toilet  
TV Television  
TYP Typical

**V**  
VERT Vertical  
VTR Vent Through Roof  
VF Verify in the Field

**W**  
W/ With  
W/O Without  
WC Wallcovering / Water  
Closet  
WD Wood  
WDP Wood Paneling  
WDW Window  
WH Water Heater  
WP Waterproof  
WSCT Wainscot  
WWF Welded Wire Fabric

**ARCHITECTURAL REFERENCE SYMBOLS**

**ELEVATION**  
(EXTERIOR OR  
INTERIOR)

LETTER / NUMBER  
IDENTIFYING ELEVATION  
DRAWING NUMBER ON  
WHICH ELEVATION IS  
DRAWN

**ELEVATION**  
(INTERIOR)

LETTER / NUMBER  
IDENTIFYING ELEVATION  
DRAWING NUMBER ON  
WHICH ELEVATION IS  
DRAWN  
VIEW LETTER

**SECTIONS**

LETTER / NUMBER  
IDENTIFYING SECTION  
DRAWING NUMBER ON  
WHICH ELEVATION IS  
DRAWN

**ROOM NAME**

ROOM NAME  
NUMBER IDENTIFYING  
ROOM

**DRAWING  
REVISION**

NUMBER IDENTIFYING  
SPECIFIC REVISION

**DOOR SYMBOL**

NUMBER IDENTIFYING  
DOOR SYMBOL

**WINDOW  
SYMBOL**

LETTER IDENTIFYING  
WINDOW SYMBOL

**DRAWING  
TITLE**

TITLE OF DRAWING  
TITLE  
SCALE 1" = 0'-1"  
SCALE OF DRAWING ON  
FULL SIZE SHEET  
TITLE LETTER /  
NUMBER  
IDENTIFYING  
DRAWING ON  
SHEET

This work was prepared by me  
or under my supervision and  
construction of this project will  
be under my observation.



**DHHL KEAUKAHA LOT 131A  
3 BEDROOM HOUSE REPAIR**  
TAK: (3) 2-1-021.010  
EXISTING / SITE PLAN

job title: sheet title:

DESIGN BY: WRS  
DRAWN BY: KK  
CHECKED BY: WRS  
APPROVED BY:  
DATE: MAY 2015  
SCALE: AS NOTED  
FILE No. W1302.43

DRAWING No.  
**A1.1**

ATTACHMENT

Revised Specs – Replacement and Added Versions

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## DIVISION 7 – THERMAL AND MOISTURE PROTECTION

### SECTION 07410 – PRE-FINISHED METAL ROOFING

#### PART 1 – GENERAL

##### 1.01 GENERAL REQUIREMENTS

- A. Perform operations and furnish equipment, tools, materials, related items and labor necessary for metal roofing work as indicated on the drawings and specified herein.

##### 1.02 GENERAL REQUIREMENTS:

- A. Furnish all labor, materials, tools and equipment necessary to provide a complete pre-finished corrugated metal roofing, including all associated accessories as indicated on the contract drawings and as specified herein.
- B. Pre-finished corrugated metal roofing shall be fabricated and factory finished as specified herein and shall conform to the American Iron and Steel Institute “Light-Gage Cold-Formed Steel Design Manual” and the requirements of the Steel Deck Institute.
- C. The contractor shall be responsible to verify all existing and proposed dimensions and conditions, and shall notify the Contracting Officer of any discrepancies between actual conditions and the contract document before ordering and fabrication.

##### 1.03 SUBMITTALS:

- A. Shop Drawing: The Contractor shall prepare shop drawings showing complete arrangements and details for the laying and anchoring of the pre-finished corrugated metal roofing, including the fastener layout, closure strips and fabricated ridge cap, edge and counter flashing in accordance with the contract drawings; and six (6) copies of such drawings shall be submitted to the Contracting Officer for approval. Shop drawings shall include reference to the sheet and detail of the contract drawings which they depict. Photocopies of the contract drawings will not be accepted as shop drawings.
- B. Manufacturer's Product Data: The Contractor shall submit four (4) copies of the Manufacturer's original product literature for the pre-finished corrugated metal roofing. Manufacturer's product data shall include test references to industry standards (ASTM), material composition and finished, and any material limitations and/or restrictions.
  - 1. Manufacturer's drawing: Should the products of the manufacturer require different drawings or details from that shown on the contract drawings or specified, the Contractor shall submit six (6) copies/sets of the Manufacturer's drawings with field adjustments with the approval of the Contracting Officer and



at no additional cost to the State. Manufacturer's drawing shall be prepared as specified above for "Shop Drawings".

- C. Physical Sample: The Contractor shall submit two (2) samples of the actual pre-finished corrugated metal roofing with the specified and finish, including fasteners, closure strips, etc. required for a complete system. Sample shall be of adequate size to depict the actual Installation, with a minimum standard width x 12 inches long.
- D. Color Sample: The Contractor shall submit two (2) samples of the selected finish color for the pre-finished corrugated metal roofing.
- E. Certificate: The Contractor shall submit six (6) copies of the Manufacturer's certificate stipulating that the material meets or exceeds the requirements of this Specification and the named test methods/references (ASTM), and that the material is suitable for the intended use.
- F. Guaranty: The Contractor shall furnish a two year written guaranty countersigned by the Roofing, Sheet Metal, and Sealant and Caulking Contractors as specified below to the Contracting Officer.
- G. No ordering, fabrication and delivery of materials to the project site shall be done until all of the submittal(s) specified above have been approved by the Contracting Officer.

#### 1.04 QUALITY ASSURANCE:

- A. Guaranty: The Contractor shall furnish to the Contracting Officer a written guaranty on the pre-finished metal roofing, including associated flashing and sealing for a two year period after the date of the project acceptance against defects resulting from the use of defective or inferior materials, equipment or workmanship. The guaranty shall be signed jointly by the General Contractor and the Roofing, Sheet Metal and Sealant Subcontractors.
  - 1. During the terms of the guaranty, the Contractor shall replace and/or repair work where leaking occurs due to any penetration, excessive deterioration or otherwise fails to perform as required due to failure of the materials and/or faulty workmanship of the pre-finished corrugated metal roofing.
  - 2. The guaranty shall also include any other associated remedial work required to provide a complete pre-finished corrugated metal roofing including, but not limited to the following:
    - a. Replacement of sealant and caulking compounds.
    - b. Incidental priming and painting when necessary to match adjacent painted surfaces.
  - 3. The Contractor shall also provide for repairs and replacement of damage to the building, finishes, etc. resulting from such leaks in the pre-finished corrugated metal roofing.

4. All repair, replacement and/or remedial work shall be made at no additional cost to the State.
- B. Manufacturer's Warranty: The manufacturer of the pre-finished corrugated metal roofing system shall also submit to the Contracting Officer a manufacturer's warranty for coating system under tropical Hawaii weather conditions, with the following as an expected performance standard:
1. For ten (10) years, roof panels will not perforate or structurally fail. Should cosmetic degradation or color change to pigmented color coating occur, there will not be progressive deterioration of steel base material to extent that would cause panel to no longer be able to provide wind and live load resistance for which it was designed, and that would cause panel to leak.
  2. For five (5) years, roof panels will not change color more than five (5) NBS units as determined in accordance with procedures set forth in ASTM D 2244; chalk more than five (5) ratings when measured in accordance with procedure set forth in ASTM D 659; drip, flake, check, blister, crack, peel or lose adhesion properties of the finish. The term "crack" shall not include minute forming defects which may occur in fabrication of coated panel and installation processes.
  3. Should product fail to meet the condition set forth above, manufacturer will at its option, either re-coat or replace non-complying material. Manufacturer may reserve the right to investigate each installation of coated roof products and to review records and drawings regarding such application.
  4. Repainted or replacement material supplied shall be subject to warranty only for remainder of time applicable to material originally purchased.
  5. This warranty is not applicable where failure to meet conditions specified in Subparagraphs 1. And 2. Above results from product misuse, fire or physical damage.
- C. Qualifications:
1. Fabricator qualifications: Fabricators performing work under this Section shall have had a minimum of five years of previous fabrication experience with a successful in-service performance record, including sufficient production and available selected color inventory capacity to fabricate pre-finished corrugated metal roofing panels without causing delays.
  2. Installer qualifications: Installers performing work under this Section shall have had a minimum of three of previous experience on similar types of roofing projects with a successful in-service performance record.

#### 1.05 PRODUCT DELIVERY AND HANDLING

- A. All materials of this Section shall be protected against damage before, during and after installation, and to protect the materials of this work and the work of the other trades. Materials shall be stored off the ground, under cover and away from dampness. In the event of damage, replace and/or repair items damaged to the satisfaction of the Contracting Officer and at no additional cost to the State.
- B. No materials shall be delivered to the project site until ready for installation and shall be stored off the project site by the Contractor.

#### 1.06 COORDINATION

- A. Before commencing with any work of this Section, the Contractor shall inspect the existing areas, surfaces and/or conditions of which work under this Section will be performed. The Contractor shall report any defective conditions and send a copy to the Contracting Officer for interpretation and corrective measures. The Contractor shall not proceed until the unsatisfactory conditions have been corrected. Proceeding with the work shall imply acceptance of the existing conditions. Coordinate work with other trades as necessary.
- B. Pre-finished corrugated metal roofing work shall be coordinated with the following Sections:
  - 1. Section 07600 – Flashing and Sheet Metal
  - 2. Section 07920 – Sealants

### PART 2 – PRODUCTS

#### 2.01 MANUFACTURERS

- A. Pre-finished corrugated metal roofing of the following manufacturers are acceptable, provided they meet or exceed the material requirements specified:
  - 1. Ferro Union Hawaii, Inc.
  - 2. Custom Metal Roofing, HPM Building Supply.
- B. The pre-finished corrugated metal roofing of other manufacturers are acceptable, provided they meet or exceed the material requirements specified.

#### 2.02 MATERIALS

- A. General:
  - 1. All materials specified and/or required for a complete pre-finished corrugated metal roofing shall be as recommended and approved by one manufacturer. All other materials required, but not furnished by the pre-finished corrugated metal roofing manufacturer, shall be certified and approved for its intended use by the pre-finished corrugated metal roofing manufacturer.

2. The Contractor shall verify that all materials to be installed are compatible with the pre-finished corrugated metal roofing he proposes to furnish. Should the materials indicated on the contract drawings and specified herein be incompatible with the materials the Contractor proposes to furnish, the Contractor shall notify the Contracting Officer of any discrepancies in writing. Failure to report such discrepancies, that results in poor installation of the pre-finished corrugated metal roofing, to the Contracting Officer for interpretation and/or corrective measures shall be redone by the Contractor and at no additional cost to the State.
3. All materials for pre-finished corrugated metal roofing shall have the physical and chemical characteristics equal to, or better than that specified hereinafter. All materials shall be new, free from defects that will impair the strength, durability and/or appearance of the pre-finished corrugated metal roofing. All corrugated metal roofing panels shall be formed in accordance with the approved shop drawings and within the tolerances and requirements established by the manufacturer.

B. Pre-finished Corrugated Metal Roofing:

1. Panel Sheeting: Panel sheeting shall be 2-2/3" x 7/8" corrugation, equal to HPM Building Supply Pattern #7, "Deep Corrugation" or approved equal, aluminum-zinc alloy coated steel conforming to ASTM A 792, AZ-55 coating, surface-treated for maximum coating performance. Metal roofing panels shall be of a single length indicated on the contract drawings for each plane of roof.
  - a. Metal Gauge: Panel sheeting shall have a minimum thickness of 24-gauge and shall meet all structural performance requirements, but not less than the manufacturer's recommended minimums for profile and applications indicated, and in no instance, less than 24-gauge for exterior metal roofing panels.
  - b. Coating and Color Finish: The coating system on pre-finished panel sheeting shall have a total dry film thickness of 1.0 mil. on both sides. The coating finish shall be a "Kynar 500", 70% full strength on the exterior (top) side of 1.0 mil. Off white polyester backer on the interior (under) side. Pre-finish color shall be as selected by the Contracting Officer from the Manufacturer's standard colors.

Pre-finish color shall match "Sinclair's Dectone Parkway Green (398)" on Covered Walkway #2 and "Benjamin Moore's Kelly Green" on Covered Walkways #1, #3, and #4

C. Miscellaneous Material:

1. Fastener: Fasteners shall be stainless steel, Type 304 or 305 conforming to ASTM A 167, self-tapping screws with conical shaped metal washers with a neoprene gasket washer, and factory pre-finished to match the roofing panel.

Fasteners shall be sizes that are larger in diameter than existing apertures in purlins and the point shall not be exposed after being driven, and shall resist uplift resistance as recommended by the manufacturer of the pre-finished corrugated metal roofing.

- a. All fasteners shall be spaced in accordance with the manufacturer's standards and requirements for uplift resistance required by the ICBO Uniform Building Code, unless noted and/or specified otherwise. All fasteners improperly installed shall be replaced immediately.
2. Accessory Component: Accessory components shall be provided as required for a complete pre-finished corrugated metal roofing, including ridge and hip cap flashing, edge flashing, counter flashing, vent pipe flashing and other items as necessary. Flashing accessory components shall be fabricated from the same material type, gauge and finish as the metal roofing panels unless specified otherwise in SECTION 07600 – FLASHING AND SHEET METAL.
3. Flashing Tape: Flashing tape shall be self-adhering, polyester reinforced heavy duty aluminum flashing tape and approved by the pre-finished corrugated metal roofing manufacturer.
4. Closure Strip: Closure strips shall be of 1-inch width minimum polyethylene and approved by the pre-finished corrugated metal roofing manufacturer, resistant to moisture and ultraviolet. Closure strips shall be pre-cut to fit the profile of the metal roofing panels. All closure strips shall have adhesive/sealant applied on all surfaces contacting metal roofing surfaces.
5. Sealant: Sealants shall be as recommended for use by the manufacturer of the pre-finished corrugated metal roofing and as specified in SECTION 07920 – SEALANTS.

## PART 3 – EXECUTION

### 3.01 INSPECTION

- A. The Contractor, Roofing Contractor and the Pre-finished Metal Roofing Manufacturer's Representative shall examine the entire surface/substrate and conditions under which pre-finished corrugated metal roofing work is to be installed. The Contractor shall document any unsuitable conditions and send a copy to the Contracting Officer for direction and/or corrective measures. The Contractor shall not proceed until such unsuitable conditions have been corrected and are acceptable to the Manufacturer's Representative. Proceeding with the work shall imply acceptance of the conditions by the Contractor.

### 3.02 REMOVAL WORK

- A. Contractor shall remove only as much as can be replaced before end of work day. Exposed roof should be protected at all times in case of rain. Any damage incurred due to failure to protect exposed building interior shall be repaired or replaced at Contractor's expense.

### 3.03 DRY ROT AND/OR TERMITE DAMAGE

- A. Any existing dry rot and/or termite damage discovered during the progress of the preformed metal roofing system work shall be addressed as specified in SECTION 02050 – DEMOLITION, REMOVAL AND RELOCATION.

### 3.04 METAL ROOFING PANEL FABRICATION

- A. General: Metal roofing panels and accessory items shall be pre-finished and fabricated at the factory to the greatest extent possible. Fabrication work shall be done in accordance with the Manufacturer's standard procedures and processes as necessary to fulfill all performance requirements, which shall be demonstrated and confirmed by factory testing. Before forming, panel sheeting shall be chemically cleaned, then coated to conform to ASTM A 792, coating Class AZ-55. Metal roofing panels shall be fabricated in compliance with the profile, dimensions and structural requirements specified. Fabricated metal roofing panels shall be of a single length indicated on the contract drawings for each plane of roof to eliminate end laps in the field.
- B. Separation of Dissimilar Metals: Bituminous protective coatings at locations of fabricated metal roofing panel surfaces when conditions dictate, shall be applied when these locations will be in direct contact with substrate materials that are non-compatible, or could result in corrosion or deterioration of materials or finish upon installation.

### 3.05 INSTALLATION AND WORKMANSHIP

- A. General:
  - 1. The Contractor shall comply with the pre-finished corrugated metal roofing fabricator's and materials manufacturer's instructions and recommendations for the proper installation of the pre-finished corrugated metal roofing as applicable to project conditions and supporting substrates. Panels and other accessory components of the pre-finished corrugated metal roofing shall be securely anchored in place, with the necessary allowances for thermal and structural movement in the completed installation.
  - 2. Work shall be performed in conformance with approved comerial practices, by skilled workmen tto ensure weather tichgtness. As much as possible, avoid cutting metal panels near other roofs, and especially avoid having metal shavings and particles come in contact with other roofing. Cutting of metal roofing with

electrical circular of reciprocating saw blades will not be allowed. Electrical nibblers, mechanical or manual shears will be permitted.

- B. Laying of Metal Roofing Panels: Metal roofing panels shall be installed parallel to the roof slope. Metal roofing panels shall be in full lengths from ridge to eave, with no transverse joints. Install roofing panels with 2-1/2 corrugation side laps, starting roofing so exposed edges are on the "leeward" of the prevailing winds.
- C. Spacing of Fasteners: Spacing of fasteners shall be in accordance with the approved shop drawings and with the manufacturer's printed recommendations of the pre-finished corrugated metal roofing. Fasten roofing panels to each purlin through the crest of each third corrugation at the top, bottom and at each side lap, unless indicated otherwise by the manufacturer.
- D. Accessory Component: All accessory components, including gaskets, closure strips, cleats, sealants, etc. shall be installed as required for a proper and watertight metal roofing system.
  - 1. Insert closure strips at open ends of all ribs, exterior wall terminations, exterior wall and roof junctions, and where indicated on the drawings.
  - 2. Prior to installation of the ridge cap flashing, each valley corrugation of roofing shall be bent up and the ridge transition sealed with an aluminum faced flashing tape. Connections shall be sealed as required for a watertight pre-finished corrugated metal roofing.
  - 3. Install any other required flashing, and seal or solder for a watertight pre-finished corrugated metal roofing.

### 3.06 QUALITY CONTROL

- A. The Manufacturer's Representative shall inspect pre-finished corrugated metal roofing system work during installation to ensure compliance with these Specifications, approved shop drawings and manufacturer's recommended instructions. Upon completion of the performed metal roofing system work, the Manufacturer's Representative shall provide a written certification to the Contracting Officer, stating that the preformed metal roofing system has been installed in accordance with the manufacturer's instructions and is free of defects in materials and workmanship.

### 3.07 REPLACEMENT, PROTECTION AND CLEAN-UP

- A. Replacement: Damaged roofing panels and accessory components of the installed pre-finished corrugated metal roofing that are not accepted by the Contracting Officer after minor repairs have been attempted, shall be removed and replaced with new material, at no additional cost to the State.
- B. Protection: Pre-finished corrugated roofing Installer shall advise the General Contractor of protection and surveillance procedures to be observed by other trades.

C. Clean – Up:

1. During the progress of the work, the project site shall be kept free of all debris and waste materials resulting from the work under this Section. All such debris and rubbish shall be removed from the project site.
2. Clean residue from drilling immediately after holes are made in the roofing. Remove all metal shavings and other injurious material from the roof surface.
3. Upon completion of pre-finished corrugated metal roofing installation, the finish surfaces of metal roofing panels shall be cleaned as recommended by the pre-finished corrugated metal roofing manufacturer. All excess pre-finished corrugated metal roofing materials shall be removed from the project site.

END OF SECTION



## DIVISION 9 – FINISHES

### SECTION 09550 – HIGH PRESSURE LAMINATE WOOD FLOORING

#### PART 1 – GENERAL

##### 1.01 SUMMARY

###### A. Section Includes:

1. High Pressure Decorative Laminate Flooring
2. Stairs and Steps
3. Underlayment and Vapor Barrier
4. Trims and Moldings

###### B. Related Sections:

1. Finishing and curing of concrete slabs: Section 03300.
2. Wood Substrates: Section 06100
3. Waterproofing membranes: Division 7

##### 1.02 SYSTEM DESCRIPTION

- A. High Pressure decorative laminate plank flooring with mechanical locking system and attached underlayment applied over a moisture barrier and concrete slab.
- B. High pressure decorative laminate plank flooring with mechanical locking system and attached underlayment applied over a wood substrate.
- C. Flooring system of “floating – floor” construction type allowing for expansion and contraction due to changes in humidity.
- D. Vapor Barrier is required over concrete based subfloors including ceramic tile brick and terrazzo.

##### 1.03 SUBMITTALS

- A. Comply with Section 01330, unless otherwise indicated.
- B. Product Data:
  1. Product Data and detailed Specification of construction.

2. Manufacturer's installation instructions.
  3. Manufacturer's recommendations for product handling, storage, acclimation, installation, protection, and maintenance.
- C. Show Drawings: Submit installation details showing layout and location of each product type and accessory component including design(s) and finish texture(s).
- D. Samples: Submit selection and verification samples for design(s) and finish textures.

#### 1.04 QUALITY ASSURANCE

- A. Installer Qualifications: Installation shall be performed by a firm experienced in the application of systems similar in complexity to those required for this Project. Additionally, installers shall be in possession of the manufacturer's installation manual and adhere to the instructions.
- B. Manufacturer's Qualifications: Not less than 25-years experience in the laminate flooring industry and a record of successful commercial applications.
- C. Source Limitations: Obtain all products and materials from one source.
- D. Pre-Installation Meetings: Conduct pre-installation meeting to verify project requirements, substrate conditions, manufacturer's installation instructions, and manufacture's warranty requirements.

#### 1.05 DELIVERY, STORAGE, AND HANDLING

- A. Ordering: Order material in compliance with manufacture's lead time requirements to avoid construction delays.
- B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged cartons.
- C. Storage and Protection: Store in a horizontal fashion, flat and off the floor (i.e. palletized).

#### 1.06 PROJECT CONDITIONS

- A. Maintain air temperature between 55° and 80° Fahrenheit and humidity levels between 25% and 60% for 48 hours before, during and after installation.
- B. Install decorative laminate flooring after other finishing operations have been completed.

#### 1.07 WARRANTY

- A. Furnish manufacturer's limited 10-year commercial warranty for joint integrity, wear resistance, stain resistance, and fade resistance (Alloc Commercial).
- B. Furnish manufacturer's limited 6-year light commercial warranty for joint integrity, wear resistance, stain resistance, and fade resistance (Alloc Original).

## PART 2 – PRODUCTS

### 2.01 MANUFACTURERS

- A. Drawings and specifications are based on manufacturer's literature from Alloc Inc., manufacture of Alloc Commercial and Alloc Original. (262) 554-1541, [www.alloc.com](http://www.alloc.com)

### 2.02 MATERIALS

- A. Composite panel(s) comprised of four main components: a high pressure decorative laminate surface, an Aqua Resist high density fiberboard (HDF) core, a high pressure balancing backer, and an attached high density polyethylene underlayment.
  - 1. 7.6" X 47.5" X .43" (Alloc Commercial)
  - 2. 7.6" x 47.55" x .385" (Alloc Original)
- B. Panel Edges:
  - 1. Patented aluminum locking system for glue-free installation.
  - 2. Wax-impregnated edges.
- C. Performance Standard Compliance:
  - 1. The products surface shall be capable of withstanding a minimum of 11,500 (Alloc Commercial) revolutions in accordance with NEMA LD 3.13.
  - 2. The floor as installed shall have a static coefficient of friction when dry greater than 0.80 and when wet greater than 0.72 as tested in accordance with ASTM C1028.
  - 3. The floor shall be resistant to stains and reagents and exceed all standards as set forth in and tested in accordance with ASTM D3032 (Alloc Commercial) and NEMA LD 3.4 (Alloc Original)
  - 4. The floor shall have a horizontal joint strength of not less than 1,000 lbs./lineal ft. when tested in accordance with Lloyd-LR 10LL (ISO/TC 219)
  - 5. Ball Impact Resistance (ANSI/NEMA LD3-2000, 3.8): No damage 1,678 mm (Alloc Commercial) and no damage 675 mm (Alloc Original).

6. Critical Radiant Flux (ASTM E 648): NFPA 101 Class 1 (Alloc Commercial and Alloc Original)
7. Specific Optical Density of Smoke: Class 1 (Alloc Commercial) when tested in accordance with ASTM D 3032 and <350 when tested in accordance with ASTM E 662-03
8. Impact Insulation Classification (IIC): 64 when tested in accordance with ASTM E 492 – 90 NVLP
9. Sound Transmission Classification (STC): 61 when tested in accordance with ASTM E 90-02 NVLAP
10. Meets ASTM E1333 and California State Code for emissions.
11. Mechanical locking system strength > 1000 lbs / lineal foot as per ISO/TC 219 / TG03

#### 2.03 ACCESSORIES

- A. Vapor barrier shall be polyethylene sheet(s) not less than 6.0 mils thick.
- B. Underlayment is pre-attached to product in the form of a 2mm (0.08”) thick crosslinked HDPE sheet.

#### 2.04 RELATED MATERIALS

- A. Decorative Laminate Trim available in 94” lengths matching colors or Anodized Aluminum (aa) Trim
  1. Quarter Round (not in aa)
  2. Wall Base (not in aa)
  3. Reducer
  4. Square Nose Reducer or End Cap
  5. T-Molding
  6. Overlap and Flush Stair nose (Not in aa)
- B. Mono Track aluminum fastening system used to secure the Trim tightly in place without visible nail or screw holes. Alternatively use construction mastic.
- C. Ensure Mono Track and moldings are installed on clean level subfloor.
- D. Anodized Aluminum Trim comes with flush screw down system.

## PART 3 – EXECUTION

### 3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with current manufacturer's product installation manual.

### 3.02 EXAMINATION

- A. Site Verification of Conditions: Examine substrate conditions, application areas, and jobsite conditions are acceptable for product installation.
- B. Verify concrete slabs, brick and terrazzo type subfloors are dry according to ASTM F 1869 with maximum moisture emission of 5 pounds per 1000 square feet per 24 hours. Do not install flooring if alkaline content is high.
- C. For Health Care Installations note the Alloc mechanical locking system provides a close fitting joint with water repellant wax impregnated edges in line with recommendations by the AIA, in the American Hospital Association (AHA) Guidelines for Design and Construction of Hospitals and Health Care Facilities.

### 3.03 PREPARATION

- A. Surface Preparation: Remove wood floors from concrete subfloors. Remove carpeting from subfloors prior to installation. Prepare sub floor to receive laminate flooring and verify that the sub floor is flat to within 3/16" over a 10' span. Ensure that the sub floor is structurally sound and stable. Clean sub floor to remove loose dirt particles and debris.
- B. Acclimation: Condition flooring materials in unopened cartons in the room where the installation is to take place or room with exact similar conditions for at least 48 hours prior to installation.

### 3.04 PLANNING

- A. Verify direction of plank flooring with Architect and/or end user prior to commencing with installation.
- B. Install flooring symmetrically about room centerline unless otherwise indicated.

### 3.05 INSTALLATION

- A. Install polyethylene vapor barrier sheet on:
  - 1. Concrete Subfloors.
  - 2. Over existing floors installed on concrete.
  - 3. Over all subfloors that have open crawlspace underneath them.

- B. Install laminate flooring as a floating floor.
- C. Connect the planks via the aluminum locking mechanism and stagger the plank's end joints a minimum of 12".
- D. Provide a minimum of 1/4" expansion space between flooring planks and perimeter walls, columns and other fixed objects.
- E. Install transition pieces:
  - 1. When exceeding 50 lineal feet in a single room.
  - 2. At the centerline of doors.
  - 3. When transitioning to other flooring materials or unfinished areas.
- F. Do not nail, screw, or fix laminate flooring to the sub floor(s).
- G. Install wall base or trim at floor perimeter and at vertical obstructions.

Stairs and Steps:

- A. Install stairs and steps in compliance with manufacturer's installation instructions.
- B. Use laminate flooring planks for risers and trends combined with stairnose moldings.

3.6 PROTECTION

- A. Cover installed flooring to protect it from damage during the remainder of construction. Use heavy Kraft-paper or other suitable material.
- B. Cleaning: Maintaining flooring in accordance with manufacturer's suggestions.

END OF SECTION

## SECTION 09610 – FLOOR TREATMENT

### PART 1 – GENERAL

#### 1.01 GENERAL REQUIREMENTS

- A. General: As specified in Section 01010.

#### 1.02 SUMMARY:

A. Section Includes:

1. Moisture vapor transmission (MVT) floor treatments.
2. Concrete alkalinity (pH) floor treatments.

B. Related Sections:

1. Division 1 Sections, general.
2. Division 1 – General Requirements.
3. Division 1 – LEED Requirements.
4. Division 3 – Cast-In-Place Concrete.
5. Division 3 – Concrete Repair.
6. Division 9 – Resilient Flooring.
7. Division 9 – Carpet.

#### 1.03 SYSTEM DESCRIPTION:

- A. MVT and pH Treatment Intent: Specified floor treatment products may not be required, unless tested MVT and pH actually exceed acceptable levels for each affected floor product. Provision for products are covered under Division 1 – Alternates & Unit Price Items Section.

B. Performances:

1. Moisture Vapor Transmission: For all substrate types,  $\leq 3$  lbs / 1000 sf / 24 hrs maximum.
2. Alkalinity: For cementitious substrates, surface alkalinity of pH 8 minimum to 9 maximum.

#### 1.04 SUBMITTALS

##### A. Product Data:

1. Test Procedures: Submit detailed data of each test procedures to be conducted.
2. Test Equipment: Submit data on each testing equipment.

##### B. Quality Assurance Submittals: Refer to “Quality Assurance” and “Field Quality Control” paragraphs herein.

##### C. Closeout Submittals: Refer to “Maintenance” paragraphs herein.

#### 1.05 QUALITY ASSURANCE:

##### A. Contractor Responsibility for MVT and pH Testing: At Contractor’s option, testing may be conducted as follows.

1. By qualified independent Testing Consultant.
2. By qualified Technicians of each Flooring Installer for which testing is required.

##### B. Flooring Installer Responsibility: For each Project flooring product for which testing is required, submit following written documentations from Flooring Manufacturer prior to conducting testing and final floor treatments.

1. Approval of specified testing method and testing criteria for each specific affected Project product.
2. Approval of specified floor treatment materials and methods for each specific affected Project flooring product.

##### C. Floor Treatment Installer Qualifications: Submit documentation for following, if floor treatments required for Project.

1. Installation Experience:
  - a. Ten (10) years experience installing MVT and pH resistant coatings of similar types on Projects of similar scope, installation complexity.
  - b. Four (4) current installations using specific Project products on Projects of similar scope and installation complexity. Describe project scope, square feet of each installed product, installation complexity and include at least one MVT and one pH challenged project.
2. Floor Treatment Manufacturer Certification: Submit Manufacturer’s certification approving selected Installer as having requisite knowledge and experience to properly install each Project Product.



D. Substrate Conditions – Restrictions: Do not install MVT and pH sensitive flooring materials over substrate with moisture content or alkalinity, or both, that are not within acceptable criteria that is allowed by any Project scheduled Flooring Manufacturer.

E. Testing:

1. Exception to Test Criteria: Performance requirements may be altered when Manufacturer of scheduled flooring over any substrate accepts following conditions in writing.
  - a. Submits alternate performance criteria that is warranted as acceptable to Flooring Manufacturer for each specific product for which an alternate criteria is allowed.
  - b. Submits detailed test procedures and test equipment data to be used when different than specified testing.
  - c. For any alternate testing procedure, submits scientific justifications why alternate testing results in reliable data for which manufacturer can warrant for specific Project conditions under which it's product is to be installed.
2. Test Reports: Submit detailed submittals of following for each flooring for which testing is required.
  - a. Reports: Show not less than following for each test.
    - 1) Location designation, by number or other logical designation; as correlated on plan drawing.
    - 2) Each test type conducted, e.g. MVT or pH.
    - 3) Date and time each test conducted.
    - 4) Results of each test conducted.
    - 5) Specific test method used, e.g. ASTM or other.
    - 6) Temperature and humidity readings at area where each test conducted.
  - b. Plan Drawing: Show location of each test correlated with report test data.
  - c. Remediation Reports: If corrective measures required, for each type of corrective measure instituted, maintain detailed historical record, by day and location, of corrective measure instituted and results attained.

- F. Floor Treatment Coatings: Prior to purchase and manufacture of any products for Project, submit written certification from each Manufacturer of each Project selected MVT and pH membranes indicating that specified membranes can reduce MVT or pH levels, or both, from any unacceptable tested levels to each affected Flooring Manufacturer's acceptable levels.
- G. LEED Documentation Submittals: Submit LEED confirmation documentation as required in Division 1 – LEED Requirements Section and Division 1 – Submittals Section to show that products meet specified LEED characteristics under “LEED” Requirements” paragraphs herein; necessary to attain each indicated LEED credit.

#### 1.06 LEED REQUIREMENTS:

- A. Mandatory Credits: Compliance with following is mandatory for the Work.

- 1. EQ Credit 4.1: Low emitting adhesives and sealants.

#### 1.07 WARRANTY:

- A. Manufacturer's Warranty: Submit Manufacturer's written and executed “Materials and Installation Defects Warranty” covering adhesion, moisture reduction, and alkalinity associated defects occurring in applied coatings for Period of ten (10) years from date certified by University for Substantial Installation of Project.

### PART 2 – PRODUCTS:

#### 2.01 FLOOR TREATMENT SYSTEMS – GENERAL CHARACTERISTICS:

- A. Capable of reducing unacceptable moisture vapor transmission or pH to levels acceptable to Manufacturer's of each flooring product scheduled to be applied over any tested substrates.
- B. Approved by each Manufacturer of Project flooring products to be installed over any Project MVT or pH resistant, or both, coating products.
- C. Capable of staying fully bonded to substrate under installed conditions, up to maximum published performance limits; for life of product.
- D. Does not cause concrete to loose alkalinity beyond point where it becomes detrimental to concrete structure, e.g. becomes more acid and therefore accelerates deterioration of concrete.

#### 2.02 MOISTURE VAPOR TRANSMISSION (MVT) FLOOR TREATMENT SYSTEM:

- A. MVT-1:

- 1. Manufacturer: Bostik.

2. Product: "D-250 Moisture Vapor Barrier Coating".
3. Primary Characteristics:
  - a. Type: Water based, penetrating epoxy coating system
  - b. Performance: Capable of reducing moisture vapor transmission to  $\leq 3$  lbs / 1000 sf / 24 hrs when tested vapor transmission is as high as 14 lbs / 1000 sf / 24 hrs.

B. MVT-2:

1. Manufacturer: Bostik.
2. Product: "D-250 Moisture Vapor Barrier Coating".
3. Primary Characteristics:
  - a. Type: Two component epoxy coating system.
  - b. Performance: Capable of reducing moisture vapor transmission to  $\leq 3$  lbs / 1000 sf / 24 hrs when tested vapor transmission is as high as 25 lbs / 1000 sf / 24 hrs.

2.03 ALKALINITY (pH) FLOOR TREATMENT SYSTEM:

A. pH-1:

1. Products: One of following.
  - a. Either MVT-1 of MVT-2 when pH only needs to be reduced to Contract limits.
  - b. When MVT and pH both needs to be reduced, specifically select MVT-1 or MVT-2 capable of reducing both to required Contract limits.
2. Primary Characteristics: Capable of reducing concrete surface pH to 9 minimum when tested alkalinity is as high as 14.

PART 3 – EXECUTION

3.01 PREPARATION FOR TESTING:

A. Environmental Conditions:

1. General: Each area in which tests are to be performed are to be acclimated to ambient temperature and relative humidity levels that would occur under actual

occupancy and use and is to be maintained for full duration of Contract Period once established.

2. Elevated Floors: For elevated floors, acclimation to include in-service temperature and humidity conditions above and below such affected floor structures.
  3. Establishment of Temperature and Humidity Equilibrium:
    - a. Requirement: Where environmental conditions are unlike in-service conditions, establish in-service conditions, e.g., HVAC is turned on, for period of 48 hours minimum or until floor substrate has stabilized to in-service conditions.
    - b. Monitoring: Just prior to establishment of in-services conditions, take moisture meter readings of floor substrate. Monitor moisture levels continuously until there is no more change in readings. Location of each reading to be at same as locations determined for MVT and pH testing locations.
- B. Equipment Acclimation: When required by specified test methods, acclimate equipment, e.g., probes, as required for each test method.
- C. Substrate Preparation: Remove all deleterious products from surfaces that could contaminate testing results, including preparation materials. Remove deleterious materials from surface without destroying surface.

### 3.02 TESTING – GENERAL:

- A. General: Test each substrate to verify that moisture vapor transmission and alkalinity levels are within each Flooring Manufacturer's published requirements for each Project product, after substrate preparation and just prior to installation of flooring assembly materials.
- B. Number of Tests: Three tests for first 1000 sf and one additional test per 1000 sf of area thereafter; unless current standard requires a higher frequency of testing.
- C. Timing of Testing: Perform MVT and pH testing at same time at each selected test location and adjacent to each other. Ensure testing locations do not contaminate each other.

### 3.03 MOISTURE VAPOR TRANSMISSION TESTING:

- A. Standards: Testing not to be in conflict with any of following, unless otherwise acceptable to University.
  1. General: ASTM E 1907.

2. Division 9 – Wood Flooring: NOFMA or NWFA standards.
  3. Division 9 – Resilient Flooring: ASTM F 710, RFCI Standard IP#1 for sheet flooring and RFCI Standard IP#2.
  4. Division 9 – Carpet: ASTM F 710 and CRI 104.
- B. Acceptable Test Methods: One or both of following as required and approved for use by each Manufacturer of flooring products to be applied over substrates to be tested.
1. Calcium Chloride Test: ASTM F 1869 “Anhydrous Calcium Chloride Quantitative Test Unit Method”.
  2. Relative Humidity Test: 75% maximum.

### 3.04 ALKALINITY (pH) TESTING:

- A. Standards:
1. ASTM D 4262.
  2. ASTM F 710
- B. Test Equipment: Litmus paper kit designed for testing pH levels on concrete. Litmus paper to be capable of measure pH levels from 0 to 14.
- C. Number of Tests: Same as required for MVT testing.
- D. Test Method:
1. Each Test Area: Approximately 1” diameter.
  2. Substrate Preparation: Abrade test location to 1/32” minimum depth but not exceeding 1/8”
  3. Water: Apply de-ionized and distilled water to abraded area. Allow to stand for 60 seconds.
  4. Litmus Strip: Dip into puddle and remove immediately. Compare with pH charts to determine pH.

### 3.05 INSTALLATION MVT & pH FLOOR TREATMENTS:

- A. General: Where MVT and pH not within acceptable levels, install MVT and pH coatings in strict accordance with each Manufacturer’s Project specific requirements as needed to reduce water vapor emission rates of pH, or both, to levels acceptable to each Flooring Manufacturer’s requirements specific to each

product scheduled to be applied over tested substrates; as fully submitted and successfully reviewed by University.

### 3.06 FIELD QUALITY CONTROL:

#### A. Retesting:

1. General: After fully curing MVT and pH coatings, retest substrates in accordance with MVT and pH Coating Manufacturer's requirements to assure that MVT and pH are within acceptable levels for installation of each Project product scheduled over each tested substrate.
2. Testing Locations: Retest all same locations as original MVT and pH testing occurred.

#### B. Submittals: Submit following.

1. Test reports.
2. Final approvals from each Flooring Installer and Flooring Manufacturer of test results.

### 3.07 PROTECTION:

#### A. Protections:

1. Where MVT and pH coatings required, coordinate installation of coatings to protect it from contamination, damage and deterioration prior to time when subsequent scheduled finishes can be applied.
2. Provide protections from Contractor's ongoing operations during interim prior to time when subsequent scheduled finishes can be applied.
3. Submit to Contractor written methods necessary to protect coatings from contamination, damage and deterioration.
4. Submit to each Installer scheduled to apply subsequent materials to MVT and pH resistant coatings, methods and restrictions required to assure proper performance of membrane and bonding of final finishes to coatings.

END OF SECTION

## SECTION 09655 – SHEET VINYL FLOORING

### PART 1 – GENERAL

#### 1.01 SECTION INCLUDES

- A. Sheet vinyl flooring.
- B. Edging strips.
- C. Base.
- D. Underlayment and floor patch.
- E. Adhesives and primers

#### 1.02 MEASUREMENT AND PAYMENT

- A. General: Resilient sheet flooring and base will not be measured separately for payment but will be paid for as part of the Contract lump sum price for Architectural Work.

#### 1.03 REFERENCES:

##### A. American Society for Testing and Materials (ASTM):

- 1. ASTM E84 Test Method for Surfacing Burning Characteristics of Building Materials
- 2. ASTM E648 Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source
- 3. ASTM E662 Test Method for Specific Optical Density of Smoke Generated by Solid Materials

##### B. Federal Specifications (FS):

- 1. L-F-475 Floor Covering Vinyl, Surface (Tile and Roll), with Backing
- 2. SS-W-40 Wall Base: Rubber and Vinyl Plastic

##### C. Resilient Floor Covering Institute (RFCI):

- 1. RFCI Installation Specifications
- 2. RFCI Wall Base

#### 1.04 SUBMITTALS

- A. General: Refer to Section 01 33 00 – Submittal Procedures, and Section 01 33 23 – Shop Drawings, Product Data, and Samples, for submittal requirements and procedures.
- B. Samples: Submit samples of sheet vinyl flooring, edge trim, resilient base, and accessories. Sheet vinyl flooring and base require approval of the Engineer before they may be purchased for this Work.

### PART 2 - PRODUCTS

#### 2.01 MATERIALS

- A. Sheet Vinyl Flooring: Fed. Spec. L-475, Type II, Grade A. Sheet vinyl flooring shall meet the following requirements:
  - 1. Flame Spread: 25 maximum when tested in accordance with ASTM E84.
  - 2. Smoke Developed: 450 maximum when tested in accordance with ASTM E662.
  - 3. Critical Radiant Flux: 0.45 minimum when tested in accordance ASTM E645.
  - 4. Gage: 0.080 inch minimum.
  - 5. Color and Pattern: As indicated, or as selected by the Engineer from manufacturer's standards.
- B. Edging Strips: Molded vinyl, 1 ½ inch by 1/8-inch thick, with exposed edge ¼ rounded, in color as selected by the Engineer from manufacturer's standards.
- C. Base: Fed. Spec. SS-W-40, top set cove, solid vinyl or rubber.
  - 1. Size: 4 inches high, unless otherwise indicated.
  - 2. Color: As indicated, or as selected by the Engineer from manufacturer's standards.
- D. Underlayment and Floor Patch: Floor patch and leveling compound or underlayment shall be products manufactured for the purpose as recommended by the manufacturer of the resilient floor furnished.
- E. Adhesives and Primers: Products specified or recommended by the manufacturer of the particular resilient flooring and base furnished.

### PART 3 – EXECUTION

#### 3.01 INSPECTION AND PREPARATION OF SURFACES



- A. Inspection of Substrate Surfaces: Before starting the installation of resilient flooring and base, examine all surfaces on which the finish flooring and base are to be applied. Examination includes bond, moisture, and alkali testing of concrete subfloors. Any defective surfaces or conditions preventing proper execution of the work shall be corrected as required.
- B. Cleaning and preparation of Substrate Surfaces: Subsurfaces and backing surfaces shall be dry, clean of dust, paint spots, grease, and bond breaking or curing compounds. Subsurfaces shall also be free from roughness and sharp edges to prevent protrusions and bulges after resilient material is laid or applied. Fill all joints, cracks, and depressions in concrete slabs with specified floor patch and underlayment material. Grind down ridges and high spots flush and smooth with surrounding surfaces.
- C. Beginning Work: Installation shall not begin until the work of other trades in the area, including painting, has been completed.
- D. Responsibility: Nothing specified herein shall be construed as relieving the Contractor of any responsibility for the quality of the finished installation. Surfaces on which resilient flooring and base are to be applied shall be level and in proper condition in every respect for an acceptable installation and long life without defects.

### 3.02 INSTALLATION

- A. Installation Standards: Comply with RFCI Installation Specifications and RFCI Wall Base.
- B. Installation Requirements: Keep materials at a temperature of 70 degrees F or higher for at least 48 hours before using, and maintain 70 degrees F or higher room temperatures at least 3 days before, during, and after application of materials. Apply materials in accordance with the sheet vinyl manufacturer's installation instructions. Materials shall be installed only by skilled and experienced applicators authorized and approved by the manufacturer.
- C. Sheet Vinyl Flooring:
  - 1. Installation System: Sheet vinyl flooring shall be installed in accordance with the sheet vinyl flooring manufacture's instructions.
  - 2. Application of Adhesive: Apply specified adhesive with a notched steel trowel to ensure an even bed of adhesive. Cross-trowel to achieve an eve thickness.
  - 3. Sheet Vinyl Layout: Layout vinyl sheet to ensure minimum number of seams. Only "perfects" shall be used to that cross seams shall be kept to absolute minimum. Lay sheets firmly against adjacent sheets to minimize joints. Neatly scribe around pipes, fixtures, and equipment to form tight, hairline joints free of gaps.

4. Sheet vinyl at Permanent Cabinets: Sheet vinyl flooring is not required under fixed cabinets having covered fronts and integral bottoms and which are permanently anchored to the structure.
  5. Edging Strips: Install edging strips wherever sheet vinyl terminates at an opening or where there is an unprotected edge. Top of strips shall be flushed with top of sheet vinyl flooring.
- D. Base: Complete resilient flooring installation before applying base. Install base on all walls as indicated and on fronts, toe spaces, and finished backs and ends of cabinets with adhesive recommended by manufacturer of base. Apply adhesive to both wall and base and press firmly into place. Maintain top edge at true horizontal line. Toe of coved base shall contact floor for entire length. Closely butt end joints, top edge, and faces flush. Remove excess adhesive.

### 3.03 CLEANING, SEALING, AND PROTECTION

- A. Traffic: Until floors are well seated at least 72 hours at a maintained temperature of not less than 70 degrees F, traffic shall be kept to an absolute minimum, and fixtures, equipment, trucks, and similar equipment or vehicles shall not be permitted to travel over floors.
- B. Cleaning and Sealing: Just before turning finished spaces over to the Engineer, and not before, clean resilient flooring and base thoroughly in accordance with the flooring manufacturer's recommendations. After cleaning, apply one coat of approved non-skid finish to floors and polish with a mechanical buffer.
- C. Protection: Install clean plywood or board walks over clean, non-staining building paper where any traffic from other trades must pass over completed resilient floors. Maintain protection until acceptance by the District and Contract substantial completion.

END OF SECTION

## SECTION 09660 – RESILIENT FLOORING

### PART 1 – GENERAL

#### 1.01 GENERAL CONDITIONS

As specified in Section 00700

#### 1.02 WORK DESCRIPTION

Furnish all labor, tools and equipment required for the work as indicated on the contract drawings and specified herein including, but not limited to the following: Installation, of new resilient flooring material and related items including other items specified to be installed under this Section but specified elsewhere.

#### 1.03 RELATED WORK

- A. The work specified herein shall be coordinated with all other required work and their respective trades. The following Sections cover work specifically related to this Section:
1. Section 03300 – CAST-IN-PLACE CONCRETE
  2. Section 06200 – FINISH CARPENTRY
  3. Section 06400 – CABINETWORK

#### 1.04 GENERAL REQUIREMENTS

The Contractor shall visit the job site to verify the site conditions and dimensions and carefully study the plans and specifications all prior to submitting his bid. The Contractor shall clearly understand existing versus new work and identify and compensate for all potential variables affecting his work.

#### 1.05 SUBMITTAL

In accordance with Section 01300 – Submittals, submit:

- A. Six (6) sets of the manufacturer's Product Data, brochure, technical specifications and similar information for materials specified.
- B. Three (3) samples of each type or color of resilient floor tiles to be used for the project.
- C. Six (6) sets of the manufacturer's care, cleaning and maintenance instructions.

#### 1.06 QUALITY ASSURANCE

- A. All resilient floor tile and accessories shall be manufactured by a single source to ensure uniformity of color, texture, pattern and finish.
- B. An installer experienced and competent in the installation of resilient flooring products shall install all resilient floor tile and accessories.

#### 1.07 PRODUCT HANDLING

- A. Deliver material in good condition to the project site in manufacturer's original unopened containers with product label information clearly marked thereon.
- B. Store all materials and adhesives in a dry, well-ventilated space protected from the weather and maintained at a minimum temperature of 65 Degrees Fahrenheit and maximum of 100 Degrees Fahrenheit.

#### 1.08 GUARANTEE

The Contractor shall provide one (1) original and five (5) copies of a written guarantee to the Director guaranteeing that:

- A. Installation of the products of this Section was in accordance with the manufacturer's instructions and in compliance with all conditions of the manufacturer's warranty.
- B. Conditions upon which installation was undertaken was in full compliance with the manufacturer's instructions including, but not limited to: Moisture and alkalinity content of concrete slabs

#### 1.09 WARRANTY

Products shall have a minimum two (2) year manufacturer's warranty that its products are free from manufacturing defects.

#### 1.10 EXTRA MATERIALS

Furnish extra materials as described below, packaged in their original container and identified with original manufacturer's labels describing their contents:

- A. Furnish one (1) box of each type, color, pattern, class, wearing surfaces and size of tile installed.

## PART 2 – PRODUCTS

### 2.01 MATERIALS

#### A. Asbestos Prohibition

No asbestos containing materials or equipment shall be used under this section. The Contractor shall insure that all the materials and equipment incorporated in the project are asbestos-free.

#### B. Vinyl Composition Tile: Shall be nominal 12" x 12" x 1/8" thick, meeting ASTM F 1066, conforming to Fed. Spec SS-T-312, Type IV, Comp 1, factory waxed with a minimum light reflectance of 30%.

1. All other rooms or areas scheduled to receive floor tile shall be Armstrong Standards Excel on vinyl composition tile or approved equal. Colors to match that of existing, adjacent resilient floor tiles. In not able to match all tile characteristics, the color shall be selected from manufacturer's full line of colors by the Director.

#### C. Adhesive:

1. shall be water-resistant type, as recommended by the manufacturer for the specific materials/components, locations, conditions, usage, grade level and subfloor conditions encountered for the project. Do not use adhesive not intended for this purpose.

#### D. Edging:

1. Transitions from resilient tile to substrate shall be beveled vinyl strip, one inch wide, same thickness as tile.

#### E. Leveling and Patching Compound:

Shall be Latex modified, Portland cement based formulation unless otherwise required by the flooring manufacturer for the applications indicated. Gypsum based compounds shall be used.

## PART 3 – EXECUTION

### 3.01 INSPECTION

The installer shall examine substrates where resilient tile flooring will be installed for compliance with the flooring manufacturer's requirements. Installation shall not proceed until unsatisfactory conditions have been corrected. Proceeding with installation will indicate acceptance of the substrate conditions by the Installer.

### 3.02 PREPARATION

- A. General: Comply with the flooring material manufacturer's installation instructions for the preparation of substrates to receive resilient flooring.
- B. Unless otherwise required by the flooring manufacturer, the subfloor shall be broomed, damp mopped and scrubbed until it is free from dust, dirt, grease or other foreign material. It shall also be scraped to make the surface smooth and level.
- C. The concrete subfloor shall be free of materials that may interfere with adhesive bond and shall be clean, dry smooth before tiles are laid. Defects such as ridges, holes, cracks and depressions shall be corrected and filled with patching/leveling compound approved by the manufacturer.
- D. If floor tile is laid on defective subfloors, such tile shall be removed and replaced and the defective subfloor conditions remedied at the Contractor's expense.

### 3.03 PROJECT CONDITIONS

- A. Flooring materials and the spaces to receive flooring materials shall be conditioned in accordance with the flooring manufacturer's recommendation and instructions.
- B. Provide adequate ventilation to remove moisture and fumes from the areas where floor tiles are being installed.

### 3.04 TESTING

- A. Flooring materials shall not be installed over concrete slabs until the slabs have cured and are sufficiently dry.
- B. After cleaning, test new concrete slabs for alkalinity, moisture and adhesive bond as recommended by the flooring material manufacturer. Floor tile installation shall not proceed until unsatisfactory conditions have been corrected.

### 3.05 INSTALLATION OF MATERIALS

- A. See Finish Schedule for locations and type of flooring required. Flooring shall continue respectively under and behind removable and/or portable cabinets, cases, etc.

Flooring shall continue into closets where the floor of the closets and adjacent floor are at the same level. Installation shall not begin until the work of other trades, including painting, has been completed.

- B. All work shall be done by experienced tradesmen in strict accordance with recommended specifications of the respective manufacturer. Where not contrary to manufacturer's recommendations, adhesive shall be applied with a notched trowel in a

thin and even coat. Tiles shall be laid with tight joints in true alignment both ways. They shall be cut to fit accurately at joining with other materials and at vertical surfaces. The under side of the tiles shall be heated if necessary to obtain satisfactory bond to the subfloor.

C. Placement:

1. At rooms with existing and/or adjacent tile: Tiles shall be laid to match existing joint lines, patterns, grain, etc.
2. At new rooms and rooms without existing and/or adjacent tiles: Tiles shall be laid symmetrically about the centerlines of the room in both directions, starting at the center of the room and working toward the wall so that border tiles shall not be less than half the width of the field tiles. Grain of all tiles to run parallel.

D. Terminations:

Vinyl edging shall be installed with contract adhesive at all marginal edges of flooring not stopped by raised thresholds or other vertical surfaces.

3.07 CLEANING AND PROTECTION

Spots of adhesive shall be removed immediately as work progresses. Floor shall not be washed or waxed until the adhesive has completely set, and in no case until after the minimum length of time recommended by the manufacturer. The flooring shall be cleaned with a neutral cleaner as recommended by the manufacturer and then mopped with clear water. When the floor is dry, 2 coats of an approved non-slop wax shall be applied with a clean lambs wool mop. Each coat shall be buffed thoroughly when dry with a weighted rotary electric floor polishing machine. After polishing, the General Contractor shall protect the flooring by keeping traffic off the floors until acceptance of the project.

The Contractor shall clean and wax all new tiles as well as existing adjacent tiles. Extent of cleaning and waxing operations shall extend for the entire room in which new tiles are installed up to walls, doors or partitions that define or confine the space.

END OF SECTION

## SECTION 09680 - CARPET

### PART 1 – GENERAL

#### 1.01 GENERAL REQUIREMENTS

- A. General: As specified in Section 01010.

#### 1.02 SUMMARY:

A. Section Includes:

1. Modular carpet tiles.

B. Related Sections:

1. Division 1 Sections, general.
2. Division 1 – LEED Requirements
3. Division 3 – Cast-In-Place Concrete.
4. Division 3 – Concrete Repair.
5. Division 9 – Floor Treatment.

#### 1.03 SUBMITTALS:

- A. Product Data: Submit Carpet Manufacturer's product literature and installation instructions for each type of carpeting and related materials required. Product literature to indicate complete physical and performance characteristics of each carpet and related materials. Included methods of installation for each type of Project substrate.
- B. Shop Drawings: Submit. Show carpet layout, seaming diagrams, carpet direction, accessories, cutouts, and installation details.
- C. Samples: Submit samples of following which are prepared from same materials to be used for the Work:
1. Carpets: 8-1/2" x 11" samples.
  2. Edge Guards/Trims: Profiles x 11" length samples. Where range of finish, color, and texture available, submit range for selection by University.
- D. Quality Assurance Submittals: Refer to "Quality Assurance" paragraphs herein.
- E. Closeout Submittals: Refer to "Warranty" and "Maintenance" paragraphs herein.



#### 1.04 QUALITY ASSURANCE:

- A. Carpet, General: The Carpet and Rug Institute (CRI).
- B. Installer Qualifications: Refer to Division 1 requirements.
- C. Mockups: For each different carpet assembly where type, color, and pattern is different, construct partial mockups part of each different assembly for review by University and as part of start of actual installations. Size of each installation to be as large as necessary to fully shown installed characteristics, but not less than 10' x 10' area; unless otherwise acceptable to University. Select location to show conditions in field and at terminations, e.g. cutouts, walls, bound edges, molding trims, etc. Finish installations to match successfully reviewed mockups. Carpet used for mockups are not to be used in final installation.
- D. Dye Lots: Minimize dye lots. For any particular color scheme where the total quantity does not exceed the Carpet Manufacturer's standard maximum dye lot yardage, the total quantity shall be one dye lot. Where the total quantity exceeds the Carpet Manufacturer's standard maximum dye lot yardage, separate dye lots may be utilized, except that such separate dye lots shall not be intermixed in any one contiguous installation area without prior approval from Interior Designer. Secure such approval prior to the manufacture of such products.
- E. LEED Documentation Submittals: Submit LEED confirmation documentation as required in Division 1 – LEED Requirements Section and Division 1 – Submittals Section to show that products meet specified LEED characteristics under "LEED Requirements" paragraphs herein; necessary to attain each indicated LEED credit.

#### 1.05 LEED REQUIREMENTS

- A. Mandatory Credits: Compliance with following is mandatory for the Work.
  - 1. MR Credit 4: Recycled Content.
  - 2. EQ Credit 4.1: Low emitting adhesives and sealants.

#### 1.06 PROJECT/SITE CONDITIONS:

- A. Environmental Conditions, General: Refer to Division 1 requirements.
- B. Temperature/Humidity: Place carpet and adhesives only in areas where the space is continuously air conditioned and under environmental temperature and humidity conditions acceptable to each Project Product manufacturer. Other temperature/humidity requirements may be acceptable to University, when Carpet and Adhesive Manufacture submits in writing that other written and reviewed specified project conditions to be maintained prior, during, and after installation are acceptable to them and that such conditions are indicated as not detrimental to the final installation requirements of the project.

C. Substrate Conditions: Unless more restrictive quality requirements are dictated by each Project Product Manufacturer, comply with the following.

1. Moisture Content: Not to exceed 65%
2. Alkalinity: Limit pH range between 5 to 9.

1.07 WARRANTY:

A. Manufacturer's Warranty: Submit written and executed Manufacturer's standard limited "Materials Warranties" covering manufacturing defects in each Project product materials and workmanship as follows from date certified for Substantial Completion of Project.

1. Wear: Lifetime.
2. Static Performance: Lifetime.
3. Adhesive: Lifetime.
4. Backing: Lifetime.
5. Duracolor Technology: Lifetime.

B. Installer's Warranty: Submit written warranty against defects in the installation for a period of one (1) year from date certified for Substantial Completion.

1.08 MAINTENANCE:

A. Maintenance Instructions: Submit each carpeting Manufacturer's maintenance instructions for Project carpeting.

B. Extra Materials: For each different material (e.g. size, type, color, pattern, cut, etc.), furnish extra materials from the same production run as each original material provided for the Project and following amounts.

1. Submit all unopened cartons ordered but not used for Project, except provide not less than one standard unopen cartoon of each where all has been opened.
2. Re-box all remaining loose and useable materials not used for Project. Rebox only same materials together. Apply labels on surfaces of each cartoon to identify contents there in by Manufacturer, product name, type, number, and color.

## PART 2 – PRODUCTS

### 2.01 PRIMARY CARPET MATERIALS:

A. CPT - #: As scheduled; where not scheduled or where not all cost impact characteristics are not scheduled, verify from Architect and include impacts in Bid. Verify not less than following.

1. Manufacturer.
2. Style.
3. Style Name.
4. Color.
5. Primary Characteristics:
  - a. Type: Modular (carpet tile).
  - b. Size: 24" x 24".
  - c. Construction Related:
    - 1) Gauge.
    - 2) Stiches.
    - 3) Pile Thickness.
    - 4) Dye Method
    - 5) Backing
    - 6) Face Weight
    - 7) Face Yarn.
    - 8) Stain Residence.
  - d. Performance Related:
    - 1) Static: 3.0 KV at 70° F using Shuffle Test.
    - 2) Flammability: DOC-FF-1, Pill Test, passes.
    - 3) Smoke Density: NFPA 258, less than 450.

- 4) LEED: CRI Green Label certified.

## 2.02 RELATED MATERIALS:

- A. Adhesives: Type required by each Carpet Manufacturer for their Project modular carpet products for each installation and substrate condition and remains tacky to allow modular tiles to be repositioned several times without affecting its adhesive capability.
- B. Water Vapor Transmission Membrane: Refer to Division 9 – Floor Treatment Section.
- C. Edge Guards/Trims: Burke Mercer Flooring Products or other comparable heavy duty extruded or molded resilient guards/trim; selected by University from full range of available standards.
- D. Divider Strips: Terrazzo type, brass/bronze 1/8" wide divider strips with anchorage provisions, and of height required to match carpet assembly depth.
- E. Miscellaneous Materials: Following types as acceptable to each Carpet Manufacturer.
  - 1. Concrete Patching Material: Refer to Division 3 – Concrete Repair Section.
  - 2. Concrete Primer/Sealer: Type to seal in dusting or deteriorated base substrate surfaces and provide priming of surface for subsequent and proper bonding of glue down type installments.

## PART 3 – EXECUTION

### 3.01 EXAMINATION:

- A. Substrate Conditions, General: Refer to Division 1 requirements. Do not proceed with installation where conditions are unacceptable.
- B. Moisture Vapor Transmission (MVT) and Alkalinity (pH) Testing: For work bonded to concrete slabs, comply with following.
  - 1. Conduct testing in conformance with Division 9 – Floor Treatment Section.
  - 2. If testing indicates unacceptable levels of MVT and pH, install each Resilient Manufacturer's approved MVT or pH coatings conforming to Division 9 – Floor Treatments and Section 01010 – General Requirements; capable of reducing MVT or pH, or both, to acceptable levels.

### 3.02 PREPARATION:

- A. Substrate Preparation – General:

1. Remove deleterious products from substrates. Neutralize other deleterious chemical conditions, e.g. alkaline or staining materials. Seal minor powdery defective concrete with Carpet Manufacturer approved sealing materials.
  2. Level and patch minor holes, cracks, depressions, rough areas, and other similar defects in the substrate with patching material.
- B. Moisture Vapor Transmission (MVT) and Alkalinity (pH) Testing:
1. Conduct testing conformance with Division 9 – Floor Treatment Section.
  2. If testing indicates unacceptable levels of MVT and pH, install each Carpet Manufacturer's approved MVT or pH coatings conforming to Division 9 – Floor Treatments Section and capable of reducing MVT or pH, or both, to acceptable levels.
- C. Environmental Acclimation: Acclimate carpeting and adhesive materials in installation space not less than 48 hour prior to application under conditions acceptable to each Carpeting Material Manufacturer.

### 3.03 INSTALLATION, GENERAL:

- A. Carpet Manufacturer's Requirements: Install in strict accordance with Carpet Manufacturer's Project specific requirements. Utilize tools and methods specifically recognized in industry as proper for each type of installation required to prevent defects and ensure taut and smooth installations.
- B. Layout: Layout carpet in accordance with successfully reviewed Shop Drawings, and as follows.
1. Fitting: Prior to any installation, fit carpet into each area. Trim edges.
  2. Pattern: Observe Manufacturer's requirements for achieving proper design, color, and pattern blending. Match mockups successfully reviewed by University.
- C. Complete Coverage: Extend carpet over entire exposed substrate. Extend carpet under flanges of fixed furnishings/equipment. Extend carpet into adjacent closet and alcoves of areas indicated to be carpeted, unless another finish is specifically indicated.
- D. Fill Strips: Do not use fill strips of less than 18" width, unless it is a scheduled border, or unless otherwise acceptable to University as approved in successfully reviewed Shop Drawings.
- E. Cutouts: Provide cutouts where required. Bind edges where not otherwise protected by overlapping flanges of installed product for which cutouts required.

- F. Exposed Carpet Edges: Where carpet would otherwise be exposed, provide edge guards/trim as indicated; where not indicated, provide rubber/vinyl edge guard/trim for direct glue-down installations of type selected by University.
- G. Divider Strips: Apply where carpeting terminates against adjacent stone and tile installations.

#### 3.04 MODULAR CARPET:

- A. General: Comply with CRI 104, Section 14, "Carpet Modules" and Modular Carpet Manufacturer's written installation instructions.
- B. Layout: Provide layout in accordance with Shop Drawings successfully reviewed by University; that start at position as close to center of each area and allows for terminal perimeter cut modules of largest size possible.
- C. Pattern Orientation: To be selected by University from mockups of Manufacturer's standard patterns.

#### 3.05 CLEANING & PROTECTION:

- A. General: Refer to Division 1 requirements. Advise Contractor of continued environmental conditions to be maintained in order that carpet installations are not subjected to detrimental conditions.
- B. Cleaning/Repair: Remove debris, soil marks, spots, and other stains from carpet. Repair defects. Replace carpet unrepairable and damaged carpet. Clean cut protruding yarn from face of carpet.
- C. Stable Installation: Do not allow traffic or materials on installations, until adhesives are fully cured and stable.
- D. Protection: CRI 104, Section 15, "Protection of Indoor Installations".

END OF SECTION