

**RICHARD T. BISSEN, JR.**  
Mayor

**JOSIAH K. NISHITA**  
Managing Director

**ERIN A. WADE**  
Deputy Managing Director



**DEPARTMENT OF MANAGEMENT**  
**COUNTY OF MAUI**  
**200 SOUTH HIGH STREET**  
**WAILUKU, MAUI, HAWAII 96793**  
[www.maui-county.gov](http://www.maui-county.gov)

October 20, 2025

Honorable Richard T. Bissen, Jr.  
Mayor, County of Maui  
200 South High Street  
Wailuku, Hawaii 96793

**APPROVED FOR TRANSMITTAL**

  
\_\_\_\_\_  
Mayor 10/21/2025  
Date

For Transmittal to:

Honorable Alice L. Lee, Chair  
and Members of the Maui County Council  
200 South High Street  
Wailuku, Hawaii 96793

Dear Chair Lee:

**SUBJECT: BILLS 136 (2025) AND 137 (2025), RELATING TO THE  
RENOVATION OF 60 SOUTH CHURCH STREET, WAILUKU,  
HAWAII (BFED-8)**

This transmission is in response to your subject letter dated October 15, 2025 regarding the Bill 136 (2025) and 136 (2025) pertaining to a budget amendment request for the 60 South Church Street Building Renovations Project.

1. Confirm whether a property condition or other assessment report exists for 60 South Church Street. If yes, please provide a copy.

*Response: A property condition assessment was not conducted for the subject property prior to acquisition. However, during the renovation design phase in 2022, a waterproofing assessment was issued that addressed various known leaks and structural damage in the building envelope due to deferred maintenance & incremental moisture intrusion over the life of the building. Recently, in September 2025 a rooftop assessment was conducted for the one-story Annex Building fronting Church St., which is another location where leaks have been observed during the rainy months (NOTE: funding to repair the Annex Building roof is included in this budget amendment request). Copies of both these reports are attached to this letter as Exhibits "C" and "D".*

Honorable Alice L. Lee, Chair

October 20, 2025

Page 2

2. Provide the estimated renovation completion date and move-in schedule for 60 South Church Street, by department or agency.

*Response: The contractor is expected to reach substantial completion December 2025. Furniture and technology installations will be underway in December-January, with move-in expected in February 2026.*

3. Provide the total costs incurred to date, separated by acquisition and renovation, and identify the funding sources for each amount.

*Response: See attached Funding Summary (Exhibit "A")*

4. Provide the current estimate to complete the project, including contingency, and state whether additional costs are anticipated beyond the current appropriation request.

a. If additional costs are anticipated, identify the amount, the proposed funding source, the reason, the expected date for budget action, and any schedule impact.

*Response: See attached Funding Needs Summary (Exhibit "B"). No additional costs are anticipated beyond the current appropriation request.*

5. Identify all funding sources for the project, by amount. Please state any obligations, deadlines, or conditions per funding source and indicate whether any award, obligation, or deadline is at risk. If any risk exists, explain the risk and the mitigation, and attach a copy of the award or grant documents.

*Response: See attached Funding Summary (Exhibit "A"). While there are deadlines involved with the encumbrance or expenditure of certain funding sources, the risk of not meeting these deadlines is extremely low and not of significant concern.*

Should you have any questions or concerns, please do not hesitate to contact me at extension 7855.

Sincerely,



JOSIAH K. NISHITA  
Managing Director

Attachments

**Bills 136 (2025) and 137 (2025) [BFED-8]**

**EXHIBIT "A"**

**60 S. Church St. Building Renovations**

**Funding Summary**

Acquisition or Renovation?	FY	Dept.	Index Code	Title	Amount Appropriated	Amount Encumbered (To Date)	Obligations / Conditions / Deadlines	Risk Involved?
Acquisition	2021	Finance	310293	Acquisition of 60 S. Church St. Bldg. & Property	\$ 3,800,000	\$ 3,735,549		
Renovation	2021	Management	310252	60 S. Church St. Bldg. Renovations	\$ 260,000	\$ 260,000		
Renovation	2022	Management	320236	60 S. Church St. Bldg. Renovations	\$ 628,000	\$ 628,000		
Renovation	2022	Management	320038	60 S. Church St. Bldg. Renovations	\$ 1,872,000	\$ 1,872,000		
Renovation	2022	Management	326236	60 S. Church St. Bldg. Renovations	\$ 7,000,000	\$ 7,000,000		
Renovation	2023	Management	330247	60 S. Church St. Bldg. Renovations	\$ 810,000	\$ 810,000		
Renovation	2024	Management	146069 340242	DHS/EOC Grant - 60 S. Church St. Bldg. Reno.	\$ 1,400,000	\$ 1,380,997	Expend by June 2026	Very Low
Renovation	2024	Management	340044	60 S. Church St. Bldg. Renovations	\$ 2,500,000	\$ 2,480,939		
Renovation	2025	Management	350027	60 S. Church St. Bldg. Renovations	\$ 2,500,000	\$ 2,342,814	Encumber Balance by 12/31	Very Low
Renovation	2025	MEMA	912014C	"C" Acct (Computer Eqpt, Furniture, Video Wall)	\$ 1,189,621	\$ 1,189,621		
Renovation	2025	MEMA	156202	EMPG Grant - FY2023	\$ 199,000	\$ 199,000		
Renovation	2025	MEMA	136702	DHS Grant - FY2022	\$ 2,644	\$ 2,644		
Renovation	2025	DPW	350046	Countywide Facilities Maintenance Program	\$ 107,797	\$ 107,797		
Renovation	2026	MEMA	146743	DHS Grant - FY2023	\$ 71,892	\$ 71,892	Expend by May 2026	Very Low
<b>TOTAL:</b>					<b>\$ 22,340,954</b>	<b>\$ 22,081,253</b>		

**Bills 136 (2025) and 137 (2025) [BFED-8]  
60 S. Church St. Building Renovations  
Cost of Completion / Funding Needs Summary**

**EXHIBIT "B"**

<u>Item #</u>	<u>Description</u>	<u>Cost</u>	
1	MEMA-requested add-ons to existing scope of security improvements	\$ 106,644.79	
2	Electrical infrastructure, door hardware retrofits for MEMA-requested security add-ons (Item 5 above)	\$ 50,000.00	Estimate
3	Main Electrical Distribution Switchboard Retrofits for new 1000A breaker (incl. thermographic testing of switchgear)	\$ 75,000.00	Estimate
4	Design & Construction of Steel Rack for Stacking of Transformers (plus addtl. labor for stacking installation)	\$ 12,500.00	Estimate
5	Floor Leveling on 2nd & 3rd Floors (Labor-only)	\$ 150,000.00	Estimate
6	Roofing Modifications: install gutters/downspouts at perimeter of three-story building roof; modify roof profile for two-way drainage	\$ 40,000.00	Estimate
7	Extension of Temporary Emergency Generator Rental (4 months)	\$ 65,000.00	Estimate
8	Installation of Property Line Sewer Manhole (per WWRD bldg. permit req's)	\$ 20,000.00	Estimate
9	Replace window gaskets & tint at elevator lobbies & two-story HT office building	\$ 50,000.00	Estimate
10	Exterior Painting of Annex Building & HT Offices	\$ 150,000.00	Estimate
11	Re-roof & Replacement of Roof Drains on Annex Building	\$ 150,000.00	Estimate
12	Replace 2" backflow preventer assembly, upgrade water meter box cover to 316SS, per DWS building permit requirements	\$ 8,000.00	Estimate
13	Landscaping Design & Installation	\$ 50,000.00	Estimate
14	Add Services - Design Contract	\$ 50,000.00	Estimate
15	Contractor's Extended Overhead (Jan.-Feb. 2026)	\$ 116,000.00	Estimate
16	CONTINGENCY: Miscellaneous Pending & Future Change Orders	\$ 150,000.00	Estimate
		<u>\$ 1,243,144.79</u>	
	Less Remaining Project Funding	<u>\$ (157,000.00)</u>	
	<b>TOTAL Estimated Funding Need</b>	<b>\$ 1,086,144.79</b>	

# Architectural Diagnostics Ltd.

A Division of Kent Engineering

Building Diagnostics X Failure Analysis X Remedial Architecture X Architecture

29 April 2022 + 6/1/2022 Inserts (R-1)

Ben Lee  
Clifford Planning  
Ben.Lee@CliffordPlanning.com

**PROJECT:** 60 S. Church St.  
**SUBJECT:** Waterproofing

Dear Ben:

On 11/18/2021 I accompanied you to the 60 S. Church Street building in Wailuku, Maui to examine reported waterproofing problems in preparation for an extensive interior renovation by your office. After our site visit, I examined portions of the construction drawings for the building. The following is a summary of my observations.

1. We looked at the entire exterior but, because of visible indications of moisture intrusion, we focused on:
  - 1.1 The north exterior building wall
    - 1.1.1 There appears to be moisture intrusion at the intersections between the CMU walls and concrete beams above and below the 2<sup>nd</sup> floor beam, above and below the 3<sup>rd</sup> floor beam and below the roof beam.
  - 1.2 The roof, which is about 1/3 covered with PV panels. We focused on the exposed east end and the eastern 2/3's of the south side.

DS Q: Why wasn't the NW exposed roof area (between the PV panels) looked at or tested for moisture?

ADL: We took 8 core samples of the roofing, which, when we were planning the work, seemed like a good representative sampling of the roofing condition. Of course, we could have had more taken but in our planning we thought 8 was adequate. If the County wants more taken, we can arrange that.

2. We looked at the entire interior, including the 1<sup>st</sup> floor which is occupied with telephone equipment but, because of visible indications of moisture intrusion, we focused on:

2.1 The interior walls on the north side on floors 2 & 3.

2.2 Portions of the 3<sup>rd</sup> floor interior wall on the south side.

### 3. The Building Walls

#### 3.1 The exterior walls

3.1.1 The structural frame is poured-in-place concrete.

3.1.1.1 The columns are 24'-6" on center.

3.1.1.2 The floor height for the 1<sup>st</sup> floor is 16'-6".

The floor height for the 2<sup>nd</sup> and 3<sup>rd</sup> floors is 13'-8"

3.1.1.3 The infill walls between the concrete frame elements are 8" thick, solid-grouted, 5-score concrete blocks ("CMU"). The 5-score blocks have ½" wide by ½" deep vertical grooves at 2 ⅔" on center, simulating the ½" wide block to block joints. The exterior surface, including both the concrete beams and columns and the CMU are in the same plane.

3.1.2 The visible face of the beams is 8" below the floor line. The exposed portion of the beams is 12" high. The exposed face of the columns is 20" wide.

3.1.3 The scored CMU starts 8" below the floor line and extends to the underside of the beam above. To accomplish this, the top of the horizontal concrete beams has a 4" wide x 8" high blockout at the top of the exterior side. A 4" thick block (½ a block) is placed in the blockout, apparently to maintain the 5-score block pattern. Because the bottom of the CMU wall sits in an "L" shaped concrete pocket, it's a watertight condition (see Detail 8/S-4 Exhibit 4).

The detail between the top of the infill wall and the bottom of the beam above, however is considerably less watertight. According to the construction drawing detail at the top of the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> floor walls, the CMU walls were built two block courses short of the bottom of the beam above. The vertical reinforcing was then inserted into the empty cells and the grout installed thru the opening left by the missing top blocks. A horizontal bond beam was then constructed along the top of the wall (the next-to-top course) with the horizontal rebar and grout inserted thru last missing CMU course. The top block course was then constructed with a half block on the face and hand-placed concrete on the inside, with an inside form. The installation of that last block course is very difficult and requires careful attention. It is very likely the source of the water coming thru the wall (see joint details - Exhibits 4, 5, 6 & 20).

3.1.4 The north wall has small balconies (4' x 7') at each end of each floor. Two at the 2<sup>nd</sup> floor, 2 at the 3<sup>rd</sup> floor and 2 at the roof, for a total of 6, including a similar extension at the roof level. All have cracks & spalling (see photo Exhibits 17 & 18).

3.1.5 The exterior side of the north wall has 9 corbels to enable a future extension of the building, 3 at the 2<sup>nd</sup> floor, 3 at the 3<sup>rd</sup> floor, 3 at the roof level. They are at beam to column intersections, are 3'-0" high, 20" wide and project 10" out from the face of the building. The 3 at the 2<sup>nd</sup> floor are severely deteriorated. The 3 at the 3<sup>rd</sup> floor line are significantly less so. The 3 at the roof line are even less so (see photos Exhibits 2, 8, 9 & 10).

3.1.6 The exterior surface of the building has two coats of an acrylic elastomeric paint, the first is a tan color, the latest, a grayish off-white.

3.1.6.1 Most of the coating is well adhered. The coating will be extremely difficult to remove, if that is the intent, mainly because of all the grooves in the scored CMU blocks.

3.1.6.2 Portions of the coating, primarily below the 2<sup>nd</sup> floor concrete beam, have large blisters, bags of water between the CMU and the coating. That indicates that the coating is leaking somewhere above the blister (see photo Exhibit 19).

3.1.7 Recommendations

3.1.7.1 Because of the vertical grooves in the exposed surface of the concrete block wall, removing the coating will be very difficult (expensive). The coating on the columns and beams, all loose coating and the coating for 8" above and below the beams (including in the CMU grooves) should be removed to the bare concrete. Then a coating of the specified acrylic wall coating is to be applied.

DS Q: This appears to be a "band-aid" fix. Please also identify what a long-term fix would entail, then explain why you are recommending a short-term solution (from a waterproofing standpoint).

ADL: As explained in the Report, removing all of the coating from the face of the 5-score CMU will be very tedious, labor intensive and expensive. We can get a quote on removing all of the coating but in an attempt to keep the work within the budget, a less extensive removal was specified.

3.1.7.2 At the corbels, the 3 at the 2<sup>nd</sup> floor line should be chipped off flush with the surrounding and the wall surface repaired to match the adjacent beam and column. The other 6 can remain in place, with the coating removed, then refinished like the rest of the wall (see photos Exhibits 8, 9 & 10).

3.1.7.3 The cracks and spalling on the balcony projections at each floor (including the roof) need to be repaired before repainting.

**Waterproofing Observations and Recommendations**

DS Q: **What about demolishing the balconies altogether?**  
ADL: It is my opinion that the cost to remove the balconies will be more, probably much more, than repairing the spalls and that repairing the balconies will preserve the visual integrity of the building.

**3.2 The Interior Wall Surfaces**

3.2.1 The interior face of the exterior wall is coated with a 1/4" thick plaster skim coat, then painted with at least 3 paint coats. The last paint coat has severe blistering in several areas on the north wall of the 2<sup>nd</sup> floor. The 3<sup>rd</sup> floor is a little less severe, and smaller areas on the south wall, indicating on-going leaks. The 1<sup>st</sup> floor appears to be OK.

DS Q: **Check 1<sup>st</sup> floor west wall near stairs. See attached photo**  
ADL: There may be small localized areas on the first floor where moisture intrusion thru the CMU has occurred. The entire exterior of the building is to be made watertight.

3.2.1.1 Previous hazmat testing indicates that the skim coat plaster on the 2<sup>nd</sup> floor walls contains unacceptable levels of asbestos (greater than 3 PPM). The 3<sup>rd</sup> floor level is OK (less than 3 PPM).

3.2.1.2 At the blistered portions of the interior walls, the skim coat plaster appears to be sound, not delaminated.  
The 1<sup>st</sup> coat, a thin film off a medium blue paint, is sound, well adhered, not blistered.  
The 2<sup>nd</sup> coat, a thin film of tan paint, appears to be sound, well adhered, not blistered.  
The final coat, a heavy film of an off-white paint is extensively blistered (see photos Exhibits 13, 14, 15 & 16).

3.2.1.3 A portion of the south wall at the 3<sup>rd</sup> floor has similar, although less severe blistering.

DS Q: **What is the cause of blistering at this area?**  
ADL: The small area of blistering on the south wall, at the 3<sup>rd</sup> floor was caused by the same mechanism that caused blistering on the north wall- water getting into the CMU, probably at the CMU to concrete beam joint at the top of the 3<sup>rd</sup> floor.

An interesting question, is "why did the 3<sup>rd</sup> coat of interior paint, the thick off-white coat, blister while the first two did not?" Clearly, the 3<sup>rd</sup> coat is less moisture permeable, but why was a different type of paint used for that layer? Why was a thicker, less permeable coat of paint applied? It could have been chosen to encapsulate the asbestos in the plaster skim-coat. If it would be

be useful, we could have the paint analyzed to see what it is made of. HiTel might have maintenance records discussion why that paint was selected.

### 3.2.2 Recommendations

3.2.2.1 Remove the paint where the surface is blistered and at least 12" beyond the blistered edge.

3.2.2.2 Feather the edge of the area where the paint has been removed.

3.2.2.3 Coat the wall with

3.2.2.3.1 A penetrating primer

3.2.2.3.2 An asbestos encapsulant paint such as SerpiFlex Asbestos Encapsulant Formula 2

## 4. The Roof

4.1 The roof is 113'-8" x 72'-6" + several extensions. The total area is about 8,700 sf.

4.2 About 31% of the roof is covered with PV panels.

4.3 It appears that the structural slab is flat, with the slope from tapered insulation.

4.4 There are two structures which extend above the main roof level, both at the southeast corner of the building- the elevator penthouse and an exit stair penthouse. Each of those, plus the roof over the exit stair at the southwest corner, has a small roof.

4.5 Eight core samples were extracted from the roof, at a variety of areas around the roof (but not under the PV panels). They show:

4.5.1 Roof composition

4.5.1.1 A hot-mopped base sheet

4.5.1.2 Yellow Jacket insulation

4.5.1.3 Fiber board (probably Canec)

4.5.1.4 A hot-mopped felt layer originally with gravel

4.5.1.5 A top layer of HydroStop with reinforcing mesh.

4.5.2 Moisture Levels of the insulation:

4.5.2.1 The moisture content at the west end of the roof, between the PV panels and the roof edge is -0-.

4.5.2.2 The moisture content at the southeast corner varies from 31% to 99.9%.

4.5.2.3 The moisture content at the northeast corner varies from 0 to 8.6% but a measurement at the edge of a ponded water area is 99.9%.

4.5.3 The roof edge flashing along the north edge is torn about 30' west of the east end of the building (see photo Exhibit 7).

### 4.6 Recommendations

4.6.1 I understand that the owner's intent is to extend the life of the existing roof for about 3 years to enable them to get the funding to replace it.

DS Q: I don't believe we ever said this?

ADL: A 5 year, short term, interim solution and a long term fix when funds are

**Waterproofing Observations and Recommendations**

available in the future were discussed at one of the Bluejeans meeting. If funds are available now, we would recommend removing the PV panels and the existing roof material down to the concrete and install a new roofing system. We would recommend an SBS mod-bit system with a high-reflectivity granular surface over R-30 foam insulation. PolyGlass Polyfresco G-SBS-HP-FR.

- 4.6.2 The exposed portions of the roof (including the 3 little roofs in 4.4 above) should be cleaned by power washing.
- 4.6.3 All visible defects, such as the hole in the north side edge flashing, should be repaired.
- 4.6.4 Install 3 Roof Sentry PV solar roof vents.
- 4.6.5 Coat the exposed areas of the roof, including the 3 little roofs in 4.4 above, and the sloping surface of roof edge detail with a silicone roof coating.

DS Q: How do these address roofing assemblies that have been moisture tested and found to contain excessive moisture?

ADL: The Hawaii sun on the roofing will evaporate the moisture in the roofing system, turning it into water vapor. The Roof Sentry PV solar vent will aggressively suck out the moisture vapor. This is a 3 to 5 year system, not a long-term one.

DS Q: 4.6.6 Clean and flush roof drains?

ADL: Since they are now 50+ years old, the roof drains should be replaced as part of the repair in paragraph 7 above. The drain piping should also be inspected.

5. This general description will be augmented by the specification and selected details.

Sincerely,

**ARCHITECTURAL DIAGNOSTICS, LTD.**



Jim Reinhardt  
Its President

60 S. Church St WP Recomm

List of Exhibits:

- Exhibit 1 Aerial photo of roof plan with annotated results of roof coring
- Exhibit 2 Photo of building exterior - east elevation
- Exhibit 3 Detail 6/S-5 beam ledger/corbel
- Exhibit 4 Structural detail Exterior Beam Section 8/S-4 from Sheet S-4
- Exhibit 5 Structural detail 8/S-4 from Sheet S -4
- Exhibit 6 Structural detail 6/S-1 from Sheet S-1
- Exhibit 7 Photo of existing edge of roof flashing
- Exhibit 8 Photo (a) of spalled beam ledger/corbel
- Exhibit 9 Photo (b) of spalled beam ledger/corbel
- Exhibit 10 Photo (c) of spalled beam ledger/corbel
- Exhibit 11 Photo (a) of the interior joint condition at the concrete beam and CMU wall above ACT ceiling
- Exhibit 12 Photo (b) of the interior joint condition at the concrete beam and CMU wall above ACT ceiling
- Exhibit 13 Photo (a) interior of blistered skim coat plaster and paint on wall - 2nd floor
- Exhibit 14 Photo (b) close-up of blistered skim coat plaster and paint on wall - 2nd floor
- Exhibit 15 photo (c) interior of blistered skim coat plaster and paint by AC equip - 2nd Floor
- Exhibit 16 Photo (d) interior of blistered skim coat plaster and paint by AC equip - 2nd Floor
  
- Exhibit 17 Photo exterior balconies
- Exhibit 18 Photo exterior balconies
- Exhibit 19 Photo sagging and water filled balloon paint at exterior concrete beam
  
- Exhibit 20 Exterior joint conditions at CMU wall and concrete beam and recommended specs

# Hawaiian Tel Building Kahului

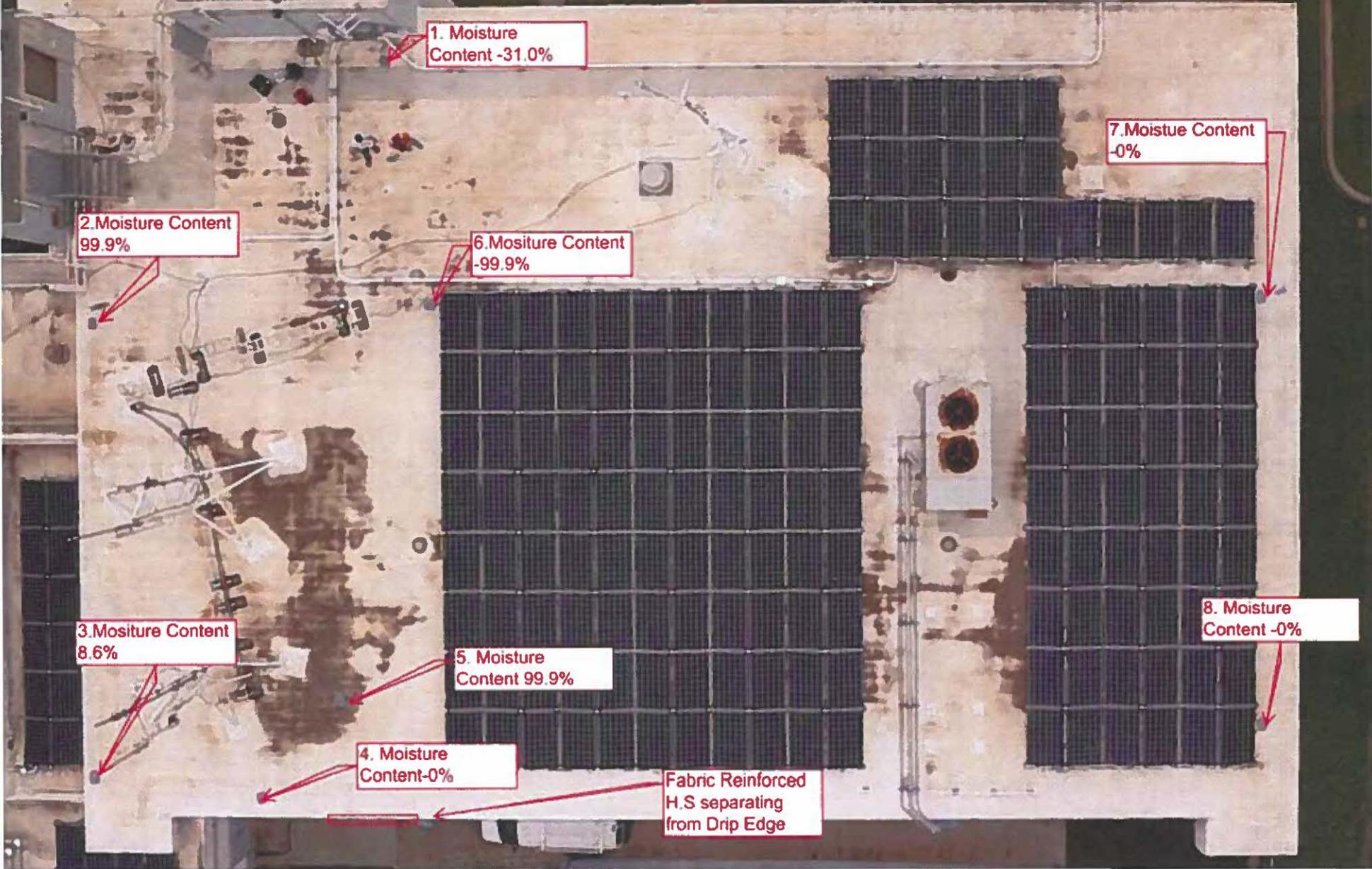
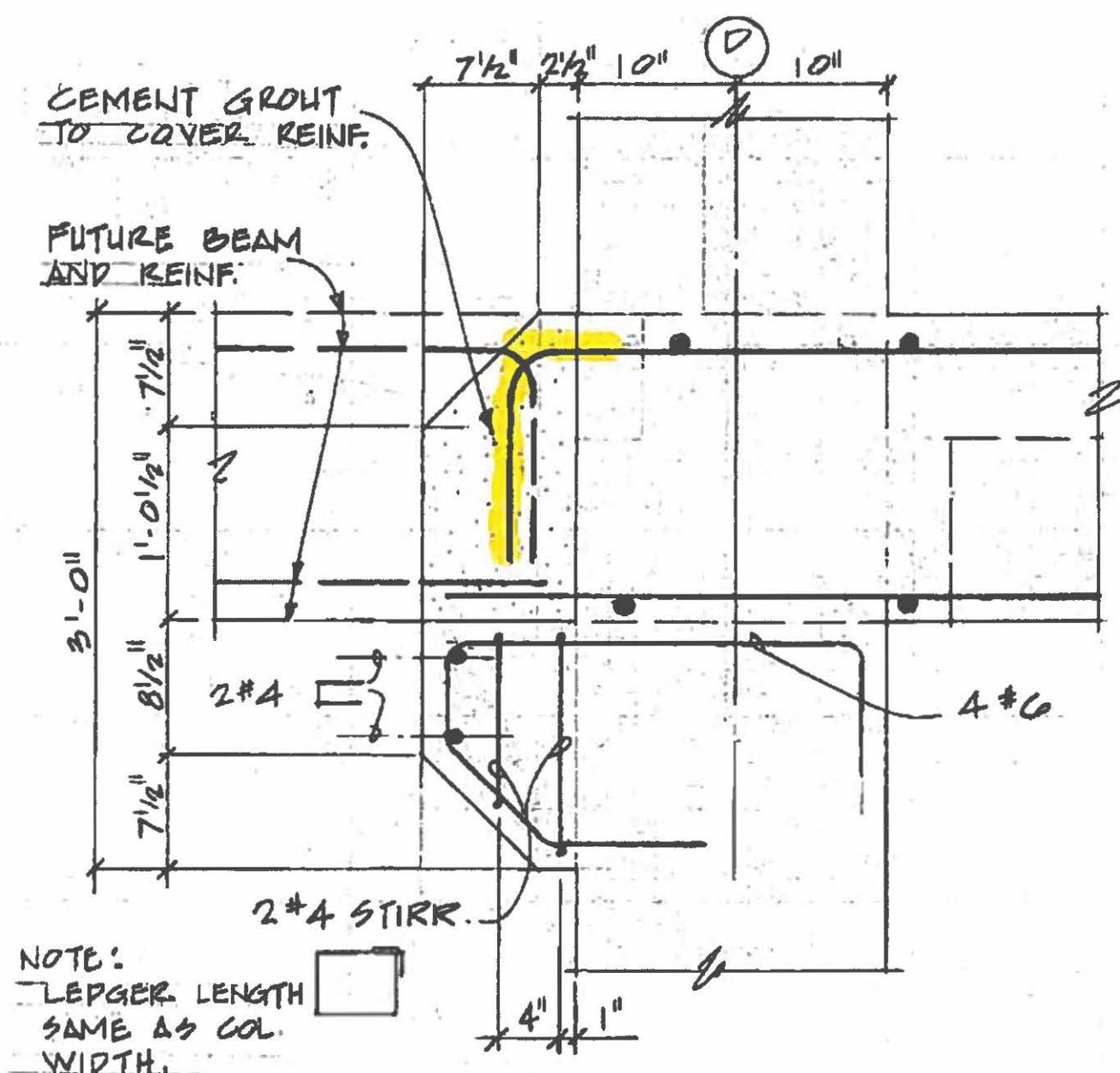


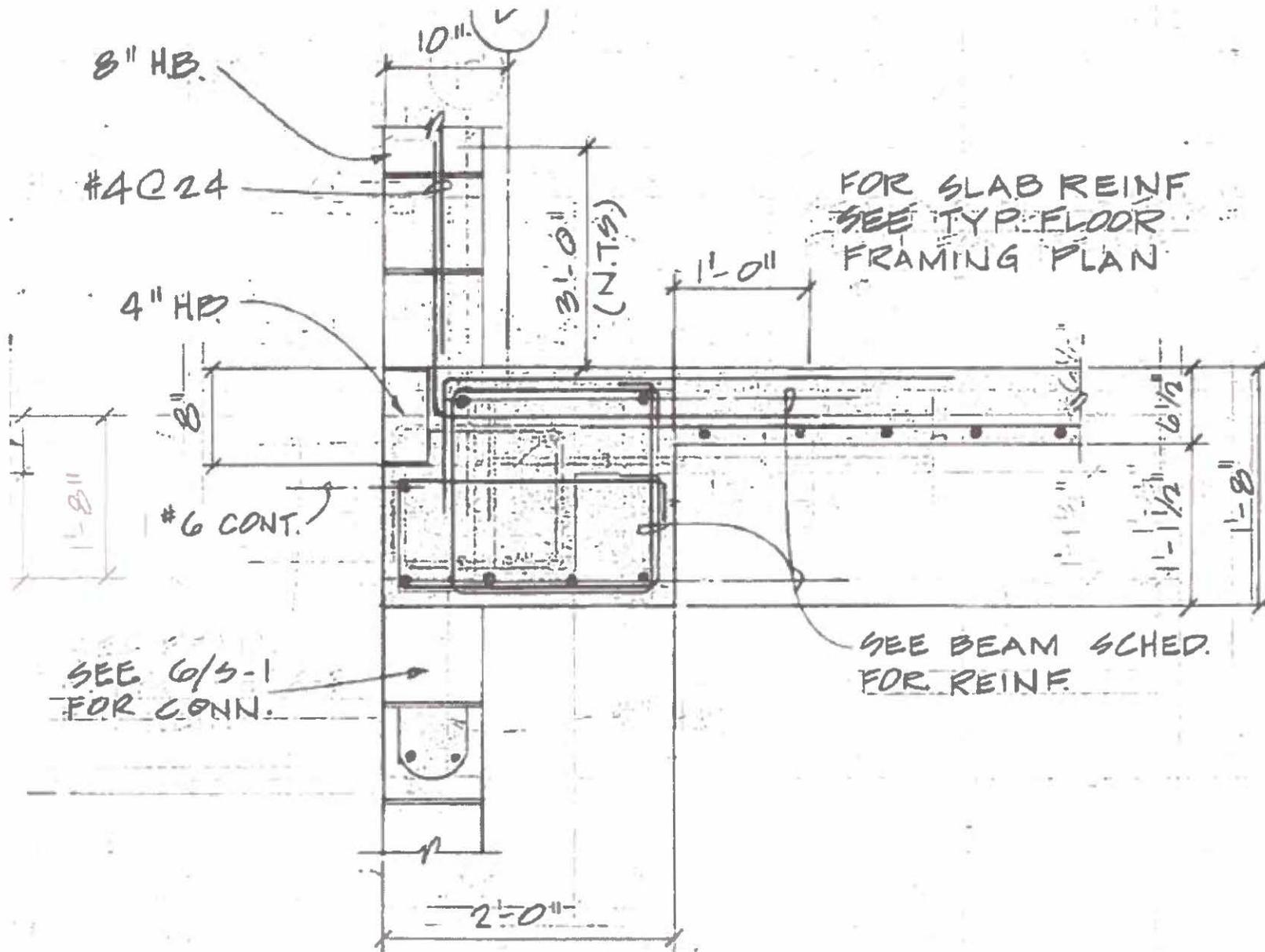
Exhibit -1



Exhibit - 2



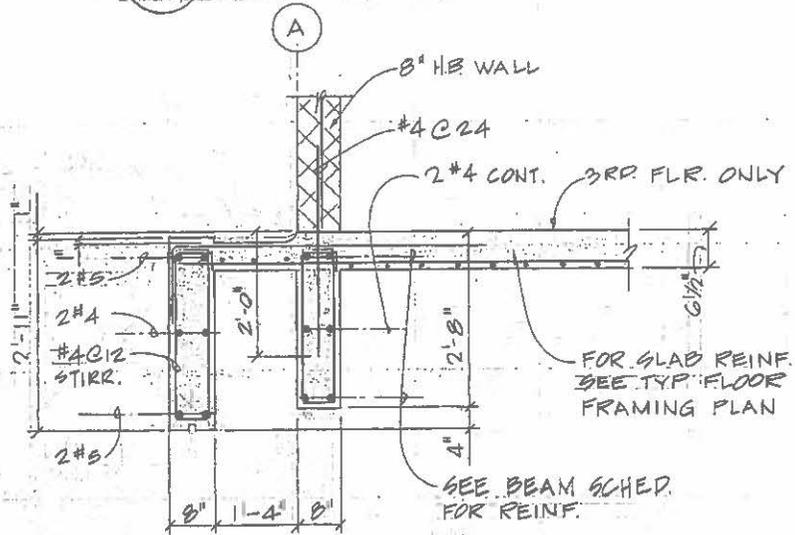
6 FUTURE BEAM LEDGER  
3-5 1" = 1'-0"



8  
9-4
EXTERIOR BEAM SECT.  
3/4" = 1'-0"

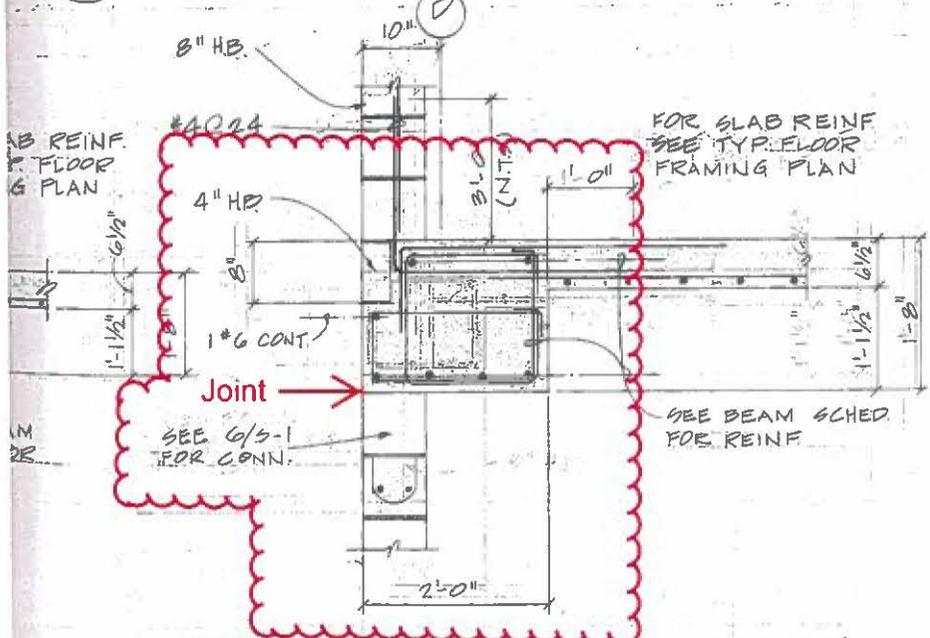
(4) BEAM SECTION

9-4 1/2" = 1'-0"



(6) EXTERIOR BEAM SECTION

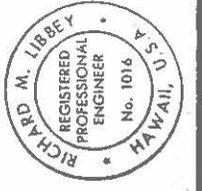
9-4 1/2" = 1'-0"



(8) EXTERIOR BEAM SECT.

9-4 3/4" = 1'-0"

DRAWING PARTIAL 2 PLAN AND PROJECT WAILUKU C WAILUKU, M



MEYERS, DETWEILER AND ASSOCIATES ARCHITECTURE, ENGINEERING AND PLANNING 837 COOKE STREET SUITE 200 HONOLULU HAWAII 96813

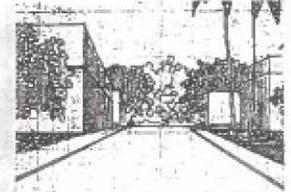
*Richard M. Libbey*

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY SUPERVISION

PROJECT 6916

DRAWING

S-4

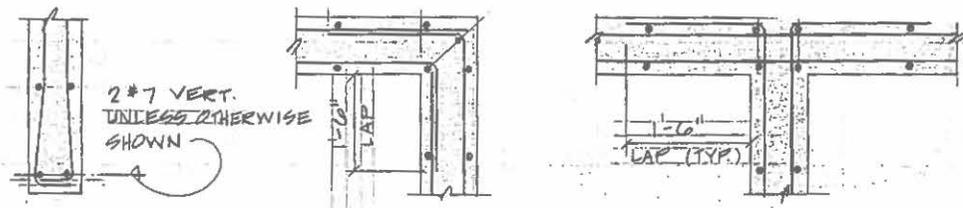


PLAN & DETAILS  
EXISTING A/C R

DETAILS & FUEL  
CHILLED WATER DIA  
INTERLOCK DIAGRAM

PAINTED CONC  
CY TREATMENT  
10 M

SECT.



2 #7 VERT. UNLESS OTHERWISE SHOWN

REIN. DETAIL

JAMB CORNER INTERSECTION

NOTE. SEE WALL SECTIONS FOR WALL REINEL SIZE & SPACING. REIN. SIZE 1/2" DIA. UNLESS OTHERWISE SHOWN.

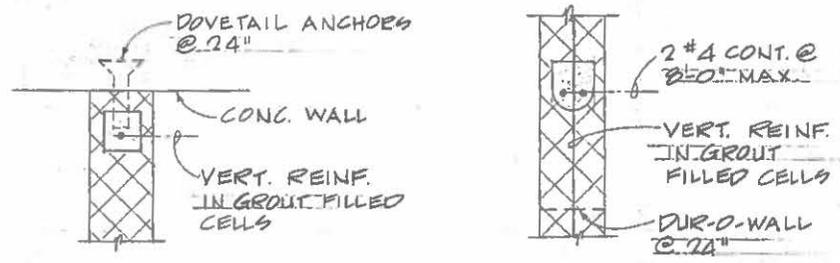
DOUBLE MAT REINFORCING

4 TYPICAL CONC. WALL DETAILS NOT TO SCALE

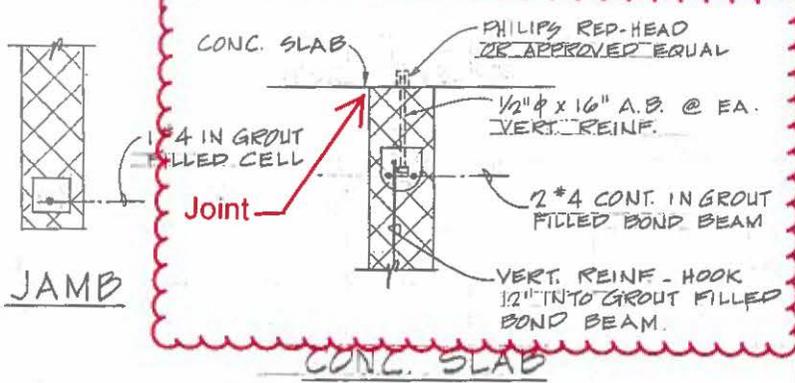
HALF OF DISPLACED ON EACH SIDE OF OPNG. @ 9" OC. PROVIDE EACH SIDE.

SEE WALL SECTION FOR REIN. SPACING

FOR LOCATION AND DIMS. OF OPENINGS IN ARCH., MECHANICAL & ELECTRICAL DWGS.



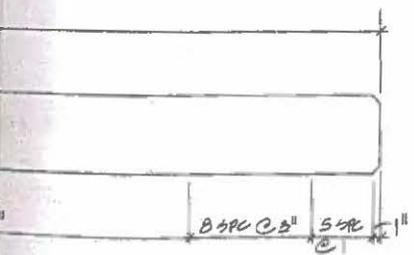
CONC. WALL BOND BEAM



JAMB

CONC. SLAB

REIN. DET.



PILES

6 TYP. CONC. BLOCK WALL DETAILS NOT TO SCALE



MEYERS, DETWEILER AND ASSOCIATES  
 ARCHITECTURE, ENGINEERING AND PLANNING  
 837 COOKE STREET SUITE 200 HONOLULU HAWAII 96813

*Richard M. Libbey*  
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY SUPERVISION.

PROJECT 6916

DRAWING

S 1

19 OF 46

60 S. Church Street  
Wall joint conditions  
May 23, 2022

- A - Remove blistered paint on concrete columns and beams.
- B - Destructive investigation by drilling holes in the CMU block to determine if the block is filled solid with grout or hollow. Also exploratory investigation of a small section of wall to test ejecting polyurethane grout. We do not know if the CMU walls were constructed prior to pouring the floor and beam?
- C - Remove cement wash and apply Thoroseal, Mapei or Sika waterproofing material on the interior of the block wall above the existing grid ceiling. The cement wash has visible cracks and efflorescence (see photos Exhibits 11& 12).

At joint conditions 1, 2, 3 & 4:

- Grind and remove the existing mortar joints to a depth of  $\frac{1}{2}$ " -  $\frac{3}{4}$ "
- Clean surface area with air, not water
- Apply Mapei product - Mapeflex P2NS sealant
- Smooth surface and do not to cover the flutes of the CMU block
- Apply 1 coat of Mapei Primer AR and
- Apply 2 coats of Mapei Elastocolor-Coat

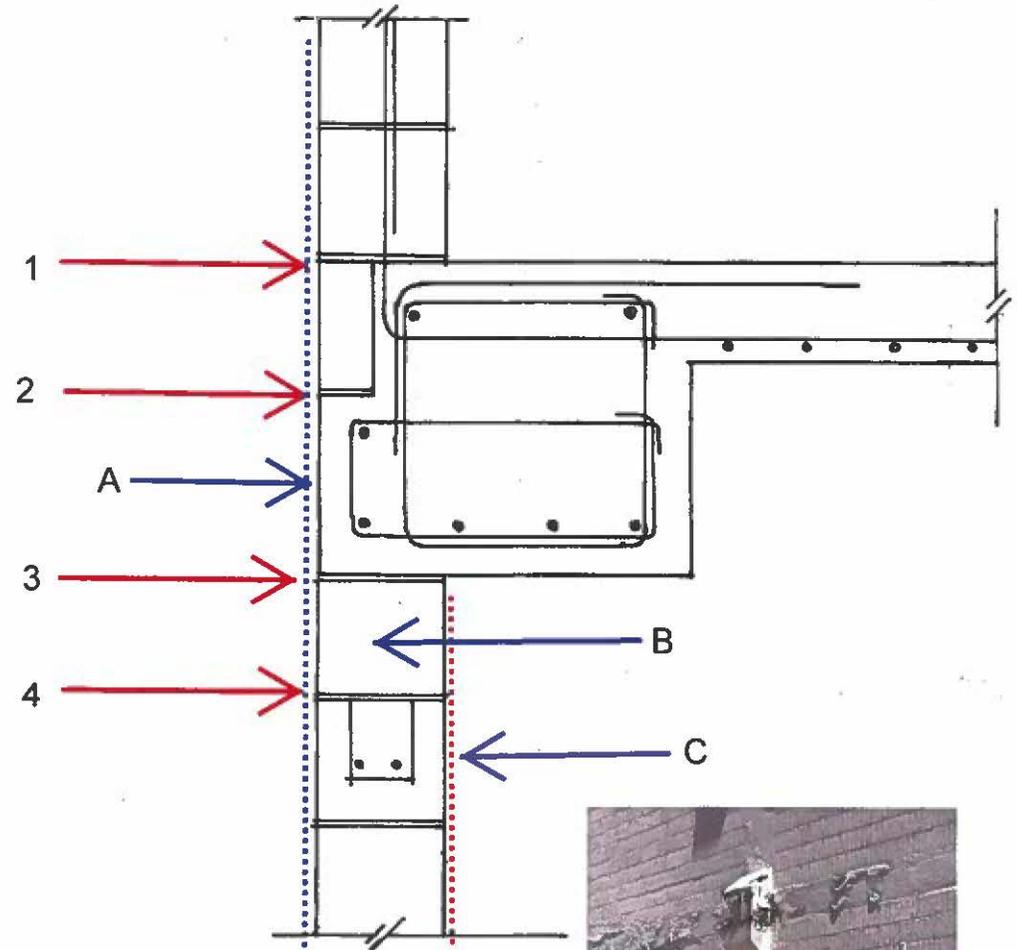


Exhibit 20



Exhibit - 7



Exhibit - 8



Exhibit - 9



Exhibiut -10



Exhibit -11



Exhibit -12





Exhibit - 14

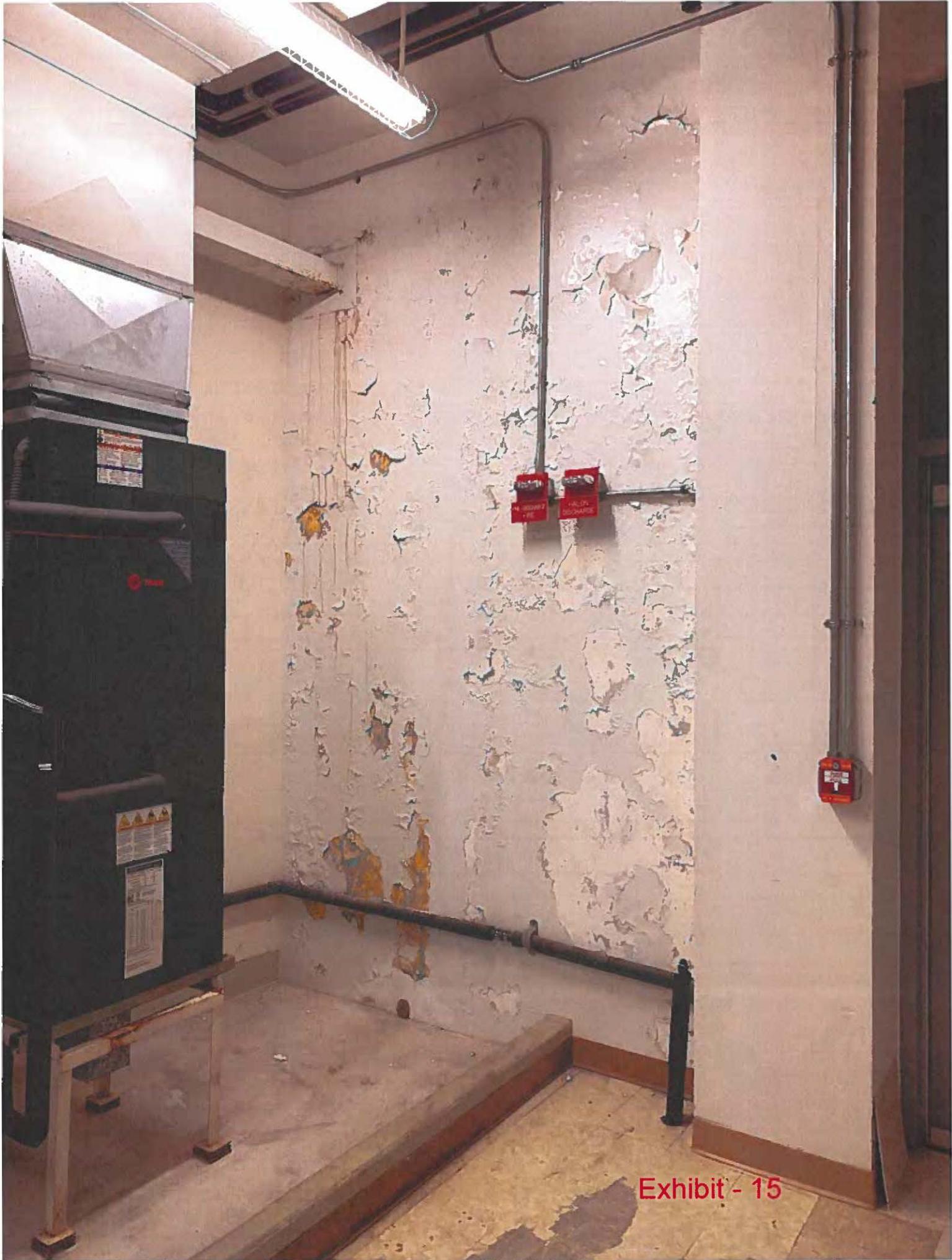


Exhibit - 15



Exhibit - 16

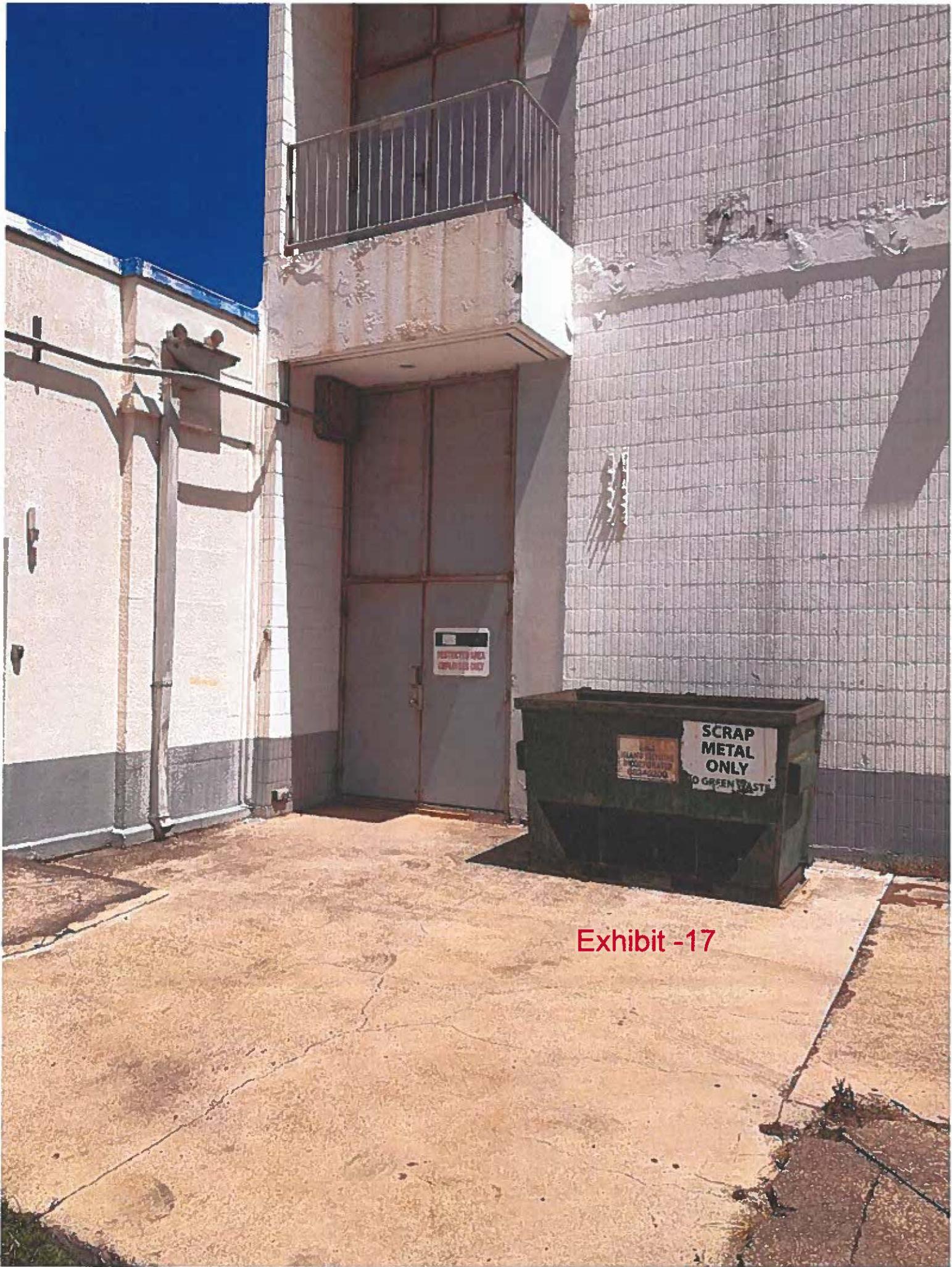


Exhibit -17



Exhibit-18

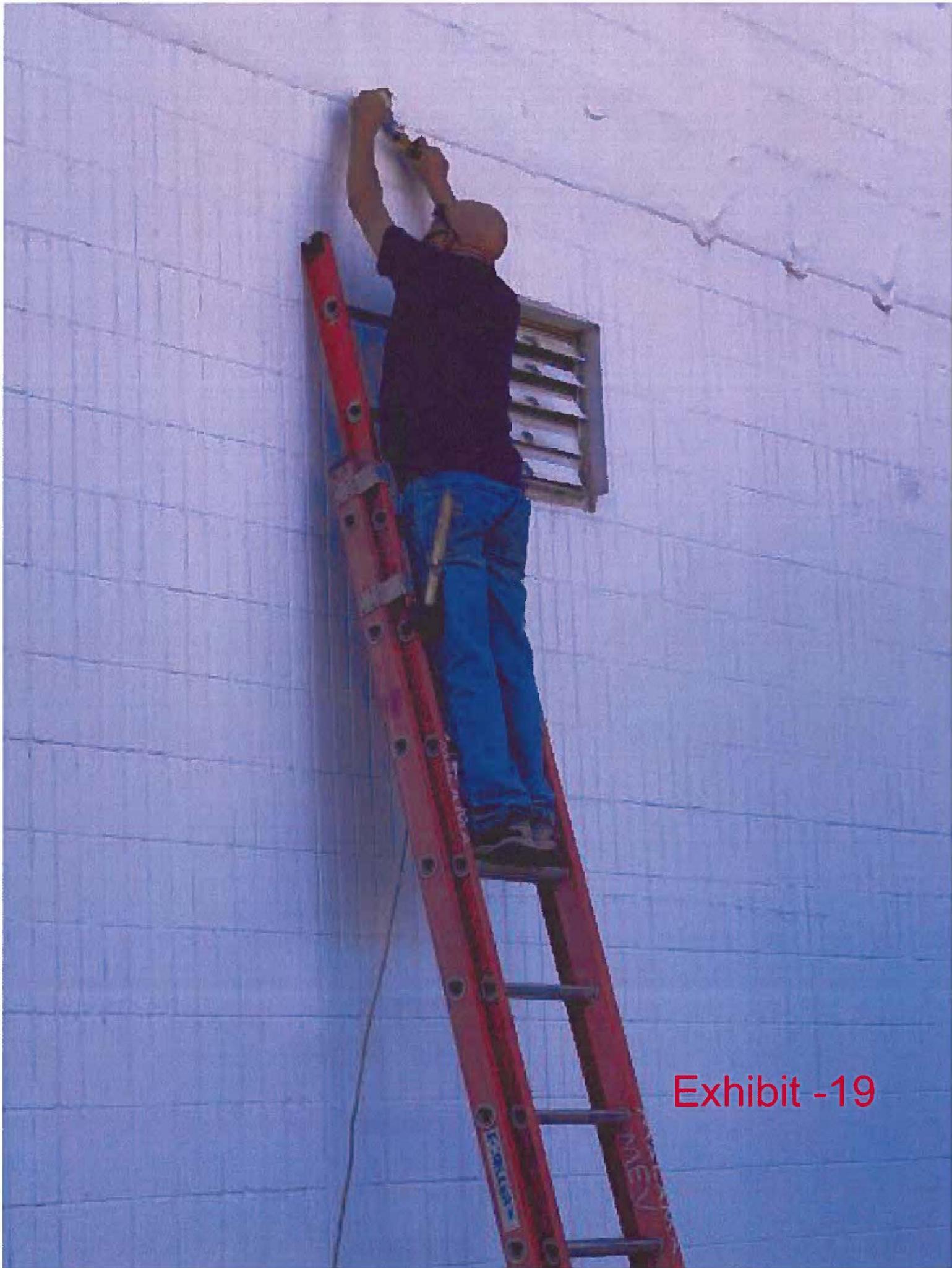


Exhibit -19

- Construction Management
- Failure / Defect Investigations
- Industrial Coatings



- Project Management
- Roofing
- Water Proofing

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98-1455 Akaaka St. Aiea Hawaii 96701 ph.:(808) 384-7239 email: [mikeyo4278@gmail.com](mailto:mikeyo4278@gmail.com)

9/22/25

Terra Mahaulu  
Senior Project Manager  
Beachside Roofing

Sent via email: [tmahaulu@beachsideroofinghawaii.com](mailto:tmahaulu@beachsideroofinghawaii.com)

**SUBJECT: MOISTURE REPORT – 60 S Church Street-Lower Roof**

Dear Terra,

Mike Ornellas of HI-Tek Hawaii Consulting (HTHC) conducted a thermal scan on the lower roof where the rooftop chiller unit was removed at 60 S Church Street. The purpose of the scan was to check for thermal anomalies in the roofing assembly that are consistent with the presence of moisture.

The weather was sunny and clear with no rainfall in the previous 24 hours. Wind conditions were 3- 4 mph with slight gusts up to 5 mph. The solar loading was favorable for the investigation. An Autel 640T V3 Dual Drone Camera with an aspect ratio of 640 x 512 and an effusivity of 95% was used for the scan.

A map of the infrared moisture scan anomalies, along with selected photographs and core locations, is appended to this report.

The roofing assembly consists of a Hypalon (chlorosulfonated polyethylene (CSPE) synthetic rubber) with a recovery board and unknown insulation thickness. A Tramex RWS impedance scanner was used to validate the observed anomalies and provide confirmation for the presence of moisture.

Detecting moisture in insulated roof assemblies involves using thermographic imaging. Solar loading occurs as the sun heats the roof throughout the day, causing wet insulation to retain more heat than dry insulation. After sunset, wet areas cool slower than dry ones, making them identifiable as anomalies for investigation.

The Tramex RWS scanner detects moisture up to 4 inches deep by measuring electrical impedance. It sends a low-frequency signal through the material, with signal strength varying based on moisture content, displayed on an analog dial.

## DISCUSSION

The Hypalon single ply membrane installed over the mechanical building exhibits significant signs of aging. The membrane is notably dry, with perceptible cracking underfoot—typical indicators of a Hypalon system that has been in service for an extended duration. Following the thermal survey, a Tramex RWS Impedance scanner was utilized to confirm thermal anomalies and assess the presence of moisture within the roofing system. Results indicate that approximately 60% of the roof remains dry, while the remaining areas registered a consistent 100% reading on the Tramex gauge, suggesting elevated moisture levels. The region beneath the currently operational chiller unit appears to contain the majority of this moisture. Additionally, ceiling observations from below this area provide clear evidence of moisture intrusion.

## Thermal Pictures

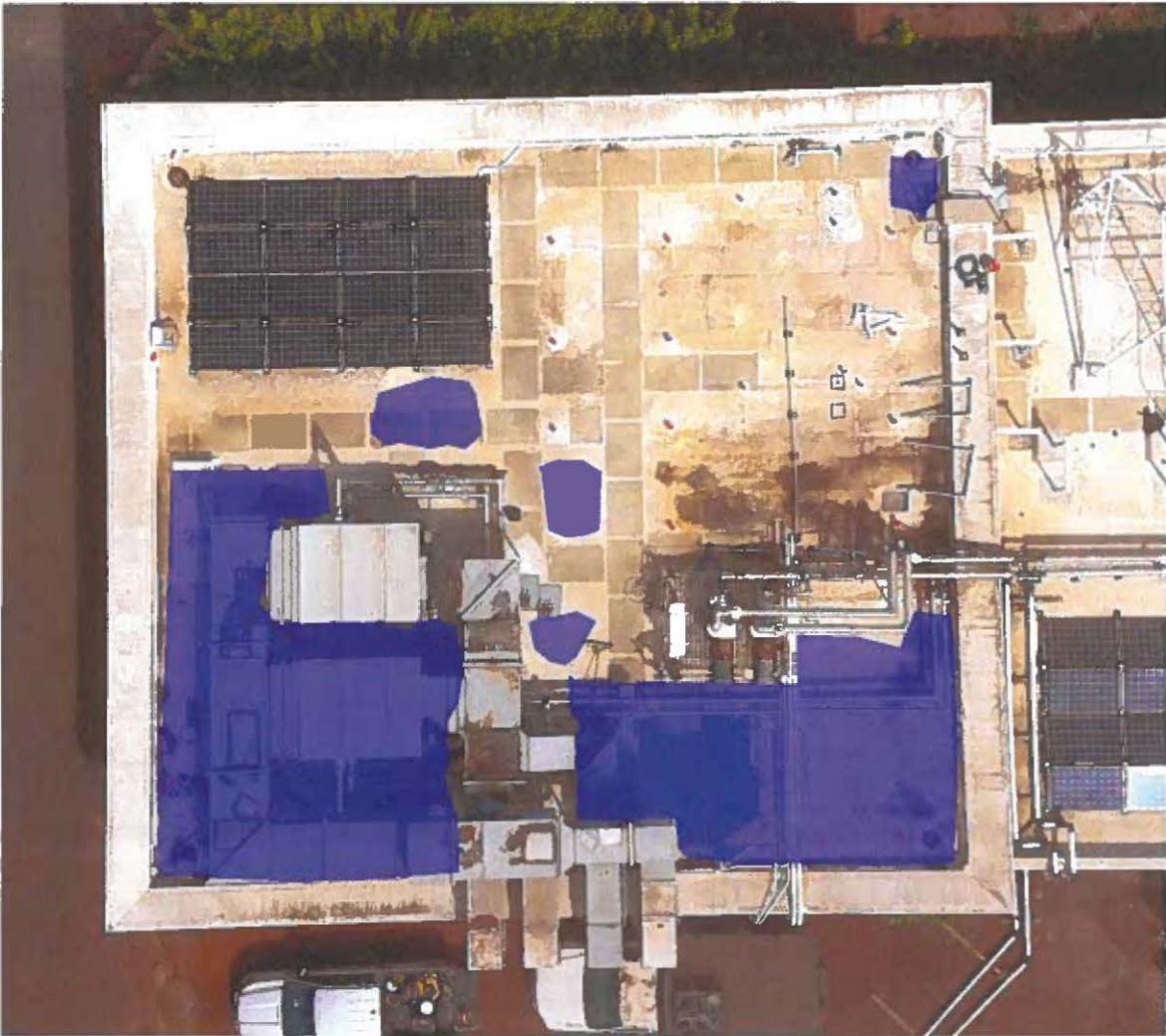
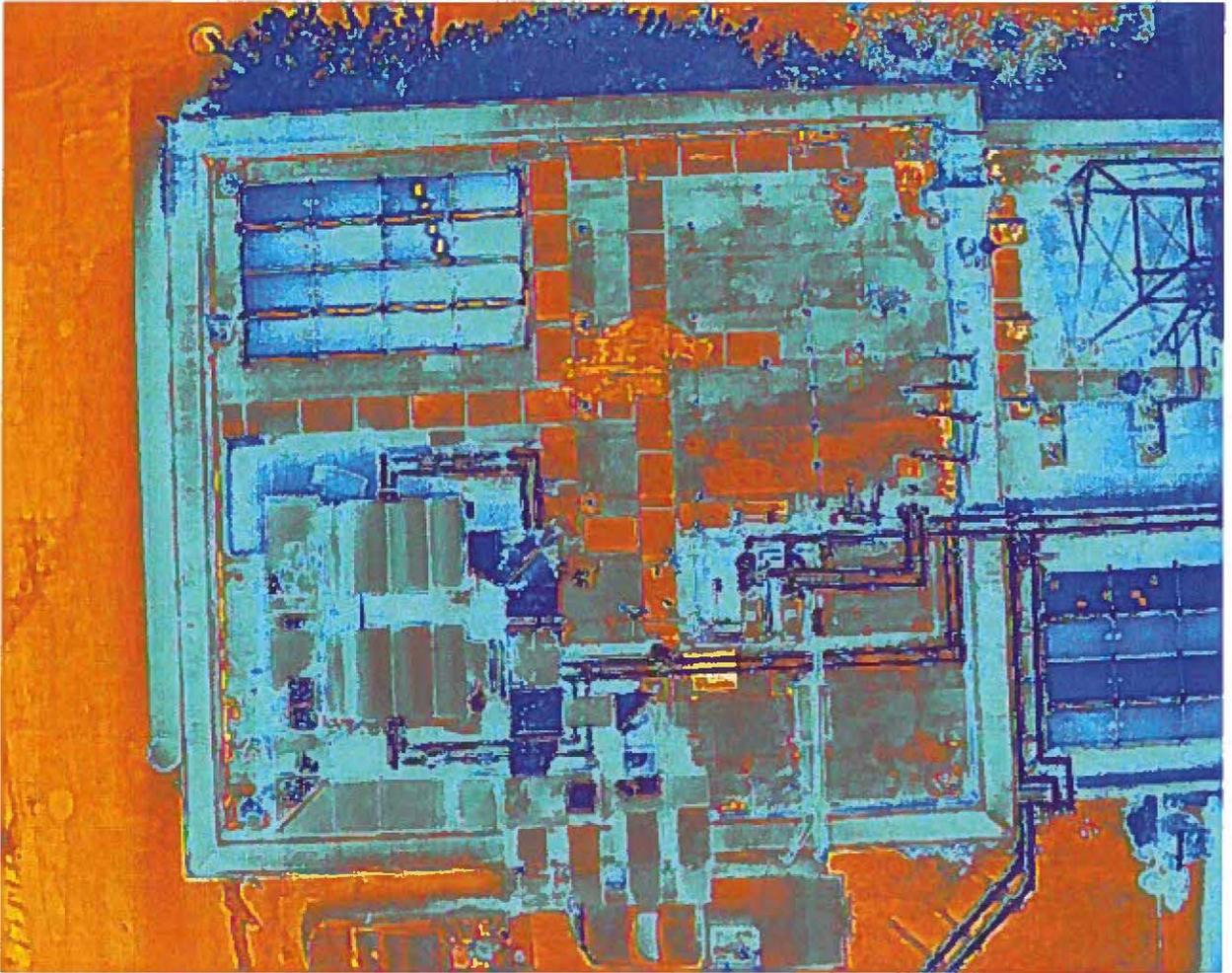
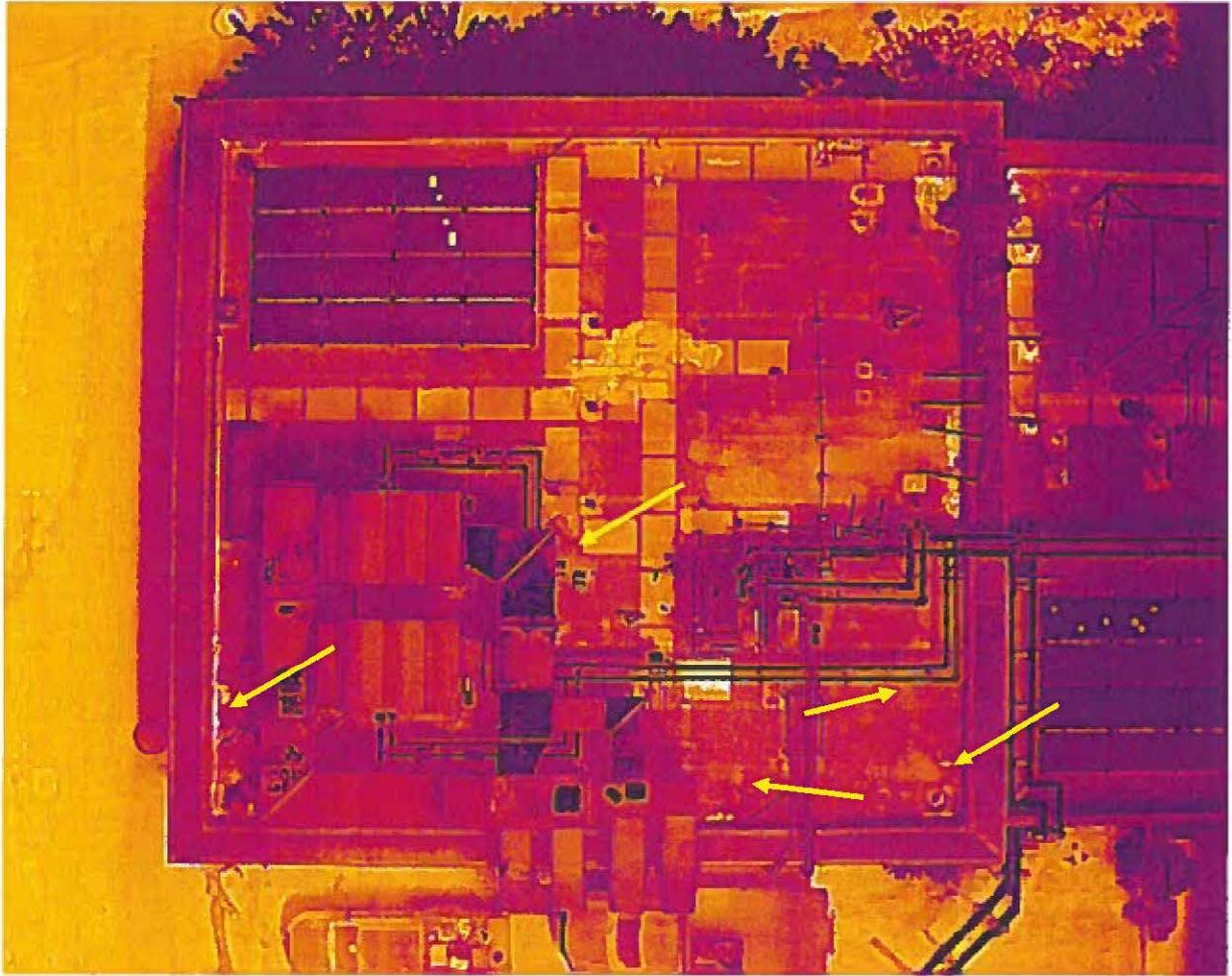


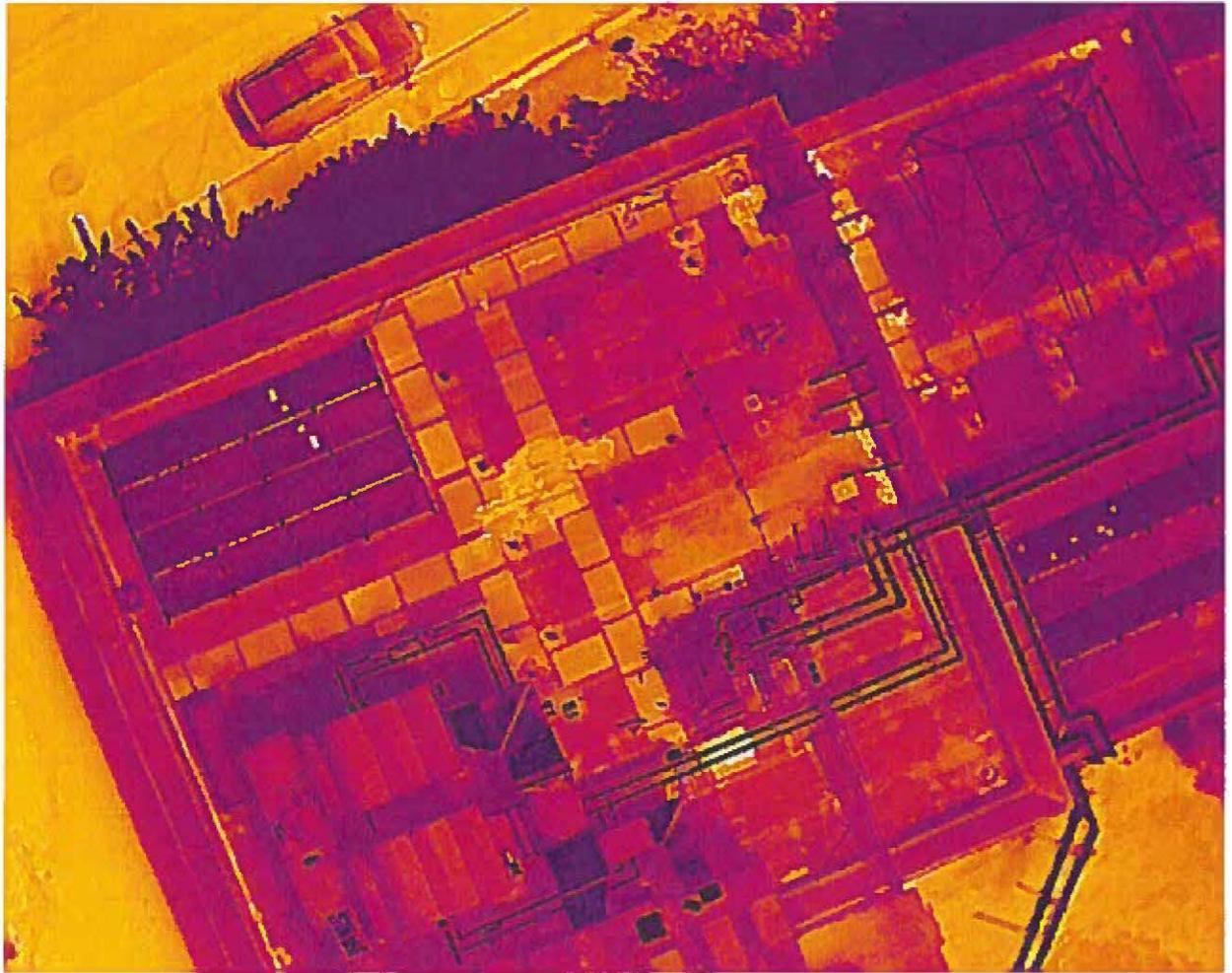
Figure 1-The areas shaded in blue were found to contain moisture.



*Figure 2-Thermal image of the roof using a different color palette.*



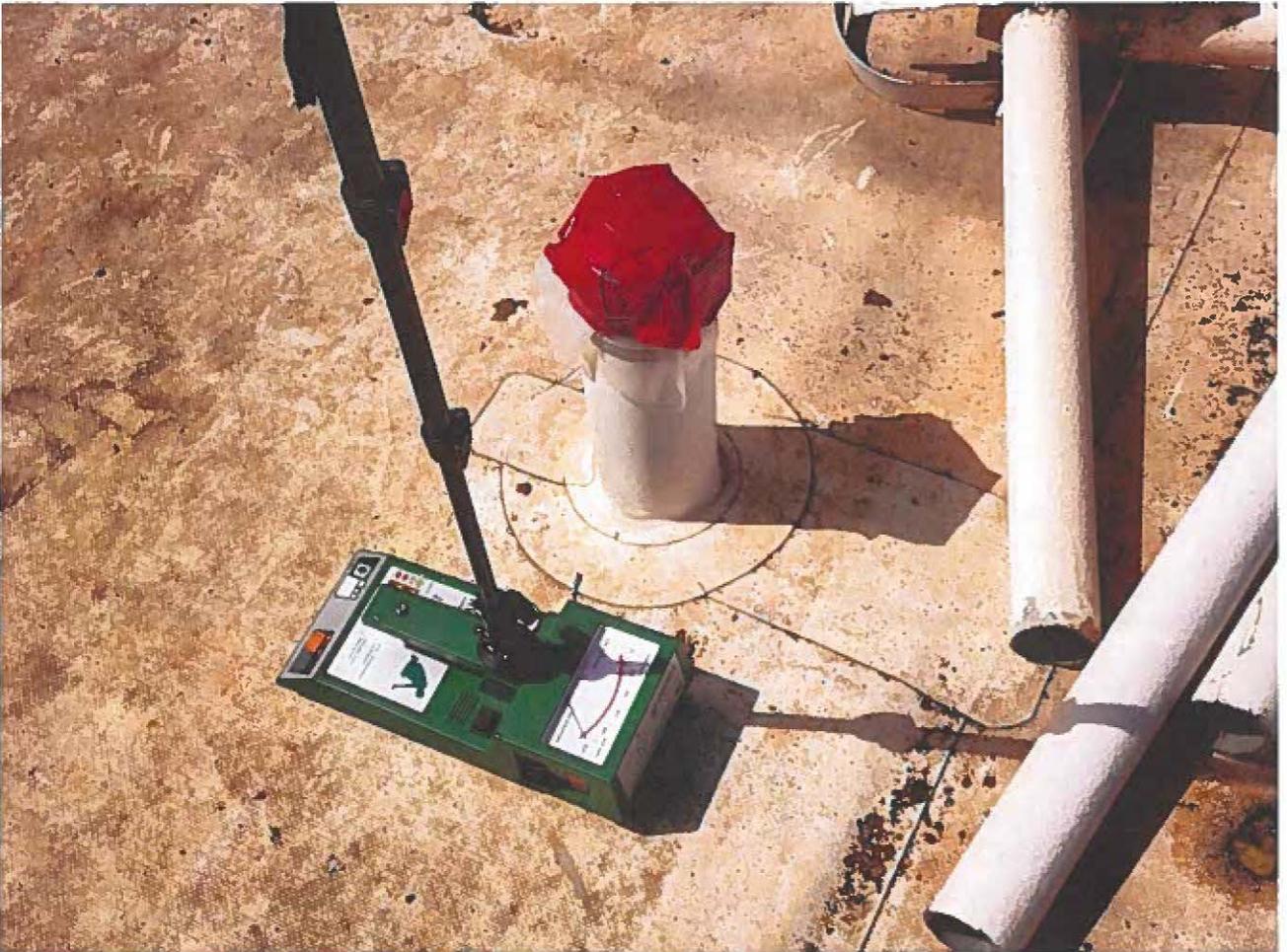
*Figure 3-The arrows indicate the thermal anomalies consistent with the presence of moisture.*

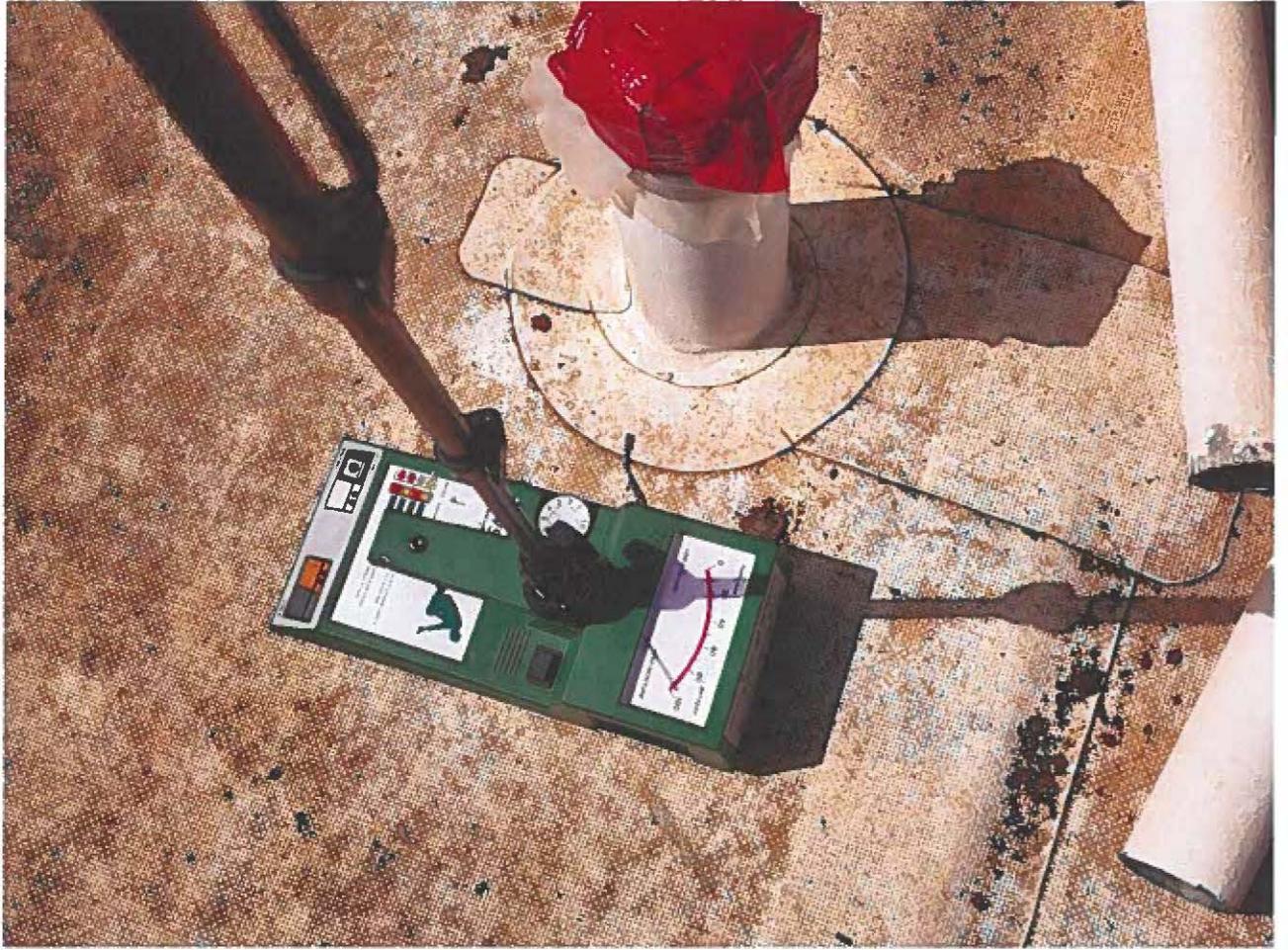




Photographs

S







## Recommendations

Due to the amount of moisture in the roof it is advisable to remove all the wet sections through the insulation layer. In lieu of replacing the Hypalon membrane a peel and stick membrane may be used once the insulation has been replaced. ASC (AMERICAN STANDARD COATINGS) will allow a 50 mil application to be applied over the top of the Hypalon membrane including the peel and stick which will then be warranted for 20 years.

Any questions contact me at (808)384-7239 or via email at mikeyo4278@gmail.com.

Respectfully submitted,

Mike Ornellas

Principal/Senior Consultant

Certified NACE CIP LEVEL Inspector

Certified FAA UAS Airman

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## BFED Committee

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**From:** Michelle L. Santos <Michelle.Santos@co.maui.hi.us>  
**Sent:** Tuesday, October 21, 2025 10:34 AM  
**To:** BFED Committee  
**Cc:** Cynthia E. Sasada; Didi A. Hamai; Erin A. Wade; Josiah K. Nishita; Kelii P. Nahooikaika  
**Subject:** MT#11267 BILLS 136 (2025) AND 137 (2025), RELATING TO THE RENOVATION OF 60 SOUTH CHURCH STREET, WAILUKU, HAWAII  
**Attachments:** Scanned from a Xerox Multifunction Printer.pdf