Invitation for Bids

Leahi Hospital Atherton Building Fire Escape Repair
26L-0516

The Hawaii Health Systems Corporation (HHSC) Oahu Region is requesting bids from qualified companies for the repairing of the Fire Escape in the Atherton Building at Leahi Hospital located at 3675 Kilauea Ave., Honolulu, HI 96816.

The IFB may be obtained electronically from the following website:
http://leahi.hhsc.org/procurement/notices/

A site visit is scheduled for July 7, 2026 at 10:30 a.m. All interested companies shall meet in the Leahi Hospital Parking Lot entrance area. The deadline for submission of written/emailed questions pertaining to the IFB is July 14, 2026.

All bids must be received by HHSC by July 28, 2026, 2:00 p.m. Hawaii Standard Time. All bids shall be sent digitally to oahucip@hhsc.org. E-mail bids not received by deadline will be disqualified for consideration. No exceptions will be made even if network provider or software (e.g. MS Outlook) delays delivery. Please note that large files (>10MB) may experience network delivery issues.

Addenda to the IFB will be posted on the website listed above.

For any inquiries, please contact Michael Nakada, Oahu Region Facilities Operations Manager, at (808) 767-0526 or by email at mnakada@hhsc.org.

Leahi Hospital
3675 Kilauea Ave.
Honolulu, HI 96816

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SECTION 1
ADMINISTRATION

1.0 INTRODUCTION

This Invitation for Bid (hereinafter "IFB") is issued by the Hawaii Health Systems Corporation (hereinafter "HHSC"), a public body corporate and politic and an instrumentality and agency of the State of Hawaii. All procedures and processes will be in accordance with HHSC Oahu Region policy and procedures.

In order for HHSC to accept Bidder's response in a timely manner, please thoroughly read this IFB and follow instructions as presented.

1.1 IFB TIMETABLE AS FOLLOWS

The timetable as presented represents HHSC's best estimated schedule. If an activity of the timetable, such as "Closing Date for Receipt of Bids" is delayed, the rest of the timetable dates may be modified. BIDDER will be advised, by addendum to the IFB, of any such modifications to the timetable. Contract start date will be subject to the issuance of a Notice to Proceed.

ACTIVITY		SCHEDULED DATES
1.	IFB Public Announcement	June 30, 2026
2.	Pre-Bid Orientation Leahi Hospital parking lot entrance 10:30 a.m.	July 7, 2026
3.	Closing Date for Receipt of Questions	July 14, 2026
4.	**Closing Date for Receipt of Bids 2:00 p.m.**	**July 28, 2026**
5.	Contractor Selection/Award Notification (on/about)	July 29, 2026
6.	Contract Start Date (on/about)	August 29, 2026

1.2 AUTHORITY

This IFB is issued following the provisions of Chapter 323F, Hawaii Revised Statutes (HRS), and its administrative rules. All BIDDERS are charged with presumptive knowledge of all requirements of the cited authorities. Submission of a valid executed bid by any BIDDER shall constitute admission of such knowledge on the part of such BIDDER.

1.2.1 IFB ORGANIZATION

This IFB is organized into four sections:

SECTION 1: ADMINISTRATIVE
Provides information regarding administrative requirements.

SECTION 2: SCOPE OF SERVICES
Provides a detailed description of goods and/or services to be provided and delineates HHSC and CONTRACTOR responsibilities.

SECTION 3: BID FORMS AND GENERAL CONDITIONS
Describes the required format and content for submission of the bid.

SECTION 4: BID EVALUATION AND AWARD
Describes how bids will be evaluation and procedures for selection and award of contract.

1.3 HEAD OF PURCHASING AGENCY (HOPA)

The HOPA for HHSC, or designee, is authorized to execute any and all Agreements (Contracts), resulting from this IFB.

The HOPA for this IFB is:

Sean Sanada
Regional Chief Executive Officer
Hawaii Health Systems Corporation

1.4 DESIGNATED OFFICIALS

The officials identified in the following paragraphs have been designated by the HOPA as HHSC's procurement officials responsible for execution of this IFB, award of Agreement and coordination of CONTRACTOR's satisfactory completion of contract requirements.

1.4.1 ISSUING OFFICER

The Issuing Officer is responsible for administrating/facilitating all requirements of the IFB solicitation process and is the **sole point of contact** for BIDDER from date of public announcement of the IFB until the selection of the successful BIDDER. The Issuing Officer will also be responsible for contractual actions throughout the term of the contract. For purposes of this IFB, the designated Issuing Officer is:

Michael Nakada
Oahu Region Facilities Operations Manager
e-mail: mnakada@hhsc.org
phone: (808) 767-0526

1.5.1 CHARTER

HHSC is a public body corporate and politic and an instrumentality and agency of the State of Hawaii. HHSC is administratively attached to the Department of Health, State of Hawaii and was created by the legislature with passage of Act 262, Session Laws of the State of Hawaii 1996. Act 262 affirms the State's commitment to provide quality health care for the people in the State of Hawaii, including those served by small rural facilities.

1.5.2 STRUCTURE AND SERVICES

HHSC is organized into four operational regions and provides a broad range of healthcare services including acute, long term, rural and ambulatory health care services. As the fourth largest public health system in the country, HHSC is the largest provider of healthcare in the Islands, other than on Oahu. This solicitation is for the Oahu Region.

1.5.3 MISSION

The mission of HHSC is to provide and enhance accessible, comprehensive health care services that are quality-driven, customer-focused and cost-effective.

1.6 FACILITY INFORMATION

Detailed information pertaining to HHSC facilities is located at http://www.hhsc.org.

1.7 SUBMISSION OF QUESTIONS

Questions must be submitted in writing via electronic mail, facsimile or post mail to the Issuing Officer no later than the "Closing Date for Receipt of Questions", identified in paragraph 1.1 in order to generate an official answer. All written questions will receive an official written response from HHSC and become addenda to the IFB.

IMPORTANT

BIDDER may request changes and/or propose alternate language to the HHSC General and Special Terms and Conditions (https://www.hhsc.org/procurement/) during this phase only. All requests will be presented to the HHSC Legal Department for review. No requests to change the HHSC General or Special Terms and Conditions will be entertained after the bids have been submitted or during the contracting process. All written questions and/or approved changes will receive an official written response from HHSC and shall be recorded as addenda to the IFB.

HHSC reserves the right to reject or deny any request(s) made by BIDDER.

Responses by HHSC shall be due to the BIDDER prior to notice of award.

Impromptu, un-written questions are permitted and verbal answers will be provided during pre-bid conferences and other occasions, but are only intended as general direction and will not represent the official HHSC position. The only official position of HHSC is that which is stated in writing and issued in the IFB as addenda thereto.

No other means of communication, whether oral or written, shall be construed as a formal or official response/statement and may not be relied upon.

SEND QUESTIONS TO:

Michael Nakada, Issuing Officer
e-mail: mnakada@hhsc.org

1.8 SOLICITATION REVIEW

BIDDER should carefully review this solicitation for defects and questionable or objectionable matter. Comments concerning defects and questionable or objectionable matter, **excluding requests to revise the General or Special Conditions**, must be made in writing and should be received by the Issuing Officer, no later than the "Closing Date for Receipt of Bids" as identified in Section 1.1. This will allow issuance of any necessary amendments to the IFB. It will also assist in preventing the opening of bids upon which award may not be made due to a defective solicitation package.

1.9 IFB AMENDMENTS

HHSC reserves the right to amend the IFB any time prior to the deadline date of the IFB. IFB Amendments will be in the form of addenda.

1.10 CANCELLATION OF IFB

The IFB may be canceled when it is determined to be in the best interests of HHSC.

1.11 PROTESTS

Any protest shall be submitted in writing to the HOPA as noted below.

A protest based upon the content of the solicitation shall be submitted in writing within five (5) working days **after** the aggrieved individual/business knows or should have known of the facts giving rise thereto; provided further that the protest shall not be considered unless it is submitted in writing prior to and not later than the "Closing Date for Receipt of Bid" identified in section 1.1.

A protest of an award or proposed award shall be submitted within five (5) working days after the posting of award of the contract. The notice of award, if any, resulting from this solicitation shall be posted at the following website: http://leahi.hhsc.org/procurement/notices/

Any and all protests shall be submitted in writing to the HOPA, as follows:

Sean Sanada
Hawaii Health Systems Corporation
Oahu Region
3675 Kilauea Avenue
Honolulu, Hawaii 96816

1.12 PERFORMANCE AND PAYMENT BOND

Performance and payment bonds shall be required for contracts $25,000 and higher. At the time of the execution of the contract, the successful Bidder shall file good and sufficient performance and payment bonds, each in an amount equal to one hundred percent (100%) of the amount of the contract price unless otherwise stated in the solicitation of bids.

1.13 SPECIALTY CONTRACTOR'S LICENSE

A. Contractor shall be solely responsible to ensure that all specialty licenses required to perform the Work are covered by the Contractor and/or its subcontractor(s).

1.14 WORKING HOURS

A. Regular working hours for this project shall take place between the hours of 8:00 AM to 4:30 PM Monday through Friday, excluding State Holidays, unless otherwise noted or restricted.

B. The Contractor may be given approval to work beyond the regular hours including Saturdays, Sundays, State Holidays, night work, or after hours under the provisions of the GENERAL CONDITIONS.

1.15 SPECIAL PROCEDURES DURING BIDDING

A. All bids shall be submitted to the Issuing Officer.

B. All questions regarding the IFB shall be submitted, in writing, to the Issuing Officer, who shall review the questions and issue any responses via Addendum. Only information received by Addendum shall be binding.

C. Any visitation to the site to examine the scope of work shall be requested through the HHSC Representative. Disruption of facility operations shall not be permitted.

SECTION 2
SCOPE OF SERVICES

2.0 INTRODUCTION

LEAHI HOSPITAL ATHERTON BUILDING FIRE ESCAPE REPAIR

Work for this project shall include, but is not limited to the repairing of the fire escapes of the Atherton Building, and miscellaneous work as indicated on the drawings.

2.1 CONTRACT PERIOD

The work shall be completed within 210 consecutive calendar days. In accordance with the General Conditions, upon failure to complete Work or any portion of the Work within the time or times fixed in the contract or extension thereof, the Contractor shall pay liquidated damages to HHSC in the amount of $500.00 per calendar day of delay.

2.2 SCOPE OF SERVICES

A. The CONTRACTOR shall complete the work specified in the specifications and drawings in APPENDIX C.

B. Qualifications. The CONTRACTOR shall have:

1. A current and valid license to perform the scope of work.
2. Have been in business for the past three (3) consecutive years.
3. A permanent, on-island office location in conducting business which is accessible to telephone calls. An answering service is not acceptable.

C. HHSC shall provide:

Technical Representatives who shall have the authority to oversee the successful completion of contract requirements, including monitoring, coordinating and assessing CONTRACTOR performance; placing requests for services; and, approving completed work/services with verification of same for CONTRACTOR'S invoices. Technical Representatives will also serve as points of contact for "technical" matters throughout the term of the contract.

SECTION 3
Bid Forms and General Conditions

General Instructions for Completing Forms

- *Bids shall be submitted in the prescribed format outlined in this IFB*
- *No supplemental literature, brochures or other unsolicited information should be included in the bid packet.*
- *A written response is required for each item unless indicated otherwise.*

3.0 Bid Form

The bid form must be completed and submitted to HHSC by the required due date and time, and in the form prescribed by the HHSC. Facsimile transmissions shall not be accepted.

Interested bidders shall submit their bid under the interested bidder's exact legal name that is registered with the Department of Commerce and Consumer Affairs and shall indicate this exact legal name in the appropriate space on page 1 of the bid form. Failure to do so may delay proper execution of the Contract.

Interested bidders shall certify its ability to provide services within 60 calendar days or upon execution of the Contract agreement by both parties. HHSC reserves the right to apply liquidated damages for the delay in Contract execution on the part of the Contractor.

The interested bidder's authorized signature shall certify bid documents. If the Bid Form on Appendix A is unsigned the bid shall be automatically rejected.

The option to extend the Contract shall be at the sole discretion of HHSC and determined to be in the best interests of the State.

3.1 Bid Security

All lump sum bids of $25,000 and higher, or lump sum base bids including alternates of $25,000 and higher, that are not accompanied by bid security are non –responsive.

a. The bid security shall be in an amount equal to at least five percent (5%) of the lump sum bid or lump sum base bid including alternates or in an amount required by the terms of the federal funding, where applicable.

3.2 General Conditions

The State of Hawaii INTERIM GENERAL CONDITIONS, dated August 1999, and AMENDMENTS shall be read by the Contractor as they form a part of the Agreement to be entered into between the Contractor and HHSC. The Interim General Conditions are not physically included in these specifications, but are included by reference. Copies of the INTERIM GENERAL CONDITIONS may be obtained from the Division of Public works, Department of Accounting and General Services, State of Hawaii at the following website: http://hawaii.gov/pwd/construction_bids/Members/qc/gen_cond_constr

The State of Hawaii General Conditions are hereby amended as follows:

a. The following terms specified in Section 1 are hereby defined:

i) Bidder shall have the same definition as Contractor.

ii) Comptroller shall be the Chief Financial Officer at HHSC or his authorized representative.

iii) Department shall be HHSC or its designee.

iv) Engineer shall be the person so designated by HHSC.

v) State shall be HHSC or its designee.

b. Section 1.20 and 1.25 replace "State of Hawaii" with "State".

c. The last two sentences of the third paragraph of Section 2.1.1.2, in the Interim General Conditions is deleted and is replaced with the following:

" If the notice is faxed, the time of receipt by the CEO's fax machine shall be official. The submittal of intention to bid via fax is acceptable only to this office."

d. Section 2.1.2.1: second sentence is hereby deleted in its entirety.

e. Last sentence of paragraph 2.1.2.3 of the Interim General Conditions is amended to read as follows:

"Failure to submit either the required tax clearance certificate or Bid Form will be sufficient grounds for HHSC to refuse to receive or consider the prospective bidder's proposal."

f. The addresses specified in Section 2.6.1 of the Interim General Conditions shall be changed to Leahi Hospital 3675 Kilauea Avenue Honolulu Hawaii 96816.

g. Sections 2.10 through 2.11 are hereby deleted in their entirety.

h. Paragraph 3.8.1 of the Interim General Conditions is amended to read as follows:

“The contract shall be signed and forwarded to HHSC (Contracts Office), by the successful bidder all within three (3) days of receipt of the contract. The performance and payment bonds shall be received by HHSC (Contracts Office) within ten (10) calendar days after the bidders is awarded the contract. No proposal or contract shall be considered binding until the contract has been fully and properly executed by all parties thereto.”

i. In paragraph 3.9.2 of the Interim General Conditions, “ten (10) calendar days after such award or within such further time as the Comptroller may allow” shall be replaced with, “the time allowed in the previous section.”

j. Section 4.1: the words “accepted bid” is deleted from the first sentence.

k. Section 4.9.3: the words “submission of bids” is replaced with the words “execution of this contract”.

l. Section 5.5: the last sentence is hereby deleted in its entirety and replaced with the following:

"In the event of conflict among the Contract Documents, the order of precedence is listed in paragraph 5 of this contract and is further detailed in the following subparagraphs:"

m. Sections 5.5.1 and 5.5.2 are hereby deleted in their entirety.

n. Section 5.8.1: "twenty-four (24)" is hereby changed to "three (3)".

o. Section 5.11 is hereby deleted in its entirety.

p. Section 5.12.4 is hereby deleted in its entirety.

q. Section 7.3.7.4, subparagraphs a and b: Replace "If the project falls within the State University System, The University of Hawaii" with "HHSC."

r. Section 7.4.1 is hereby deleted in its entirety and replaced with the following:

> "The Contractor shall prepare, process, obtain, and pay for all permits necessary for the proper execution of the work."

s. Section 7.7.2 is amended to read as follows: "The wage rate schedule is attached to this contract."

t. Sections 7.14.2, 7.19.2, and 7.19.4: delete "Departments and Agencies and their" and insert "directors" between "officers" and "representatives".

u. Section 7.14.4 is hereby added and reads as follows:

> "Contractor warrants that it and none of its employees, agents or subcontractors performing services or providing goods pursuant to this Agreement are excluded from participation in federal health care programs, as defined in the Social Security Act (section 1128 and 1128A), and other federal laws and regulations relating to health care. HHSC reserves the right to verify that the above warranty is true and to immediately cancel this Agreement in the event it is violated."

v. Section 7.15 delete "and its Departments and Agencies".

w. Section 7.21.8.6 — Delete the word "bad" before the words "weather day conditions."

x. Section 7.35.1: the last word "earlier" is changed to "later".

3. CORPORATE COMPLIANCE PROGRAM. A description of the Corporate Compliance Program of HHSC is posted on the HHSC Internet (www.hhsc.org). The CONTRACTOR, by signing this contract, acknowledges that it has read said description, and that the CONTRACTOR knows of the fact and substance of the Corporate Compliance Program, which governs operations at all facilities of the HHSC. The CONTRACTOR understands and agrees that employees, agents, and contractors performing any services at any of the HHSC facilities shall be fully subject to such Corporate Compliance Program, as may be amended from time to time, as well as all federal program requirements and applicable policies and procedures of HHSC and its facilities. The Corporate Compliance Program requires periodic training, including an orientation program, of all people who provide financial, business office, personnel, coding, medical records information systems and clinical services in the facility. The CONTRACTOR agrees to cause its employees, agents, and contractors who provide any services at any financial, business office, personnel, coding, medical records information systems and clinical services at any of the HHSC facilities to participate in the orientation and training programs.

4. CONFIDENTIAL INFORMATION. It is acknowledged and agreed that all of the trade secrets, business plans, marketing plans, know how, data, contracts, documents, scientific and medical concepts, billing records, personnel records, medical records of any kind, and referral resources for existing or future services, products, operations, management, business, pricing, financial status, valuations, business plans, goals, strategies, objectives and agreements of HHSC and any of its facilities, affiliates or subsidiaries, and all patient information, in any form, whether written, verbal, or electronic, are confidential ("Confidential Information"); provided, however, that Confidential Information, with the exception of patient information, shall not include information that is in the public domain.

5. CONTRACTOR EXCLUSION FROM FEDERAL PROGRAMS. CONTRACTOR warrants that it and none of its employees, agents or subcontractors performing services or providing goods pursuant to this Agreement are excluded from participation in federal health care programs, as defined in the Social Security Act (section 1128 and 1128A), and other federal laws and regulations relating to health care. HHSC reserves the right to verify that the above warranty is true and to immediately cancel this Agreement in the event it is violated.

6. CAMPAIGN CONTRIBUTIONS BY STATE AND COUNTY CONTRACTORS.
CONTRACTORS are hereby notified of the applicability of Section 11-205.5, HRS, which states that campaign contributions are prohibited from specified State or county government contractors during the term of the contract if the contractors are paid with funds appropriated by a legislative body. For more information, please consult with the Campaign Spending Commission, or visit its website, www.hawaii.govicampaign.

(END OF SECTION)

SECTION 4
BID EVALUATION AND AWARD

4.0 Bid Evaluation

Each bid offer will be reviewed for exact conformity of the requirements in the IFB, known as a responsible bid. Information provided in/with the bid offer will be used to determine whether the interested bidder has the technical and financial capacity to deliver the goods or services, known as a responsive bid.

4.1 Method of Award

A. The contract will be awarded to the lowest responsive and responsible Bidder whose bid (including any alternates which may be selected) meets the requirements and criteria set forth in the solicitation documents.

B. In the event the total lump sum bid of all bidders exceeds the project control budget, HHSC reserves the right to make an award to the apparent Low Bidder if additional funds are available or by reducing the scope of work through negotiation.

4.2 Contract Execution

Upon receipt of the Contract document, the CONTRACTOR shall have ten (10) business days to execute and return the Contract to the Issuing Officer. Explicit execution instructions will accompany the Contract. A copy of the fully executed Contract will be provided the CONTRACTOR within seven (7) business days of Contract execution.

Award of Contract may be withdrawn if the CONTRACTOR is unable to meet Contract execution requirements.

(END OF SECTION)

APPENDIX A

SAMPLE
BID TRANSMITTAL COVER LETTER

Dear Mr. Nakada,

(Name of Business) proposes to provide any and all goods and services as set forth in the "Invitation for Bid" for Leahi Hospital Atherton Building Fire Escape Repair IFB No. 26L-0516, for which fees/costs have been set. The fees/costs offered herein shall apply from June, 2026 to December, 2026.

It is understood and agreed that (Name of Business) have read HHSC's Scope of Services described in the IFB and that this bid is made in accordance with the provisions of such Scope of Services. By signing this bid, (Name of Business) guarantee and certify that all items included in this bid meet or exceed any and all such Scope of Services. (Name of Business) agree, if awarded the contract, to provide the goods and services set forth in the IFB; and comply with all terms and conditions indicated in the IFB; and at the fees/costs set forth in this bid. The following individual(s) may be contacted regarding this bid:_____

_____

Other information:

Address:		Federal Tax ID #:	
Phone No.:		Hawaii GET ID #:	
E-mail address:			

(Name of Business) is a: ☐ Sole Proprietor ☐ Partnership ☐ Corporation ☐ Joint Venture Other (Specify)_____

State of Incorporation is: (Specify)_____

Year of Business started: _____

The exact legal name of the business under which the contract, if awarded, shall be executed is:_____

_____

(Authorized Bidder's Signature, Printed Name/Title; Corporate Seal or Notarized)

APPENDIX B

IFB No. 26L-0516
Leahi Hospital Atherton Building Fire Escape Repair

BID FORM

After carefully examining the bid documents, drawings and specifications identified above, the Bidder proposes to furnish at its own expense all necessary labor, materials, tools and equipment to complete the work according to the true intent and meaning of the drawings and specifications, all for the Lump Sum Base Bid of:

_____DOLLARS ($_____)

(Schedule of Values must be submitted with the Bid).

Respectfully Submitted:

_____ _____
Signature / Printed Name Date

_____
Title

OTHER CONDITIONS

1. Bidder agrees to liquidated damages as specified.

2. By submitting this proposal, the Bidder is declaring that its firm has not been assisted or represented on this matter by an individual who has, in a County capacity, been involved in the subject matter of this contract in the past two years;

3. Anti-collusion certification. In accordance with HAR 3-122-192, by submitting this proposal, the Bidder is declaring that the price submitted is independently arrived at without collusion.

4. Certification for Safety and Health Program for bids in excess of $100,000. In accordance with HRS 396-18, the Bidder certifies that its organization will have a written safety and health plan for this project that will be available and implemented by the Notice to Proceed date of this project. Details of the requirements of this plan may be obtained from the Department of Labor and Industrial Relations, Occupational Safety and Health Division (HIOSH); and

5. Upon the acceptance of the proposal by the HHSC, the Bidder must enter into and execute a contract for the same and furnish a Performance and Payment bond, as required by law.

RECEIPT OF ADDENDA
Receipt of the following addenda issued by HHSC is acknowledged by the date (s) of receipt indicated below:

Addendum No. 1 _____ Addendum No. 3 _____
Date
Addendum No. 2 _____ Addendum No. 4_____

It is understood that failure to receive any such addendum shall not relieve the Bidder from any obligation under this Proposal as submitted.

ALL JOINT CONTRACTORS OR SUBCONTRACTORS TO BE ENGAGED ON THIS PROJECT

The Bidder certifies that the following is a complete listing of all joint contractors or subcontractors covered under Chapter 444, Hawaii Revised Statutes, who will be engaged by the Bidder on this project to perform the nature and scope of work indicated and understands that failure to comply with this requirement may be just cause for rejection of the bid.

The Bidder further understands that only those joint contractors or subcontractors listed shall be allowed to perform work on this project and that all other work necessary shall be performed by the Bidder with his own employees. If no joint contractor or subcontractor is listed, it shall be construed that all of the work shall be performed by the Bidder with its own employees.

The Bidder must be sure that it has and that the subcontractor(s) listed in the proposal have all the necessary specialty licenses needed to perform the work for this project. The Bidder shall be solely responsible for assuring that all the specialty licenses required to perform the work are covered in its bid.

The Bidder shall include the license number of the joint contractors or subcontractors listed below. Failure to provide the correct names and license numbers as registered with the Contractor's Licensing Board may cause rejection of the bid submitted.

Complete Firm Name Joint Contractor or Subcontractor for Lump Sum Base Bid	License Number	Nature and Scope of Work to be Performed

Enclosed herewith:

1. Surety Bond (*1))
2. Legal Tender (*2))
3. Cashier's Check (*3))
4. Certified Check (*3))

(Cross Out Those Not Applicable)

in the amount of:

_____ DOLLARS ($_____).

as required by law.

Respectfully submitted,

_____
Name of Company, Joint Venture or Partnership

_____
License

By _____
Signature (*4)

Title _____

Date: _____

(CORPORATE SEAL)
(*5)

NOTES:

1. Surety bond underwritten by a company licensed to issue bonds in this State;

2. Legal tender; or

3. A cashier's or a certified check accepted by, and payable on demand to the HHSC by a bank, a savings institution, or credit union insured by the Federal Deposit Insurance Corporation.

    a. These instruments may be utilized only to a maximum of $100,000.

    b. If the required security or bond amount totals over $100,000, more than one instrument not exceeding $100,000 each and issued by different financial institutions shall be accepted.

4. Please attach to this page evidence of the authority of this officer to submit bids on behalf of the Company, and also the names and residence addresses of all officers of the Company.

5. Fill in all blank spaces with information asked for or bid may be invalidated. PROPOSAL MUST BE INTACT. MISSING PAGES MAY INVALIDATE YOUR BID.

END OF BID FORM

APPENDIX C

S P E C I F I C A T I O N S

FOR

FURNISHING LABOR AND MATERIALS

REQUIRED FOR

LEAHI HOSPITAL

ATHERTON BUILDING FIRE ESCAPE REPAIR

3675 KILAUEA ST.
HONOLULU, OAHU, HAWAII

TMK: 3-2-031:001

FOR THE

HAWAII HEALTH SYSTEMS CORPORATION (HHSC)

STATE OF HAWAII

ARCHITECT: INK ARCH LLC

ELECTRICAL: ALBERT CHONG ASSOCIATES, INC.

MARCH 2026

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DIVISION 0 – BIDDING AND CONTRACT REQUIREMENTS

SECTION 00210 - INSTRUCTIONS TO BIDDERS

PART 1 - GENERAL

1.01 GENERAL

A. Only Bidders with the required contractor's license(s) are eligible to submit a Bid.

B. Bidders (Contractors) shall be incorporated or organized under the laws of the State or be registered to do business in the State as a separate branch or division that is capable of fully performing under the contract. The following definitions are used in the solicitation documents.

1. Hawaii Business §3-1222-112 HAR: A bidder who is registered and incorporated or organized under the laws of the State is a "Hawaii Business" and eligible for an award.

2. Compliant non-Hawaii Business §3-122-112 HAR: A bidder not incorporated or organized under the laws of the State, but is registered to do business in the State and complies with or is exempt from the requirements of §3-122-112 HAR, is a "Compliant Non-Hawaii Business" and eligible for an award.

3. Non-compliant Bidder: If a bidder is a non-Hawaii business and is not registered with the DCCA Business Registration Division (BREG) or cannot comply with §3-122-112 HAR, then the bidder in non-compliant and is ineligible for an award.

C. Prospective Bidders shall submit their "Intention to Bid".

D. Bidders shall submit the "Sealed Bid Form", bid bond (if required), tax clearances, Hawaii business certificates, and any other documents required by the bidding documents.

E. The GENERAL CONDITIONS set forth additional terms and conditions for the bid and award process. The GENERAL CONDITIONS will be part of the contract documents by which Hawaii Health Systems Corporation (HHSC) and the bidder (prospective contractor) will be bound. Bidders are directed to the GENERAL CONDITIONS for contract and statutory requirements and for Bidding and Execution of the Contract Requirements. Bidders are also directed to "Section 00800 – Special Conditions" of these specifications for definitions and modifications to the GENERAL CONDITIONS.

1.02 OFFEROR(S) or BIDDER(S)

A. The terms “Offeror” and “Bidder” are synonymous when used in this Section 00210 and other solicitation documents.

1.03 ADDENDA, CLARIFICATIONS

A. Addenda: The HHSC may periodically issue an addendum that may increase or decrease the scope of work or contract time, provisions or conditions. The HHSC will make the addenda available online on the facility website. Bidders are responsible for the information contained in the addenda or bid clarification whether or not the Bidder receives the addenda or clarification.

B. Bidders discovering an ambiguity, inconsistency or error when examining the bidding documents or the site and local conditions or bidders with questions or clarification requests shall send their written requests (email or fax notification are acceptable) to the Project Architect. Bidders shall comply with the following procedures:

1. Identify each request with the Project Name.

2. Indicate the appropriate section number, paragraph, drawing and detail number, schedule or other identifier.

3. The request should be brief, concise, but complete enough to properly evaluate and determine the merits or non-merits of the question or request.

C. Bidders shall make any requests for clarifications no later than fourteen (14) calendar days prior to the submission date for sealed bids. Refer to the “Notice to Bidders” for submission date.

D. HHSC will respond to important requests or clarifications by way of addenda. HHSC may not address or respond to all bidders inquiries, if the HHSC determines the request is unimportant or not required to disseminate to all Bidders.

1.04 SEALED BID FORM (BID FORM)

A. Bidder shall fill out the “Sealed Bid Form” completely. Write in ink or type. Besides the following paragraphs with instructions, there are supplemental Bidder’s Instructions within the text of the “Sealed Bid Form” and bidders shall comply with the instructions. Do not alter the “Sealed Bid Form”, and maintain the form intact.

B. RECYCLED PRODUCT PREFERENCE is not applicable to this project.

C. OTHER CONDITIONS: Bidder acknowledges and agrees to the provisions and certifications stated in this article.

D. RECEIPT OF ADDENDA: Bidder shall fill in the appropriate dates any addenda were received.

E. LISTING JOINT CONTRACTORS OR SUBCONTRACTORS:

1. Bidder shall complete the "Joint Contractors or Subcontractors List." It is the sole responsibility of the bidder to review the requirements of this project and determine the appropriate specialty contractor's licenses that are required to complete the project. Failure of the bidder to provide the correct names, license numbers, specialty class number, classification description and to indicate that the specialty contractor is required for this project, may cause the bid to be rejected.

2. Bidder agrees the completed listing of joint contractors or subcontractors is required for the project and that the bidder, together with the listed joint contractors and subcontractors, have all the specialty contractor's licenses to complete the work.

3. Based on the Hawaii Supreme Court's January 28, 2002 decision in Okada Trucking Co., Ltd. v. Board of Water Supply, et al., 97 Hawaii 450 (2002), the bidder as a general contractor ('A' or 'B' license) is prohibited from undertaking any work solely or as part of a larger project, which would require the bidder ('A' or 'B' general contractor) to act as a specialty ('C' license) contractor in any area in which the bidder ('A' or 'B' general contractor) has no specialty contractor's license. Although the 'A' and 'B' contractor may still bid on and act as the "Prime Contractor" on an 'A' or 'B' project (*See, HRS §444-7 for the definitions of an "A" and "B" project*), respectively, the 'A' and 'B' contractor may only perform work in the areas in which they have the appropriate contractor's license. The bidder ('A' or 'B' general contractor) must have the appropriate 'C' specialty contractor's licenses either obtained on its own, or obtained automatically under HAR §16-77-32.

4. General Engineering 'A' Contractors automatically have these 'C' specialty contractor's licenses: C-3, C-9, C-10, C-17, C-24, C-31a, C-32, C-35, C-37a, C-37b, C-38, C-43, C-56, C-57a, C-57b, and C-61.

5. General Building 'B' Contractors automatically have these 'C' specialty contractor's licenses: C-5, C-6, C-10, C-12, C-24, C-25, C-31a, C-42a, and C-42b.

6. The table that lists the specialty contractor' classifications in the bid form is from the Department of Commerce and Consumer Affairs' (DCCA) website www.state.hi.us/dcca/har/index.html. Bidders shall provide the appropriate classifications numbers and descriptions for any specialty contractors that are not included in the bid form and bidders are directed to the DCCA web site for the latest updated list.

7. Instructions to complete the Joint Contractors or Subcontractors List:

   a. Determine the specialty contractor classification(s) required for this project and provide the complete firm name and license number of the joint contractor or subcontractor in the respective columns. If the bidder is a general contractor and providing the work of the required specialty contractor classification, fill in the bidder's (general contractor's) license number and name.

   b. List only one joint contractor or subcontractor per required specialty contractor's classification.

   c. For projects with alternate(s), fill out the respective "Joint Contractors or Subcontractors List for the Alternate(s)." Bidder shall determine the specialty contractor's classification and description required for the respective alternate. Bidders shall fill in the complete class number, class description, firm name and license number of the respective joint contractor or subcontractor. The bidder shall not include any joint contractor or subcontractor previously listed for the base bid.

F. COST AND TIME: Bidder shall completely fill out the article and enter the cost for the Project Bid Price, and Alternates when provided. Bidder shall tabulate the Project Bid Price, and Alternates when provided, and the Bidders shall then enter the Total Lump Sum Bid Price. **BE SURE TO ENTER THE TOTAL LUMP SUM BID PRICE IN WORDS AND NUMERALS**. Refer to Bidder's Instructions located within the article.

   1. If provided, bidder shall fill in total costs for each alternate.

   2. The bidder is directed to the construction time information paragraph "B" for the list of contract times and dates which may include: contract duration, project start date, jobsite start date, jobsite completion, contract completion date and construction time for alternates. Bidder shall refer to "Section 01100" of these specifications for additional construction time information, as applicable.

G. SIGNATORY PAGE: Bidder shall completely fill out article (page). Bidder shall indicate if it is a "Hawaii Business" or a "Compliant Non-Hawaii Business." Also, bidder shall refer to Bidder's Instructions located within the article.

1.05 EVALUATION CRITERIA

A. EVALUTATING BIDS: The lowest responsive, responsible bid is determined by the following procedures:

1. The total lump sum bid price is adjusted to reflect the applicable preferences.

a. For projects with alternates, the total lump sum base bid price and alternates will be adjusted to reflect the applicable preferences.

2. Project control budget is established prior to the submission of bids.

1.06 METHOD OF AWARD

A. The contract will be awarded to the lowest responsive and responsible Bidder whose bid (including any alternates which may be selected) meets the requirements and criteria set forth in the solicitation documents.

B. In the event the total lump sum bid of all bidders exceeds the project control budget, HHSC reserves the right to make an award to the apparent Low Bidder if additional funds are available or by reducing the scope of work through negotiation.

1.07 OTHER CONDITIONS FOR AWARD

A. The Chief Procurement Officer may reject any or all bids and waive any defects if the Chief Procurement Officer believes the rejection or waiver is in the best interest of HHSC.

B. The Chief Procurement Officer may hold all bids up to 60 calendar days from the date bids were opened. Unless otherwise required by law, bids may not be withdrawn without penalty.

C. The award of the contract is conditioned upon funds made available for the project (or projects if applicable)

1.08 COMPLIANCE WITH §3-122-112 HAR:

A. As a condition for award of the contract and as proof of compliance with the requirements of 103D-310(c) HRS, the bidder shall meet the “Hawaii Business” or “Compliant non-Hawaii Business” requirements and shall provide the following documents:

1. Department of Taxation (DOTAX) and the IRS tax clearance certificates.

2. Department of Labor (DLIR) certificate of compliance.

3. Department of Commerce and Consumer Affairs (DCCA), Business Registration Division (BREG) certificate of good standing.

a. A Hawaii business that is a sole proprietorship is not required to register with the BREG and therefore not required to submit the DCCA, BREG "Certificate of Good Standing."

B. The apparent three low bidders shall furnish the required documents to HHSC within seven calendar days from the bid opening date. If a valid certificate is not submitted on a timely basis for award of a contract, a bidder otherwise responsive and responsible may not receive the award. Bidder is responsible to apply for and submit the documents by the required deadlines.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 REQUIRED DOCUMENTATION FOR HAWAII BUSINESS OR COMPLIANT NON-HAWAII BUSINESS (§3-122-112 HAR)

A. TAX CLEARANCE REQUIREMENTS (HRS Chapter 237): Bidder shall obtain a tax clearance certificate from the Hawaii State Department of Taxation (DOTAX) and the Internal Revenue Service (IRS). The certificate is valid for six months from the most recently approved stamp date on the certificate; the certificate must be valid on the date received by HHSC.

1. DOTAX *TAX CLEARANCE APPLICATION* Form A-6 (Rev 2003) is available at DOTAX and IRS (State of Hawaii) offices or DOTAX website, and by mail or fax.

a. DOTAX website: http://www.state.hi.us/tax/alphalist.html#a

b. DOTAX forms by fax/mail: (808) 587-7572 or 1-800-222-7572

2. Mail, fax or submit in person completed tax clearance application forms to the Department of Taxation, Taxpayer Services Branch or to the address listed on the application. Facsimile numbers are:

a. DOTAX: (808) 587-1488

b. IRS: (808) 539-1573

3. DOTAX will return the form to the bidder. The bidder is reminded that it is responsible to submit the applications for the tax clearance directly to DOTAX or IRS and not to HHSC.

B. DLIR CERTIFICATE of COMPLIANCE (HRS Chapter 383 - Unemployment Insurance, Chapter 386 - Workers' Compensation, Chapter 392 - Temporary Disability Insurance, and 393 – Prepaid Health Care): Bidder shall obtain a certificate of compliance from the Hawaii State Department of Labor and Industrial Relations (DLIR). The certificate is valid for six months from the date of issue; certificates must be valid on the date received by HHSC.

1. DLIR *APPLICATION FOR CERTIFICATE OF COMPLIANCE WITH SECTION 3-122-112 HAR*, Form LIR#27 is available at DLIR website or at the neighbor island DLIR District Office.

   a. DLIR website: http://www.dlir.state.hi.us/LIR#27

2. Mail, fax or submit in person completed application form to the Department of Labor and Industrial Relations, Administrative Services Office at the address listed on the application.

3. DLIR will return the form to the bidder. The bidder is reminded that it is responsible to submit the application for the certificate directly to DLIR and not to HHSC.

C. DCCA CERTIFICATE OF GOOD STANDING: Bidder shall obtain a certificate of good standing issued by the Department of Commerce and Consumer Affairs (DCCA), Business Registration Division (BREG). The certificate of good standing is valid for six months from the date of issue; certificates must be valid on the date received by HHSC.

1. DCCA *CERTIFICATE OF GOOD STANDING* is available from the business registrations website or by telephone. Bidders are advised there are costs associated with registering and obtaining the certificate.

   a. DCCA form website: http//www.BusinessRegistrations.com

   b. DCCA telephone: (808) 586-2727, M - F 7:45 to 4:30 HST

2. Submit the application per DCCA's requirements.

3. DCCA will return the form to the bidder. The bidder is reminded that it is responsible to submit the application for the certificate directly to DCCA and not to HHSC.

END OF SECTION

SECTION 00800 - SPECIAL PROVISIONS

PART 1 - GENERAL

1.01 SUBSTITUTION REQUESTS

A. Written substitution requests must be submitted with your Invitation for Bid (IFB) in accordance with IFG Section 3. All substitutions will be reviewed and approved in accordance with Section 6.3 Substitution of Materials and Equipment.

B. Substitution requests by FAX are not acceptable.

1.02 PROJECT CONTACT PERSON

A. HHSC Representative – For access to the site, project solicitation, and construction inquiries.

NAME:	Mr. Michael Nakada
POSITION OR TITLE:	Oahu Region Facilities Operations Manager
TELEPHONE NUMBER:	(808) 767-0526
Email:	mnakada@hhsc.org

B. Consultant

NAME:	Mrs. Margaret Mok
POSITION OR TITLE:	Architect
TELEPHONE NUMBER:	(808) 356-5906
Email:	mmok@inkarch.com

1.03 OFFEROR'S RESPONSIBILITY FOR EXAMINING PLANS, SPECIFICATIONS AND SITE OF WORK

A. Offerors herewith refers to sub-contractors, suppliers, manufacturer's representatives as well as contractors.

1.04 LIQUIDATED DAMAGES

A. The time of completion for the Work shall be within 210 consecutive calendar days from the official commencement date of the Notice to Proceed (NTP).

B. In accordance with the General Conditions, upon failure to complete Work or any portion of the Work within the time or times fixed in the contract or extension thereof, the Contractor shall pay liquidated damages to the Department in the amount of $500.00 per calendar day of delay.

C. In accordance with the General Conditions, PROJECT ACCEPTANCE DATE, for failure to correct punch list deficiencies, within the time or times fixed in the contract or extension thereof, the Contractor shall pay liquidated damages to the HHSC, in the amount equal to ten percent (10%) of the liquidated damages per calendar day of delay.

D. In accordance with the General Conditions FINAL SETTLEMENT OF THE CONTRACT, for failure to submit closing documents within the time or times fixed in the contract or extension thereof, it is agreed that the Bidder shall pay liquidated damages to HHSC in the amount equal to five percent (5%) of the liquidated damages per calendar day of delay.

1.05 SPECIALTY CONTRACTOR'S LICENSE

A. Contractor shall be solely responsible to assure that all the specialty licenses required to perform the Work are covered by the Contractor or its subcontractor(s).

1.06 WORKING HOURS

A. The regular working hours for this project is from 8:00 AM to 4:30 PM Monday through Friday, excluding State Holidays, unless otherwise noted or restricted under "Section 01100". The Working Hours provisions of specification "Section 01100" shall govern over this article 1.06.

B. The Contractor may be given approval to work beyond the regular hours including Saturdays, Sundays, State Holidays, night work, or after hours under the provisions of the GENERAL CONDITIONS, "Overtime And Night Work Section" and under specification "Section 01100".

1.07 SPECIAL PROCEDURES DURING BIDDING

A. Bid documents will be available online and from the HHSC Representative's office, at Leahi Hospital, 3675 Kilauea Ave, Honolulu, HI 96816.

B. All bids shall be submitted to the HHSC Representative.

C. All questions regarding the plans and specifications shall be submitted, in writing, to the HHSC Representative and Consultant. The HHSC Representative and Consultant will review the questions and issue any responses via Addendum. Only information received by Addendum shall be binding.

D. All questions regarding the proposal or contractual requirements shall be submitted, in writing to the HHSC Representative. The HHSC Representative will review the questions and issue any responses via Addendum. Only information received by Addendum shall be binding.

E. Any visitation to the site to examine the scope of work shall be requested through the HHSC Representative. Disruption of facility operations shall not be permitted.

1.08 PROCEDURES DURING CONSTRUCTION

A. Upon issuance of the Notice to Proceed, the Contractor shall submit a work schedule for review and discussion. The work schedule shall be up-dated on a weekly or bi-weekly basis as directed by the HHSC Representative.

B. On a weekly or bi-weekly basis, the Contractor shall conduct a progress meeting with the HHSC Representative. The meeting will discuss the progress of the construction, discussion of problems, and review of outstanding issues. The Contractor shall conduct the meeting and prepare the meeting notes and minutes and distribute to all parties.

C. During the construction, submittals and RFIs shall be submitted to the HHSC Representative with copy to the Consultant for review and action. To expedite the review, the Contractor may make submittals via email.

D. Periodic requests for payment shall be submitted to the HHSC Representative for review and confirmation. Upon approval by the HHSC Representative, the request for payment will be forwarded to the appropriate HHSC Contracting Office for processing.

E. Upon substantial completion of the project, the Contractor shall submit in writing to the HHSC Representative a request for a pre-final inspection. The Contractor shall have completed their own inspection and completed all noted discrepancies. Include with the request for the pre-final inspection a list of all outstanding work not completed or corrected.

F. Upon conducting a pre-final inspection, the Consultant shall prepare a punchlist of noted discrepancies for the Contractor's remedial action. Additional items observed and noted by the HHSC Representative during the inspection shall also be included in the punchlist. A final inspection will be performed upon completion of all punchlist items.

1.09 PROJECT RESTRICTIONS

A. The Contractor is informed that the facilities will be fully occupied and work shall be performed in close coordination with the HHSC Representative. Work will require the relocation of clients from the work area. Time shall be allocated for HHSC to conduct this relocation. Scheduling of the work shall be closely monitored and work performed to minimize the disruption to the remaining areas of the facility. All work schedules shall be approved by the HHSC Representative prior to starting.

B. Staging and storage of materials on-site is limited and shall be coordinated with the HHSC Representative. Contractor may be required to store materials off-site at his own expense.

C. Parking on-site is limited and may be restricted to only active delivery of materials and equipment. Coordinate with the HHSC Representative. If on-site parking not be available, the Contractor shall park off-site.

D. The above restrictions shall be considered in the work of this project and shall be included in the Contractor's cost. No additional compensation shall be made for not considering these restrictions.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 FINAL PAYMENT REQUIREMENTS

A. In addition to the requirements in the GENERAL CONDITIONS “Final Payment” section, the contractor shall submit”

1. Tax clearance certificate from DOTAX and IRS, current within two months of the issuance date; and

2. An originally signed Certificate of Compliance for Final Payment (SPO Form - 22, modified), affirming that the contractor remained in compliance with all laws as required by (§3-122-112 HAR). A contractor making a false affirmation shall be suspended and may be debarred pursuant to section 103D-702 HRS.

END OF SECTION

SECTION 01019 - GENERAL PROJECT REQUIREMENTS

PART 1 - GENERAL

1.01 SUMMARY OF WORK

A. Perform operations and furnish equipment, tools, materials, related items and labor necessary to execute, complete and deliver the Work as required by the Contract Documents.

1.02 DIVISION OF WORK

A. The Division and Sections into which these specifications are divided shall not be considered an accurate or complete segregation of work by trades. This also applies to work specified within each section.

B. Where devices, or items, or parts thereof are referred to in the singular, it is intended that such reference shall apply to as many such devices, items or parts as are required to properly complete the Work.

C. Specifications and Drawings are prepared in abbreviated form and include incomplete sentences. Omission of words or phrases such as “the Contractor shall”, “as shown on the drawings”, “a”, “an”, and “the” are intentional. Omitted words and phrases shall be provided by inference to form complete sentences.

D. Specifying of interface and coordination in the various Specification Sections is provided for information and convenience only. Such requirements in the various Sections shall complement the requirements of this Section.

1.03 NOTIFICATION

A. Contact the HHSC Representative at least five (5) working days prior to starting any onsite work.

1.04 SAFETY REQUIREMENTS

A. The Hawaii Occupational Safety and Health Law, Chapter 396, Hawaii Revised Statutes, effective May 16, 1972, as amended, is applicable and made a part of the Contract. Carefully read and strictly comply with its requirements.

B. Protect the facility personnel, students, and the public whenever power driven equipment is used. Ensure adequate safety precautions are used when operating any power-driven equipment.

1.05 PERFORMANCE AND COORDINATION

A. Contractor shall be in charge of the Work and the Project Contract Limits, as well as the directing and scheduling of all work. Contractor shall include general supervision, management and control of the Work of this project, and in addition to other areas more specifically noted throughout the Specifications. Final responsibility for performance, interface, and completion of the Work and the Project shall be the Contractor's.

B. Jobsite Administration shall be the responsibility of the Contractor. Provide a competent superintendent on the job and provide an adequate staff to execute the Work. In addition, all workers shall dress neatly and conduct themselves properly at all times. Loud abusive behavior, sexual harassment and misconduct will not be tolerated. Workers found in violation of the above shall be removed from the job site as directed by the HHSC Representative.

C. The HHSC will hold the Contractor liable for all the acts of Subcontractors and shall deal only with the Prime Contractor in matters pertaining to other trades employed on the job.

D. Coordination: Provide project interface and coordination to properly and accurately bring together the several parts, components, systems, and assemblies as required to complete the Work.

1. Provide interface and coordination of all trades, crafts and subcontracts. Ensure and make correct and accurate connections of abutting, adjoining, overlapping, and related work. Provide anchors, fasteners, accessories, appurtenances, and incidental items needed to complete the Work, fully, and correctly in accordance with the Contract Documents.

2. Provide additional structural components, bracing, blocking, miscellaneous metal, backing, anchors, fasteners, and installation accessories required to properly anchor, fasten, or attach material, equipment, hardware, systems and assemblies to the structure.

3. Provide caulking, sealing, and flashing as required to waterproof the building complete and as required to insulate the building thermally and acoustically. Include sealing, flashing, and related work as required to prevent moisture intrusion, air infiltration, and light leakage.

4. Materials, equipment, component parts, accessories, incidental items, connections, and services required to complete the Work which is not provided by subcontractors shall be provided by the Contractor.

1.06 COOPERATION WITH OTHER CONTRACTORS

A. HHSC reserves the right at any time to contract for or otherwise perform other or additional work within the Project Contract Limits. The Contractor of this project shall to the extent ordered by the HHSC Representative, conduct its work so as not to interfere with or hinder the progress or completion of the work performed by HHSC or other contractors.

1.07 SUBMITTALS

A. Furnish required submittals specified in this Section and in the Technical Sections. Submittals include one or more of the following: shop drawings, color samples, material samples, technical data, material safety data information, schedules of materials, schedules of operations, guarantees, certifications, operating and maintenance manuals, and field posted as-built drawings.

B. Record Drawings: Field Posted As-Built Drawings, the intent of which is to record the actual in-place construction so that any future renovations or tie-ins can be anticipated accurately, shall be prepared and submitted by the Contractor. To accomplish this, the following procedure shall be followed by the Contractor:

1. A full-size set of field posted as-built drawings shall be maintained at the job site. All deviations from alignments, elevations and dimensions which are stipulated on the drawings and authorizations given by the HHSC Representative to deviate from the drawings shall be clearly and accurately recorded by the Contractor on this set of record drawings.

2. Changes shall be recorded immediately after they are constructed in place to assure they are not forgotten. Record the changes in red pencil and where applicable, refer to the authorizing document or Change Order. The field posted as-built drawings shall be made available to the Consultant and HHSC Representative at any time so that its clarity and accuracy can be monitored.

3. The words “FIELD POSTED AS-BUILT” shall be labeled on the title sheet and certified by the Contractor as to accuracy and completeness as shown below:

   FIELD POSTED AS-BUILT

   Certified By: _____Date:_____
   Contractor (Include name and company)

4. The words “FIELD POSTED AS-BUILT” shall be labeled on all sheets in the margin space to the right of the sheet number written from the bottom upward.

5. The Index to Drawings shall be revised with the label “FIELD POSTED AS-BUILT” for each sheet. The index shall conclude with the following note: “A COMPLETE SET CONTAINS ____ SHEETS” with the total number of sheets comprising the set to be placed in the blank.

6. Any “FIELD POSTED AS-BUILT” drawing which the HHSC Representative and/or Consultant determines does not accurately record the deviation may be corrected by the Consultant and the Contractor shall be charged for the services.

7. Submit the set of “FIELD POSTED AS-BUILT” drawings to the Consultant and notify the HHSC Representative no later than five (5) calendar days prior to the date of final inspection.

8. “AS-BUILT” drawings will be prepared by the design consultant using the “FIELD POSTED AS-BUILT”. Both sets of drawings will be sent to the Contractor for review and approval. The Contractor shall retain the “FIELD POSTED AS-BUILT” drawings for records, sign the “AS-BUILT” set of drawings, indicating approval, and return the drawings in a timely manner to the Consultant and notify the HHSC Representative.

1.08 CONSTRUCTION SCHEDULE:

A. The Construction Schedule completion date will be approved prior to award. The daily activities of the Construction Schedule will be reviewed within fifteen (15) calendar days after the Notice to Proceed or upon earlier written instruction by HHSC.

B. The schedule shall be related to the entire project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the work. If requested by the HHSC Representative, the Contractor shall participate in a preliminary meeting to discuss the proposed schedule and requirements prior to submission of the schedule.

C. Contractor shall prosecute the work according to the Schedule. The HHSC Representative shall rely on the reviewed Contractor’s Schedule and regular updates for planning and coordination. The HHSC Representative’s review of the Contractor’s Construction Schedule does not relieve the Contractor of its obligation to complete the work within the allotted contract time. Nor does the review grant, reject or in any other way act on the Contractor’s request for adjustment(s)to complete remaining contract work, or for claims of additional compensation. Such requests shall be processed in accordance with other relevant provisions of the contract.

D. If the HHSC Representative issues a Field Order or Change Order or requires Force Account Work that affects the sequence or duration of work activities noted on the construction progress schedule, the Contractor shall promptly update the schedule. This shall be accomplished by adding, deleting or revising the work activities noted, or changing the logic in the schedule to show the Contractor's plan for incorporating the change into the flow of work. All Change Orders and Time Extension requests that affect the construction schedule shall be evaluated based on their impact on the approved Construction Schedule.

1.09 MEETINGS

A. Contractor shall meet with the HHSC Representative, weekly or other interval as determined, to discuss the progress of the Work.

B. For each meeting, Contractor shall take meeting minutes and provide a list stating all items, work or material, which may cause a delay or have an impact on the project's contractual dates. The list shall be inclusive of items requiring action from all responsible parties such as outstanding submittal status, request for information (clarification), force account work, change order, and change proposals. The format of this list shall be at the Contractor's discretion, subject to the HHSC Representative's approval. Submit the list to all parties for discussions as a meeting agenda. Contractor shall provide a plan of corrective action for any item, which is delayed or expected to be delayed, where that item impacts the contractual dates.

1.10 PROJECT AND SITE CONDITIONS

A. Project Contract Limits (Contract Zone Limits) shown on the drawings indicate only in general the limits of the work involved. Perform necessary and incidental work, which may fall outside of these demarcation lines. Confine construction activities within the Project Contract Limits and do not spread equipment and materials indiscriminately about the area.

1.11 SANITARY FACILITIES

A. The Contractor shall be allowed to utilize on-site restrooms as directed by the HHSC Representative. The Contractor shall maintain the facility in clean and sanitary condition at all time. Failure to do so, may require the Contractor to provide portable temporary toilet facilities for the contractor's use.

1.12 CONSTRUCTION AIDS

A. Provide construction aids and equipment required by construction personnel and to facilitate execution of the Work including: scaffolds, ladders, ramps, platforms, railings, and other such facilities and equipment.

PART 2 - PRODUCTS

2.01 QUALITY

A. Materials, items, equipment and fixtures specified in the various Divisions and Sections shall be new unless otherwise specified.

2.02 STORAGE AND HANDLING

A. Contractor shall supervise jobsite delivery and handling, and assign storage space for materials, items, equipment and fixtures of all trades. Contractor and installer are responsible for delivery, unloading, unpacking, handling, storage, distribution, installation and protection of its materials at the jobsite.

B. Except as otherwise required by these specifications or by HHSC, determine and comply with manufacturer(s) recommendation(s) on product handling, storage and protection.

C. Deliver products to the jobsite in manufacturer's original containers, with labels intact and legible. Maintain packaged material with seals unbroken and labels intact until time of use. Promptly remove damaged materials and unusable items from the jobsite, and promptly replace with material meeting the specified requirements, at no additional cost to HHSC.

D. The Consultant may reject as non-complying such material and products that do not bear identification satisfactory to the Consultant as to manufacturer, grade, quality, and other pertinent information.

PART 3 - EXECUTION

3.01 EXAMINING THE SITE

A. Contractor and Subcontractors are expected to visit the site and make due allowances for difficulties and contingencies to be encountered. Compare contract documents with work in place. Become familiar, with existing conditions, the conditions to be encountered in performing the Work, and the requirements of the drawings and specifications.

B. Verify construction dimensions and elevations indicated on the drawings before any construction begins. Any discrepancy shall be immediately brought to the attention of the Consultant, and any change shall be made in accordance with the Consultant's instruction. Contractor shall not be entitled to extra payment if it fails to report the discrepancies before proceeding with any work whether within the area affected or not.

C. Obtain all field measurements required for the accurate fabrication and installation of the Work included in this Contract. Exact measurements are the Contractor's responsibility.

D. Furnish or obtain templates, patterns, and setting instructions as required for the installation of all Work. All dimensions shall be verified in the field.

E. The Contractor shall accept the site in the condition which exists at the time access is granted to begin the Work.

1. Verify existing conditions and dimensions shown and other dimensions not indicated but necessary to accomplish the Work.

2. Locate general reference points and take action to prevent their destruction. Lay out work and be responsible for lines, elevations and measurements and the work executed. Exercise precautions to verify figures and conditions shown on drawings before layout of work.

3. Before starting the Work, the Contractor and each Subcontractor, shall verify governing dimensions and shall examine adjoining work on which the Contractor's work is in any way dependent. No additional compensation will be allowed on account of differences between actual measurements and dimensions shown. Submit differences discovered during the verification work to the Consultant for interpretations before proceeding with the associated work.

3.02 UTILITY SERVICE

A. Electricity - Make arrangements with the facilities for temporary use of electricity for construction use.

B. Telephone - Make arrangements with the utility companies for temporary telephone service for construction use or utilize cellular phone service.

C. Water - Make arrangements for temporary water use with the facilities.

3.03 ENVIRONMENTAL

A. General Contractor shall oversee that proper environmental conditions are met regarding temperature, humidity, lighting and ventilation.

3.04 PREPARATION AND PROTECTION

A. Protection of Property: Continually maintain adequate protection of the Work from damage and protect all property, including but not limited to buildings, interior or exterior finishes, equipment, furniture, grounds, vegetation, material, utility systems located at and adjoining the job site. Repair, replace or pay the expense to repair damages resulting from Contractor's work, fault or negligence.

B. Before starting work to be applied to previously erected constructions, make a thorough and complete investigation of such recipient surfaces and determine their suitability to receive required additional construction and finishes. Contractor, at its expense, shall make whatever repairs and conditioning required to properly prepare such surfaces. Contractor shall coordinate the work to provide a suitable surface to receive following work.

C. Commencement of work by any trade will be construed as acceptance of existing conditions and surfaces as being satisfactory for application of subsequent work, and full responsibility for finished results and assumption of warranty obligations under the Contract.

D. Protect existing work in a manner to prevent damage including interior work from damage by vandals or the elements. Provide temporary protection. Use curtains, barricades, or other appropriate methods. Take positive measures to prevent breakage of glass and damage to plastic, aluminum and other finishes.

E. Repairs and Replacements: In event of damage, promptly make replacements and repairs to the approval of the Consultant and/or HHSC Representative and at no additional cost to HHSC. Additional time required to secure replacements and to make repairs will not be considered to justify an extension in the Contract Time or completion.

3.05 BARRICADE

A. Erect temporary construction barricade(s) to prevent unauthorized persons from entering the project area and to the extent required by the HHSC Representative.

B. Maintain temporary construction barricade(s) throughout the duration of the Work. During the course of the project, the HHSC Representative may require additional barricades be provided for the safety of the public. Contractor shall erect the additional barricade(s) at its own expense.

3.06 INSTALLATION

A. Materials, items, fixtures required by the various Divisions and Sections of the Specifications shall be installed in accordance with Contract Documents, by workers specially trained and skilled in performance of the particular type of work, to meet guarantee and regulatory agency requirements. Should the drawings or specifications be void of installation requirements, install the materials, items, fixtures in accordance with the manufacturer's current specifications, recommendations, instructions, and directions, and/or best construction industry standards.

3.07 PATCHING

A. General Contractor shall oversee cutting and patching of concrete, masonry, structural members and other materials where indicated on drawings and as job conditions require. Unless noted elsewhere in the Drawings and Specifications, no cutting or patching of existing or new structural members will be permitted without previously notifying the HHSC Representative and Consultant.

B. Patching materials and workmanship shall be of equal quality to that indicated on the drawings, specified for new work, and/or to match the construction of item to be patched.

3.08 CLEAN-UP

A. Rubbish and debris resulting from work of the various Divisions and Sections of the specifications shall be collected and disposed of by the Contractor at legal disposal areas away from the project site. Clean up and remove from premises all debris accumulated from operations from time to time and as directed by the HHSC Representative. Permission to provide on-site trash containers shall be granted by HHSC and shall be placed where directed by the HHSC Representative.

END OF SECTION

SECTION 01100 - SUMMARY

PART 1 - GENERAL

1.01 WORK COVERED BY CONTRACT DOCUMENTS

A. Project Identification: The work shall generally consist of repairs to metal fire escape stairs and removal of two doors and frames. Demolition work shall include, but not be limited to, demolition of existing doors, frames, exit signs, and light fixtures. New work shall include, but not be limited to, installation of metal guardrail extensions, gypsum board, wall base, painting, light fixtures and miscellaneous related work.

1. Project Location: Leahi Hospital, 3675 Kilauea St., Honolulu, Hawaii.

B. Perform operations and furnish equipment, tools, materials, related items and labor necessary to execute, complete and deliver the Work as required by the Contract Documents.

C. The Division and Sections into which these specifications are divided shall not be considered an accurate or complete segregation of work by trades. This also applies to work specified within each section

D. Contractor shall not alter the Drawings and Specification. If an error or discrepancy is found, notify the Consultant.

E. Specifying of interface and coordination in the various specification sections is provided for information and convenience only. These requirements in the various sections shall complement the requirements of this Section.

1.02 SPECIFICATION FORMATS AND CONVENTIONS

A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated and include incomplete sentences. Omission of words or phrases such as “the Contractor shall”, “as shown on the drawings”, “a”, “an”, and “the” are intentional. Omitted words and phrases shall be provided by inference to form complete sentences. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred, as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates. Where devices, or items, or parts thereof are referred to in the singular, it is intended that such reference

shall apply to as many such devices, items or parts as are required to properly complete the Work.

2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.

   a. The words “shall,” “shall be,” or “shall comply with,” depending on the context, are implied where a colon (:) is used within a sentence or phrase.

3. Abbreviations and Acronyms for Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Gale Research’s “Encyclopedia of Associations” or in Columbia Books’ “National Trade & Professional Associations of the U.S.”

B. Definitions

1. Directed: Terms such as “directed,” “requested,” “authorized,” “selected,” “approved,” “required,” and “permitted” mean directed by HHSC Representative, requested by HHSC Representative, and similar phrases.

2. Indicated: The term “indicated” refers to graphic representations, notes, or schedules on drawings or to other paragraphs or schedules in specifications and similar requirements in the Contract Documents. Terms such as “shown,” “noted,” “scheduled,” and “specified” are used to help the user locate the reference.

3. Furnish: The term “furnish” means to supply and deliver to project site, ready for unloading, unpacking, assembly, installation, and similar operations.

4. Install: The term “install” describes operations at project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

5. Provide: The terms “provide” or “provides” means to furnish and install, complete and ready for the intended use.

6. Installer: An installer is the contractor or another entity engaged by contractor as an employee, subcontractor, or sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.

7. Submit: Terms such as “submit,” “furnish,” “provide,” and “prepare” and similar phrases in the context of a submittal, means to submit to the HHSC Representative and/or Consultant.

C. Industry Standards

1. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

2. Publication Dates: Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.

3. Conflicting Requirements: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to HHSC Representative and Consultant for a decision before proceeding.

1.03 WORK SEQUENCE

A. The Work will be conducted in a single construction phase.

1.04 USE OF PREMISES AND WORK RESTRICTIONS

A. General: Contractor shall have full use of construction zone for construction operations, including restricted use of project site, during construction period. Contractor’s use of premises is limited only by State’s right to perform work or to retain other contractors on portions of the project site.

B. Contractor’s use of premises is restricted as follows:

1. Construction Times and Schedule:

a. The Contractor shall coordinate the work schedule with the HHSC Representative. An advanced notice of 15 calendar days shall be provided prior to the start of work. Work can be scheduled for weekdays (8:00 AM to 4:30 PM) with advanced notice by the Contractor.

b. The normal operational hours are 8:00 AM to 4:30 PM, Monday through Friday.

c. Unless restricted elsewhere in these specifications, the Contractor may not perform work outside of normal daily operation hours. Weekend or holiday work may be permitted with the approval of the HHSC Representative. Any weekend or holiday work shall require a 15 calendar day advanced notice.

d. Work performed during normal operating hours shall not impede public traffic or office personnel. An alternate route around the work areas may be required.

2. Site Access and Parking:

a. Arrange all on-site parking and access with the HHSC Representative.

b. Permanent use of the loading area is prohibited.

c. Subject to availability, the HHSC Representative will designate other on-site areas that may be used by the Contractor other than assigned stalls. Restore any property damaged by construction activities at the completion of the project.

3. Sanitation and Utilities:

a. Contractor may use designated restrooms, however, shall maintain the facilities in clean condition at all times. Coordinate with the HHSC Representative.

b. Arrange all temporary electricity and water service with the HHSC Representative. There will be no charges for reasonable electricity and water service.

c. Should interruption of any utility services be required, outages shall be coordinated with the HHSC Representative. A minimum five (5) working days notice shall be provided. Contractor is forewarned that the HHSC Representative may require outages to be done at specific times to minimize disruptions to the facility operations.

4. Other Conditions:

a. Noise and other disrupting activities normally resulting from construction operations are detrimental to the conduct of normal activities in adjacent locations surrounding the project area. Accordingly, exercise every precaution to keep noise levels to a minimum. Internal combustion engines and compressors shall be equipped with mufflers to reduce noise to a minimum.

b. Use or application of materials with offensive odors should be avoided and may be restricted from use on this project.

1.05 WORK UNDER OTHER CONTRACTS

A. Separate Contract: The HHSC may execute a separate contract for certain construction at the facility that was not known at the time Offers were submitted.

B. Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

SECTION 01140 – WORK RESTRICTIONS

PART 1 – GENERAL

1.01 SUMMARY

A. This section includes work restrictions on the Contractor's operations, and construction as required to maintain the facility's operation during the construction period.

B. CONSTRUCTION PROVISIONS

1. Rules and Regulations: Consult with the HHSC Representative at the pre-construction conference and become familiar with the rules and regulations of the facility.

2. Contractor's Operations: Confine all construction operations to the immediate vicinity of the construction activity. Store building materials, equipment, tools and incidentals in an enclosed area as directed by the HHSC Representative. Take precautions and prevent access to power equipment, tools, etc., by other than authorized construction personnel. Perform operations to ensure the safety of the occupants of the buildings at all times.

3. Perform operations to minimize inconvenience or disturbance upon the personnel and residents.

4. Protection of occupants: Special consideration must be made by the Contractor at all times to safely protect the occupants and facility personnel from any and all injuries that may be caused as a result of the work performed under this contract.

5. Caution: The Contractor shall caution his personnel on the job that any association with the occupants be avoided as much as possible, that when spoken to by occupants, normal courtesy shall be maintained at all times.

6. None of the foregoing regulations shall be construed as a restriction on the legal prosecution of the work.

1.02 SEQUENCING OF WORK

A. The Contractor shall schedule his work in general consideration for the on-going operation of the facility. All work shall be coordinated with the HHSC Representative. Contractor shall consider in his proposal interruptions or delays to his schedule of work due to special requirements of HHSC.

B. Stoppage of work for the duration of CMS and State Survey audits shall not incur additional costs to HHSC.

END OF SECTION

SECTION 01300 - SUBMITTALS

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

Where indicated in these specifications, provide submittals to the HHSC Representative and Consultant for review.

1.02 PROCEDURES

A. Unless otherwise specified, deliver submittals to the HHSC Representative with copy to the Consultant.

B. Transmit all items using form which identifies Project, Contractor, Subcontractor, and major supplier. Identify pertinent drawing sheet, detail number, and specification section number, as appropriate. Identify deviations from Contract Documents. Provide space for the Consultant's review stamp.

C. Upon completion of review by the Consultant and HHSC Representative, the HHSC Representative will return submittals to the Contractor with copy to the Consultant.

1.03 SCHEDULE OF WORK

A. Coordinate Schedule with Work Sequence specified in Section 01140.

1.04 SHOP DRAWINGS AND SAMPLE SUBMITTALS

A. All submittals shall be made in accordance with the following unless otherwise specified. Minimum sheet size is 8-1/2" x 11". Maximum sheet size is same size as the Contract Drawings. Drawings shall be presented in a clear and thorough manner. Details shall be identified by reference to sheet, schedule, and detail shown on Contract Drawings.

B. Mark each copy to identify applicable products, and other data. Supplement manufacturer's standard data to provide information unique to the work. Include manufacturer's installation instructions when required by the specification.

1. The Contractor shall review, stamp with his approval and submit with reasonable promptness and in orderly sequence so as to cause no delay in work of any other Subcontractor, all shop drawings, and product data required by these specifications.

2. Properly identify shop drawings and samples as specified. At the time of submission, the Contractor shall inform the Consultant in writing of any deviation in the shop drawings or submittals from requirements of the Contract Documents.

3. By approving and submitting the shop drawings and submittals the Contractor thereby represents that he has determined and verified all field measurements, field criteria, materials, catalog numbers and similar data, or will do so, and that he has checked and coordinated each shop drawing and sample with the requirements of these specifications.

4. Six (6) copies of the Shop Drawings and submittals shall be submitted for review. Upon review, the Consultant will retain three (3) copies and return the balance to the Contractor.

5. The Consultant will review the shop drawings and submittals with reasonable promptness so as to cause no delay but only for conformance with the design concept of the Project and with the information given in the Contract Documents. The Consultant's review of a separate item shall not indicate approval of an assembly in which the item functions.

6. The Contractor shall make any corrections required by the Consultant and shall resubmit the required number of corrected copies of shop drawings or submittals for review. The Contractor shall direct specific attention in writing or on resubmitted shop drawings to revisions other than the corrections requested by the Consultant on previous submissions.

7. The Consultant's review of shop drawings or submittals shall not relieve the Contractor of responsibilities for any deviation from the requirements of the Contract Documents unless the Contractor has informed HHSC in writing of such deviation, at time of submission, and the HHSC Representative and/or Consultant has given written approval to the specific deviation; nor shall the Consultant's review relieve the Contractor from responsibility for errors or omissions in the shop drawings or samples.

8. No portion of the work requiring a shop drawing or sample submission shall be commenced until the submission has been reviewed by the Consultant and HHSC Representative. All such portions of the work shall be in accordance with reviewed shop drawings and samples.

C. Samples: Submit full range of manufacturer's standard textures, colors, and patterns for the HHSC's selection. Submit samples as specified in the respective Specification sections and as noted above. Samples shall illustrate functional characteristics of the Product, with integral parts and attachment devices. Coordinate submittal of different categories for interfacing work. Include identification on each sample, giving full information.

1.05 BIDDER'S SPECIAL RESPONSIBILITY FOR COORDINATING CONTRACTURAL WORK AND SUBMITTALS:

A. The General Contractor shall be responsible for the coordination of all contractual work and submittals.

B. The General Contractor shall have a rubber stamp made up in the following format:

Contractor's Name

PROJECT: _____

_____

PROJECT NO.: _____

THIS SUBMITTAL HAS BEEN CHECKED BY THIS GENERAL CONTRACTOR. IT IS CERTIFIED CORRECT, COMPLETE, AND IN COMPLIANCE WITH CONTRACT DRAWINGS AND SPECIFICATIONS. ALL AFFECTED CONTRACTORS AND SUPPLIERS ARE AWARE OF, AND WILL INTEGRATE THIS SUBMITTAL INTO THEIR OWN WORK.

DATE RECEIVED _____
SPECIFICATION SECTION # _____
SPECIFICATION PARAGRAPH # _____
DRAWING _____
SUBCONTRACTOR _____
SUPPLIER _____
MANUFACTURER _____

CERTIFIED BY: _____

C. This stamp, "filled-in", should appear on the title sheet of each shop drawing, on a cover sheet of submittals in an 8-1/2" x 11" format, or on one face of a cardstock tag (min. 3" x 6") tied to each sample. The tag on the samples should state what the sample is, so that if the tag is accidentally separated from the sample, they can be matched up again. The back of this tag will be used by the Consultant for his receipt, review, and log stamp and for any comments that relate to the sample.

D. All submittals for material and shop drawings listed in the contract documents, shall be required and shall be first reviewed and certified by the General Contractor, then reviewed and approved by Consultant and HHSC Representative, prior to any ordering of materials and equipment. Submittals that have not been reviewed by the General Contractor shall be returned for review.

1.06 MANUFACTURER'S CERTIFICATES

Submit certificates, warranties, operating and maintenance instructions in accordance with requirements of each specification section. Submit in triplicate.

1.07 MSDS

MSDS shall be submitted prior to the pre-construction meeting. The Contractor shall submit MSDS log and reference each MSDS to its specification Section number and product system.

PART 2 – PRODUCTS

(Not used.)

PART 3 – EXECUTION

(Not used.)

END OF SECTION

SECTION 01577 - POLLUTION CONTROL

PART 1 - GENERAL

1.01 SUMMARY

A. Includes site and environmental control requirements.

1.02 TRASH, REFUSE DISPOSAL

A. Assume all ballast or lamps from removed light fixtures contain mercury and are PCB contaminated. Dispose fixtures properly in accordance with federal, state, and local requirements

B. Burning of debris and/or waste materials on the project site is prohibited.

C. Do not bury debris and/or waste material on the project site, unless specifically allowed elsewhere in these specifications as backfill material.

D. Haul unusable debris and waste material to an appropriate off-site dump area. During loading operations, water down or provide other measures to prevent dust or other airborne contaminants.

E. Vacuum, wet mop, or damp sweep when cleaning rubbish and fines which can become airborne from floors or other paved areas. Do not dry sweep.

F. Use enclosed chutes and/or containers to conveying debris from above the ground floor level.

G. Clean-up shall include the collection of all waste paper and wrapping materials, cans, bottles, construction waste materials and other objectionable materials, and removal as required. Frequency of clean-up shall coincide with rubbish producing events. The Contractor shall be responsible for all clean-up cost.

1.03 DUST

A. Prevent dust from becoming airborne at all times including non-working hours, weekends and holidays in conformance with the State Department of Health, Administrative Rules, Title 11, Chapter 60 - Air Pollution Control.

B. Contractor is responsible for and shall determine the method of dust control. Subject to the Contractor's choice, the use of water or "environmentally friendly chemicals" may be used over surfaces which create airborne dust.

C. Construct or erect dust control barriers as required to retain dust within the project site area.

D. Contractor is responsible for all damage claims resulting from failure to control airborne dust during all times that the site is under the Contractor's control.

1.04 NOISE

A. Keep noise within acceptable levels at all times in conformance with the State Department of Health, Administrative Rules, Title 11, Chapter 46 - Community Noise Control. Contractor shall obtain and pay for the Community Noise Permit from the State Department of Health when the construction equipment or other devices emit noise at levels exceeding the allowable limits.

B. To reduce loud disruptive noise levels, ensure mufflers and other devises are provided on equipment, internal combustion engines and compressors. Maintain equipment to reduce noise to acceptable levels.

C. Starting-up of construction equipment meeting allowable noise limits shall not be done prior to 8:00 a.m. without prior approval of the HHSC Representative. Equipment exceeding allowable noise levels shall not be started-up prior to 8:00 a.m.

1.05 SUSPENSION OF WORK

A. Violations of any of the above requirements or any other pollution control requirements which may be specified in the Specifications shall be cause for suspension of the work creating such violation.

B. Reference the General Conditions Construction, dated 3/17/06 for the suspension procedures.

C. The HHSC Representative may also suspend any operations which creates a pollution problems even if the problem does not violate the provisions of this Section. In this instance, the work is considered a Change and subject to the provisions of the contract.

PART 2 - PRODUCTS (Not used)

PART 3 - EXECUTION (Not used)

END OF SECTION

SECTION 01715 - EXISTING CONDITIONS - ASBESTOS / LEAD / HAZARDOUS MATERIAL SURVEY

PART 1 - GENERAL

1.01 SUMMARY

A. This section includes the results of the survey for Asbestos, Lead and / or other hazardous materials and is provided for the Contractor's information.

B. Related Sections include the following:

1. SECTION 13281 - ASBESTOS ABATEMENT for all work which disturbs asbestos.

2. SECTION 13282 - LEAD PAINT CONTROL MEASURES for requirements of all work which disturbs lead-based paint (LBP) and paint with lead (PWL).

3. SECTION 13288 – ASBESTOS TESTING AND MONITORING for air testing requirements of air monitoring during all work which disturbs asbestos containing materials (ACM), LBP and PWL.

4. SECTION 13289 – LEAD TESTING AND MONITORING for air testing requirements of air monitoring during all work which disturbs asbestos containing materials LBP and PWL.

1.02 ASBESTOS

A. The structure or structures to be renovated or modified under this contract were surveyed for the presence of asbestos containing building materials (ACBM), using AHERA requirements. A copy of the initial survey report, as well as any subsequent supplemental survey report(s) if performed, are included in this Section.

1. A "User's Guide" for the asbestos survey report(s) is available for review from the HHSC Representative. The "User's Guide" contains information on how to interpret the asbestos reports.

2. The report(s) are included, even when no ACBM was found, for the Contractor's information. Review the attached report(s) for the basis on which the negative ACBM finding was made. Contractor may perform further surveys at its own expense, if ACBM not shown in the report(s) is suspected in the areas of the building(s) in which work will be performed. If ACBM is found, notify the Contracting Officer immediately. HHSC will reimburse the Contractor for the testing cost if ACBM is found.

3. If there is ACBM outside of the areas in which work will be performed, this ACBM shall not be disturbed in any way.

B. If applicable, notify employees, subcontractors, and all other persons engaged on the project of the presence of asbestos in the existing buildings in accordance with the State of Hawaii: Occupational Safety and Health Administration and 29 CFR 1926.1101, Asbestos.

C. In the event that work is required in any building or buildings on the site other than the one(s) designated within this project scope, request copies of the asbestos survey report(s) for such building(s) from the Contracting Officer. Based on the information contained in the additional survey(s), notify affected personnel.

1.03 LEAD

A. Inform employees, Subcontractors and all other persons engaged in the project that LBP and PWL is present in the existing building(s) and at the job site. Follow the requirements of 29 CFR 1926.62 Lead and 40 CFR 745.

B. Review the attached lead testing data which identify locations of lead containing material was found. Lead testing was for design purposes only, and the results do not satisfy any of the requirements of 29 CFR 1926.62 Lead and 40 CFR 745.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 SURVEY attached

A. Limited Inspection Report for Asbestos and Lead-Based Paint, Leahi Hospital Repair Atherton Bldg Fire Escape, 34 pages, dated September 20259 prepared by EnviroQuest, Inc.

END OF SECTION

EnviroQuest

SERVICES

HAZMAT Inspections

Remediation Design

Asbestos Management

Lead Management

Lead Risk Assessment

Industrial Hygiene

Indoor Air Quality

Mold Assessment

Environmental Site Assessments

Subsurface Investigation

Water Sampling

Asbestos Training

Lead Training

OSHA Training

OSHA Compliance

LIMITED INSPECTION REPORT FOR ASBESTOS AND LEAD-BASED PAINTS

LEAHI HOSPITAL
REPAIR ATHERTON BLDG FIRE ESCAPE
3675 KILAUEA AVENUE
HONOLULU, HAWAII 96816

EnviroQuest Project: 304105

September 2025

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1 INTRODUCTION

A limited hazardous building material survey (HBMS) was conducted on September 10, 2025 at the Leahi Hospital, Atherton Building.

The purpose of the activities under this project was to perform a limited inspection for asbestos-containing materials and lead-based paints that may be impacted by the fire escape renovations and repair work.

1.1 SITE LOCATION

The listed areas were included in our inspection:

- Fire Escape 1
- Fire Escape 2
- Fire Escape 3
- 3rd Floor
  - Doorway 324
  - Doorway 328

2 ASBESTOS

Twenty-one samples were collected from suspect asbestos-containing materials.

2.1 METHODOLOGY

A visual inspection for suspect ACM and homogeneous areas (areas that have uniform color, texture, and appearance) was conducted. Suspect materials were divided into three Environmental Protection Agency (EPA) categories:

- Surfacing Materials (sprayed or troweled-on materials)
- Thermal Systems Insulations (materials generally applied to various mechanical systems)
- Miscellaneous Materials (any materials which do not fit in the above categories)

Sampling methodology generally followed the procedures presented in EPA 40 CFR 763 *Asbestos*, Subpart E *Asbestos Containing Materials in Schools,* and Hawaii Department of Health (HDOH), Hawaii Administrative Rules (HAR) Titles 11-501 *Asbestos Requirements* and 11-502 *Asbestos Containing Materials in Schools.*

2.2 RESULTS

Samples were submitted to Hawaii Analytical Laboratory, LLC. (HAL) in Honolulu, Hawaii, a National Voluntary Laboratory Accreditation Program (NVLAP) accredited laboratory. HAL is also registered to provide asbestos laboratory services in Hawaii under HDOH 11-504 *Asbestos Abatement Certification Program.* The samples were analyzed by EPA Method 40 CFR 763, Appendix E to Subpart E *Interim Method of the Determination of Asbestos in Bulk Insulation Samples* and EPA 600/R-93-116 *Method for Determination of Asbestos in Bulk Building Materials.*

Based on the laboratory analytical results, asbestos was identified in three of the 21 samples.

- One sample was determined to be an asbestos-containing material (ACM), material containing more than 1% asbestos.

- Two samples were reported as having a concentration of less than 1% asbestos.

In accordance with the National Emission Standard for Hazardous Air Pollutants (NESHAP) requirements, samples consisting of distinct layers of materials were analyzed and reported separately by the laboratory. NESHAP also states that if asbestos is identified in amounts less than 10%, the owner or operator of the building must elect to assume the amount to be greater than 1% and treat the material as ACM or request verification of the amount by point counting. No samples were point counted for this report.

Refer to Table 1 and the accompanying appendices for reference photographs and laboratory analytical reports.

3 LEAD BY XRF

Twenty-eight surface measurements, including instrument calibration checks, and two paint film samples were collected from painted or coated materials.

3.1 METHODOLOGY

A visual inspection for painted or coated building surfaces was conducted. Sampling methodology generally followed the procedures presented in the U.S. Department of Housing and Urban Development's document *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing,* EPA 40 CFR 745 *Lead-Based Paint Poisoning Prevention in Certain Residential Structures,* and ASTM E1729 *Standard Practice for Field Collection of Dried Paint Samples for Subsequent Lead Determination.*

The inspection was completed using a Viken Detection Pb200i Handheld X-ray Fluorescent (XRF) Lead Paint Analyzer. The XRF uses a cobalt 57 (Co^{57}) radioactive source that when exposed to painted building components, causes lead to emit X-rays with a characteristic frequency or energy. The intensity of the radiation is then measured by the instrument and reported as lead in milligrams per square centimeter (mg/cm^2).

When XRF readings indicated a result of $\leq$0.00 mg/cm^2, a paint film sample, representative of the painted building component, was collected for verification purposes. These samples were submitted to HAL, an American Industrial Hygiene Association Environmental Lead Laboratory Accreditation Program accredited laboratory. The paint film samples were analyzed by NIOSH Method 7082m *Flame Atomic Absorption Spectroscopy* (FAAS).

3.2 RESULTS

Based on the XRF measurements and the laboratory analytical results, lead in paint concentrations exceeded EPA guidelines in 11 surface measurements. The EPA defines lead-based paint (LBP) as *paint or other surface coatings that contain lead equal to or in excess of 1.0 milligram per square centimeter or 0.5 percent by weight*. Lead at concentrations below the EPA guidelines was also detected. For the purposes of this report, these paints are identified as paint with lead (PWL), having lead concentrations greater than the laboratory detection limit, but less than 0.5% lead by weight.

Refer to Tables 2 and 3 and the accompanying appendices for reference photographs and laboratory analytical reports.

4 SUMMARY

4.1 ASBESTOS

The listed materials were identified as containing asbestos.

ACM[1] (Y/N)	Material Description	Homogeneous Area	Condition[2]
N	12”x12” beige vinyl tile with adhesive	3rd floor hallway, room 324, room 328	G
N	Green vinyl tile	3rd floor hallway, room 324, room 328	G
Y	Black adhesive	3rd floor hallway, room 324, room 328	G

1. ACM - ≥ 1% asbestos content
2. Good (G); Damaged (D) <10% distributed or 25% localized; Significant Damage (SD) >10% distributed or 25% localized

The ACM was found to be in good condition and no immediate abatement action is necessary. However, if these materials are disturbed during the renovation, the material must be removed prior to the renovation activity. All removal must be completed by a certified asbestos abatement contractor under controlled conditions in accordance with EPA and HDOH regulations. Work should also be monitored by an independent industrial hygiene professional.

The materials containing asbestos must be identified to the Contractor’s employees. If these materials are disturbed during the renovation activities, the Contractor’s employees disturbing the material must have received training under OSHA 29 CFR 1926.1101 *Asbestos*.

4.2 LEAD IN PAINT

The listed paints were identified as containing lead.

LBP[1] (Y/N)	PWL[2] (Y/N)	Color	Component	Homogeneous Area	Condition[3]
Y	-	Brown	Metal door frame	3rd floor (rooms 324 & 328)	Fair
Y	-	Beige	Metal door frame	3rd floor (room 324)	Intact
Y	-	Beige	Plaster wall	3rd floor hallway	Fair
Y	-	Brown	Concrete covebase	3rd floor hallway	Intact
Y	-	White	Concrete covebase	3rd floor (room 328)	Intact
Y	-	White	Metal door frame	3rd floor (room 328)	Intact
Y	-	Off-white	Metal floor	Exterior, fire escape 3	Fair
Y	-	Off-white	Metal ladder	Exterior, fire escape 3	Fair
Y	-	Off-white	Metal railing	Exterior, fire escape 3	Intact
Y	-	Off-white	Metal stairs	Exterior, fire escape 3	Fair
Y	-	Off-white	Wood door frame	Exterior, fire escape 3, 1st floor door	Fair
N	Y	Beige	Metal door	3rd floor (rooms 324 & 328)	Fair
N	Y	Beige	Plaster wall	3rd floor hallway	Intact
N	Y	White	Plaster wall	3rd floor (room 328)	Intact
N	Y	White	Metal door	3rd floor (room 328)	Intact
N	Y	Off-white	Concrete wall	Exterior	Intact
N	Y	Beige	Metal railing	Exterior, fire escape 1 & 2	Fair
N	Y	Beige	Metal stairs	Exterior, fire escape 1 & 2	Poor
N	Y	Beige	Metal I-beam	Exterior, fire escape 1 & 2	Fair
N	Y	Beige	Concrete wall	Exterior	Intact

1. LBP – ≥1.0 mg/cm^2
2. PWL – >0.0 but <1.0 mg/cm^2
3. Intact - Entire surface is intact; Fair - ≤10 ft^2; Poor - >10 ft^2

Prior to the disturbance of any lead-based paints, the LBP should be removed at the point of disturbance prior to any renovation or demolition activities. All removal must be completed by a certified lead abatement contractor under controlled conditions in accordance with EPA and HDOH regulations. Work should also be monitored by an independent industrial hygiene professional. If any untested paints are disturbed, they should be assumed to contain lead.

Prior to the disturbance of any paints with lead, the Contractor's employees disturbing the painted material must be informed that it contains lead and must have received training under OSHA 29 CFR 1926.55 *Gases, Vapors, Fumes, Dusts and Mists* and 29 CFR 1926.62 *Lead*. If any untested paints are disturbed, they should be assumed to contain lead.

5 LIMITATIONS

The information set forth is based solely on the agreed upon scope of services, on personal observation, laboratory data, and information provided by INK Arch, LLC.

Although this inspection provides information on the relative presence or absence of asbestos-containing materials and lead in paint, it should not be construed as a final statement that all hazardous materials have been identified.

Given the often obscure and elusive nature of hazardous materials, it is never possible to absolutely dismiss the possibility of additional hazardous materials. EnviroQuest, Inc. expressly disclaims any and all liability, representations, expressed or implied, contained in, or for omission from this report, or any other written or oral communication which might be interpreted as establishing the total extent of all liability present at the subject property.

Our services have been performed with usual thoroughness and competence of the consulting profession, in accordance with the standard of professional services at this time. No other warranty or representation, either expressed or implied is included or intended.

Any question regarding our work and this report, the presentation of the information, and the interpretation of the data are welcome and should be referred to the undersigned. EQI greatly appreciates this opportunity to assist you with your industrial hygiene needs. We look forward to working with you again in the future.

TABLE 1: ASBESTOS SAMPLE SUMMARY
LEAHI HOSPITAL, ATHERTON BLDG

Homogenous Material	% Asbestos[1]	ACM (Y/N)	Sampling Location	Sample ID	Friable (Y/N)	Condition[2]	Photo No.
Brown painted cementitious covebase	ND	N	3rd floor, door 324	304105-01A	N	G	1
	ND		3rd floor, door 324	304105-01B			
	ND		3rd floor, door 328	304105-01C			
Beige painted leveling compound over plaster	ND	N	3rd floor, wall, room 324	304105-02A	N	G	2
	ND			304105-02B			
	ND			304105-02C			
Beige painted gypsum board with joint compound	ND	N	3rd floor, wall, door 324	304105-03A	N	G	8
	ND			304105-03B			
	ND			304105-03C			
Beige painted white caulking	ND	N	3rd floor, entry door, room 324	304105-04A	N	G	4
	ND		3rd floor, entry door, room 324	304105-04B			
	ND		3rd floor, entry door, room 328	304105-04C			
12"x12" beige vinyl tile with adhesive over green vinyl tile with black adhesive over concrete	2% C (black mastic)	Y	3rd floor, floor, door 324	304105-05A	N	G	5
	<1% C (black mastic/floor tile)		3rd floor, floor, door 324	304105-05B			
	<1% C (black mastic/floor tile)		3rd floor, floor, door 328	304105-05C			
Black vinyl covebase with beige adhesive	ND	N	3rd floor, room 328	304105-06A	N	G	6
	ND			304105-06B			
	ND			304105-06C			
Off-white painted textured concrete coating	ND	N	Exterior, wall	304105-07A	N	G	7
	ND			304105-07B			
	ND			304105-07C			

1. *ND=None Detected; NA=Not Analyzed; C=Chrysotile; A=Amosite; Cr=Crocidolite; An=Anthophyllite; T=Tremolite; Ac=Actinolite*
2. *Good (G); Damaged (D) <10% distributed or 25% localized; Significant Damage (SD), >10% distributed or 25% localized*

TABLE 2: XRF LEAD SAMPLE SUMMARY
LEAHI HOSPITAL, ATHERTON BLDG

XRF #	LBP[1] (Y/N)	PWL[2] (Y/N)	XRF Reading (mg/cm^2)	Building Component	Substrate	Room Equivalent	Color	Condition[3,4]	Photo No.
1-3	Calibration Verification								
4	N	Y	0.5	Door	Metal	3rd floor hallway	Beige	Fair	8
5	Y	-	8.0	Door frame	Metal	3rd floor hallway	Brown	Fair	8
6	Y	-	14.5	Door frame	Metal	3rd floor, room 324	Beige	Intact	2
7	N	Y	0.2	Wall	Plaster	3rd floor, room 324	Beige	Intact	2
8	Y	-	1.1	Wall	Plaster	3rd floor hallway	Beige	Fair	3
9	Y	-	1.3	Covebase	Concrete	3rd floor hallway	Brown	Intact	1
10	Y	-	2.0	Covebase	Concrete	3rd floor, room 328	White	Intact	9
11	N	Y	0.6	Wall	Plaster	3rd floor, room 328	White	Intact	9
12	N	N	0.0	Wall	Drywall	3rd floor, room 328	White	Intact	10
13	Y	-	5.8	Door frame	Metal	3rd floor, room 328	White	Intact	11
14	N	Y	0.5	Door	Metal	3rd floor, room 328	White	Intact	11
15	N	Y	0.2	Wall	Concrete	Exterior	Off-white	Intact	7
16	Y	-	1.1	Floor	Metal	Exterior, fire escape 3	Off-white	Fair	12
17	Y	-	1.2	Railing	Metal	Exterior, fire escape 3	Off-white	Fair	13
18	Y	-	2.7	Ladder	Metal	Exterior, fire escape 3	Off-white	Intact	14
19	Y	-	1.2	Stairs	Metal	Exterior, fire escape 3	Off-white	Fair	15
20	N	Y	0.3	Railing	Metal	Exterior, fire escape 2	Beige	Fair	16
21	N	Y	0.1	Stairs	Metal	Exteiror, fire escape 2	Beige	Poor	17
22	N	Y	0.2	I-Beam	Metal	Exterior, fire escape 2	Beige	Fair	18
23	N	Y	0.6	Wall	Concrete	Exterior, fire escape 1	Beige	Intact	19
24	N	N	0.0	Door	Wood	Exterior, fire escape 3, 1st floor	Off-white	Fair	20
25	Y	-	2.6	Door frame	Wood	Exterior, fire escape 3, 1st floor	Off-white	Fair	20
26-28	Calibration Verification								

1. LBP – ≥1.0 mg/cm^2
2. PWL – >0.0 but <1.0 mg/cm^2
3. Exterior: Intact – Entire surface is intact; Fair – ≤ 10ft^2; Poor – >10 ft^2
4. Interior: Intact – Entire surface is intact; Fair – ≤ 2ft^2 or ≤ 10%; Poor – >2 ft^2 or >10%

TABLE 3: LEAD PAINT SAMPLE SUMMARY
LEAHI HOSPITAL, ATHERTON BLDG

Paint Color	LBP[1] (Y/N)	PWL[2] (Y/N)	Paint Description/Location	XRF #	Sample ID	Results (% weight)	Condition[3,4]	Photo No.
White	N	N	Drywall wall / 3rd floor, room 328	12	304105-01P	<0.004	Intact	10
Off-white	N	N	Wood door / Exterior, fire escape 3, 1st floor	24	304105-02P	<0.004	Fair	20

1. *LBP = >0.5% lead by weight*
2. *PWL = >laboratory detection limit but <0.5% lead by weight*
3. *Exterior: Intact – Entire surface is intact; Fair – ≤ 10ft²; Poor – >10 ft²*
4. *Interior: Intact – Entire surface is intact; Fair – ≤ 2ft² or ≤ 10%; Poor – >2 ft² or >10*

EnviroQuest

APPENDIX A

REFERENCE PHOTOGRAPHS

REFERENCE PHOTOGRAPHS

EnviroQuest

Leahi Hospital, Atherton Building.

3rd floor.

Room/Door 324.

3rd floor.

Room/Door 328.

REFERENCE PHOTOGRAPHS

EnviroQuest

Photo 1: 3rd floor.

Non-asbestos containing brown painted cementitious covebase.

Lead-based brown paint on concrete covebase.

Photo 2: 3rd floor, Room 328.

Non-asbestos containing beige painted leveling compound over plaster.

Beige paint with lead on plaster wall.

Lead-based beige paint on metal door frame.

Photo 3: 3rd floor.

Lead-based beige paint on plaster wall.

Photo 4: 3rd floor, Room 324.

Non-asbestos containing beige painted white door caulking.

Photo 5: 3rd floor.

Asbestos-containing 12”x12” beige vinyl tile with adhesive over green 9”x9” tile with black adhesive over non-asbestos containing concrete.

Photo 6: 3rd floor, Room 328.

Non-asbestos containing black vinyl covebase with beige adhesive.

Photo 7: Exterior.

Non-asbestos containing off-white painted textured concrete coating.

Off-white paint with lead on concrete wall.

Photo 8: 3rd floor.

Non-asbestos containing beige painted gypsum board with joint compound.

Beige paint with lead on metal door.

Lead-based brown paint on metal door frame.

Photo 9: 3rd floor, Room 328.

Lead-based white paint on concrete covebase.

White paint with lead on plaster wall.

Photo 10: 3rd floor, Room 328.

Non-lead based white paint on drywall wall.

Photo 11: 3rd floor.

Lead-based white paint on metal door frame.

White paint with lead on metal door.

Photo 12: Exterior, Fire Escape 3.

Lead-based off-white paint on metal floor.

Photo 13: Exterior, Fire Escape 3.

Lead-based off-white paint on metal railing.

Photo 14: Exterior, Fire Escape 3.

Lead-based off-white paint on metal ladder.

Photo 15: Exterior, Fire Escape 3.

Lead-based off-white paint on metal stairs.

Photo 16: Exterior, Fire Escape 2.

Beige paint with lead on metal railing.

Photo 17: Exterior, Fire Escape 2.

Beige paint with lead on metal stairs.

Photo 18: Exterior, Fire Escape 2.

Beige paint with lead on metal I-beams.

Photo 19: Exterior, Fire Escape 1.

Beige paint with lead on concrete wall.

Photo 20: Exterior, Fire Escape 3, 1st floor.

Non-lead based off-white paint on wood door.

Lead-based off-white paint on wood door frame.

EnviroQuest

APPENDIX B

LABORATORY ANALYTICAL REPORTS

Hawaii Analytical Laboratory
ANALYTICAL REPORT

Tuesday, September 16, 2025

EnviroQuest, Inc.
98-029 Hekaha Street, Suite 21
Aiea HI 96701

Phone Number: (808)486-5881
Facsimile: (808) 486-5889
Email: eqi@enviroquestinc.com

Lab Job No: 202508128
Date Submitted: 9/11/2025
Your Project: 304105, Leahi Hospital Atherton Fire Escape, 9/10/25

Bulk Asbestos Determination

Lab Sple No.	Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v	Matrix	Date Analyzed
202560020	**304105-01A**		NONE DETECTED		None detected		Calcite + aggregate + other	9/15/2025
Layer	Red concrete							
Comments								
202560020	**304105-01A**		NONE DETECTED		None detected		Paint + calcite	9/15/2025
Layer	White skim coat / brown paint							
Comments								
202560021	**304105-01B**		NONE DETECTED		None detected		Calcite + aggregate + other	9/15/2025
Layer	Red concrete							
Comments								
202560021	**304105-01B**		NONE DETECTED		None detected		Paint + calcite	9/15/2025
Layer	White skim coat / brown paint							
Comments								
202560022	**304105-01C**		NONE DETECTED		None detected		Calcite + aggregate + other	9/15/2025
Layer	Gray concrete							
Comments								
202560022	**304105-01C**		NONE DETECTED		None detected		Paint + calcite	9/15/2025
Layer	White skim coat / white paint							
Comments								

Hawaii Analytical Laboratory is a NIST NVLAP accredited laboratory (NVLAP Lab Code 200655-0) and is accredited in accordance with the recognized ISO/ IEC 17025:2017. Controlled doc.: Asbestos Report, rev. 5 - 20241127

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Bulk Asbestos Determination

Lab Sple No.	Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v	Matrix	Date Analyzed
202560023	**304105-02A**		NONE DETECTED		None detected		Gypsum + aggregate + other	9/15/2025
Layer	Beige plaster							
Comments								
202560023	**304105-02A**		NONE DETECTED		None detected		Gypsum	9/15/2025
Layer	White leveling compound / beige paint							
Comments								
202560024	**304105-02B**		NONE DETECTED		None detected		Gypsum + aggregate + other	9/15/2025
Layer	Beige plaster							
Comments								
202560024	**304105-02B**		NONE DETECTED		None detected		Gypsum	9/15/2025
Layer	White leveling compound / beige paint							
Comments								
202560025	**304105-02C**		NONE DETECTED		None detected		Gypsum + aggregate + other	9/15/2025
Layer	Beige plaster							
Comments								
202560025	**304105-02C**		NONE DETECTED		None detected		Gypsum	9/15/2025
Layer	White leveling compound / beige paint							
Comments								
202560026	**304105-03A**		NONE DETECTED		Cellulose (undulose) + fibrous glass (amorphous)	**20**	Gypsum + paint	9/15/2025
Layer	White drywall / white paint							
Comments								

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Bulk Asbestos Determination

Lab Sple No.	Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v	Matrix	Date Analyzed
202560026	**304105-03A**		NONE DETECTED		None detected		Calcite	9/15/2025
Layer	White joint compound							
Comments								
202560027	**304105-03B**		NONE DETECTED		Cellulose (undulose) + fibrous glass (amorphous)	**20**	Gypsum + paint	9/15/2025
Layer	White drywall / beige paint							
Comments								
202560027	**304105-03B**		NONE DETECTED		None detected		Calcite + paint	9/15/2025
Layer	White joint compound / white paint							
Comments								
202560028	**304105-03C**		NONE DETECTED		Cellulose (undulose) + fibrous glass (amorphous)	**20**	Gypsum + paint	9/15/2025
Layer	White drywall / beige paint							
Comments								
202560028	**304105-03C**		NONE DETECTED		None detected		Calcite + paint	9/15/2025
Layer	White joint compound / white paint							
Comments								
202560029	**304105-04A**		NONE DETECTED		None detected		Gypsum	9/15/2025
Layer	White glazing like material / beige paint							
Comments								
202560030	**304105-04B**		NONE DETECTED		None detected		Calcite + aggregate + other	9/15/2025
Layer	White grout like material / beige paint							
Comments								
202560031	**304105-04C**		NONE DETECTED		None detected		Calcite + other + paint	9/15/2025
Layer	White caulk / beige paint							
Comments								

Hawaii Analytical Laboratory is a NIST NVLAP accredited laboratory (NVLAP Lab Code 200655-0) and is accredited in accordance with the recognized ISO/ IEC 17025:2017. Controlled doc.: Asbestos Report, rev. 5 - 20241127

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Bulk Asbestos Determination

Lab Sple No.	Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v	Matrix	Date Analyzed
202560032	**304105-05A**	**Yes**	Chrysotile	**< 1**	None detected		Calcite + vinyl + other	9/15/2025
Layer	Beige vinyl floor tile (1)							
Comments								
202560032	**304105-05A**	**Yes**	Chrysotile	**2**	None detected		Calcite + other	9/15/2025
Layer	Black mastic (2)							
Comments								
202560032	**304105-05A**		NONE DETECTED		None detected		Calcite + aggregate + other	9/15/2025
Layer	Gray concrete							
Comments								
202560032	**304105-05A**	**Yes**	Chrysotile	**< 1**	None detected		Calcite + vinyl + other	9/15/2025
Layer	Green vinyl floor tile (2)							
Comments								
202560032	**304105-05A**		NONE DETECTED		None detected		Binder + other	9/15/2025
Layer	Tan/clear mastic (1)							
Comments								
202560033	**304105-05B**	**Yes**	Chrysotile	**< 1**	None detected		Calcite + vinyl + other	9/15/2025
Layer	Beige vinyl floor tile (1)							
Comments								
202560033	**304105-05B**	**Yes**	Chrysotile	**< 1**	None detected		Calcite + other	9/15/2025
Layer	Black mastic (2)							
Comments								
202560033	**304105-05B**		NONE DETECTED		None detected		Calcite + aggregate + other	9/15/2025
Layer	Gray concrete							
Comments								
202560033	**304105-05B**	**Yes**	Chrysotile	**< 1**	None detected		Calcite + vinyl + other	9/15/2025
Layer	Green vinyl floor tile (2)							
Comments								

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Bulk Asbestos Determination

Lab Sple No.	Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v	Matrix	Date Analyzed
202560033	**304105-05B**		NONE DETECTED		None detected		Binder + other	9/15/2025
Layer	Tan/clear mastic (1)							
Comments								
202560034	**304105-05C**	**Yes**	Chrysotile	< **1**	None detected		Calcite + vinyl + other	9/15/2025
Layer	Beige vinyl floor tile (1)							
Comments								
202560034	**304105-05C**	**Yes**	Chrysotile	< **1**	None detected		Calcite + other	9/15/2025
Layer	Black mastic (3)							
Comments								
202560034	**304105-05C**		NONE DETECTED		None detected		Calcite + aggregate + other	9/15/2025
Layer	Gray concrete							
Comments								
202560034	**304105-05C**	**Yes**	Chrysotile	< **1**	None detected		Calcite + vinyl + other	9/15/2025
Layer	Green vinyl floor tile (2)							
Comments								
202560034	**304105-05C**		NONE DETECTED		None detected		Binder + other	9/15/2025
Layer	Tan/clear mastic (1)							
Comments								
202560034	**304105-05C**		NONE DETECTED		None detected		Binder + other	9/15/2025
Layer	Tan/clear mastic (2)							
Comments								
202560035	**304105-06A**		NONE DETECTED		None detected		Calcite + other	9/15/2025
Layer	Black cove base							
Comments								

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Bulk Asbestos Determination

Lab Sple No.	Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v	Matrix	Date Analyzed
202560035	**304105-06A**		NONE DETECTED		Cellulose (undulose)	**50**	Calcite + binder	9/15/2025
Layer	Tan mastic / tan paper							
Comments								
202560035	**304105-06A**		NONE DETECTED		None detected		Calcite + other + paint	9/15/2025
Layer	White caulk / white paint							
Comments								
202560036	**304105-06B**		NONE DETECTED		None detected		Calcite + other	9/15/2025
Layer	Black cove base							
Comments								
202560036	**304105-06B**		NONE DETECTED		Cellulose (undulose)	**50**	Calcite + binder	9/15/2025
Layer	Tan mastic / tan paper							
Comments								
202560036	**304105-06B**		NONE DETECTED		None detected		Calcite + other + paint	9/15/2025
Layer	White caulk / white paint							
Comments								
202560037	**304105-06C**		NONE DETECTED		None detected		Calcite + other	9/15/2025
Layer	Black cove base							
Comments								
202560037	**304105-06C**		NONE DETECTED		Cellulose (undulose)	**50**	Calcite + binder	9/15/2025
Layer	Tan mastic / tan paper							
Comments								
202560037	**304105-06C**		NONE DETECTED		None detected		Calcite + other + paint	9/15/2025
Layer	White caulk / white paint							
Comments								

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Bulk Asbestos Determination

Lab Sple No.	Sample ID / Description	Asbestos Present?	Type	%v/v	Other Fibrous	%v/v	Matrix	Date Analyzed
202560038	**304105-07A**		NONE DETECTED		None detected		Calcite + binder	9/15/2025
Layer	Brown mastic (limited)							
Comments								
202560038	**304105-07A**		NONE DETECTED		None detected		Calcite + aggregate + other + paint	9/15/2025
Layer	Gray concrete / beige paint							
Comments								
202560039	**304105-07B**		NONE DETECTED		None detected		Calcite + aggregate + other + paint	9/15/2025
Layer	Gray concrete / beige paint							
Comments								
202560040	**304105-07C**		NONE DETECTED		None detected		Calcite + aggregate + other + paint	9/15/2025
Layer	Gray concrete / beige paint							
Comments								

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Your Project: 304105, Leahi Hospital Atherton Fire Escape, 9/10/25

General Comments
The bulk sample[s] analysis subject of this analytical report were conducted in general accordance with the procedures outlined in the United States Environmental Protection Agency's "Interim Method for the Determination of Asbestos in Bulk Insulation Samples" (EPA-600/M4-82-020, Dec. 1982) and / or "Method for Determination of Asbestos in bulk Building Materials" (EPA-600/R-93-116, July 1993). The analysis of each bulk sample relates only to the material examined, and may or may not represent the overall composition of its original source. Floor tile and other resinously bound materials, when analyzed by the EPA methods referenced above may yield false negative results because of limitations in separating closely bound fibers and in detecting fibers of small length and diameter. Gravimetric treatment, which HAL does not offer, may also be appropriate for certain NOB (non-friable organically bound) materials. Unless specifically requested by clients, NOB samples can be subcontracted to a NVLAP accredited lab, or else, they will be analyzed by HAL using regular PLM technique. In addition, alternative methods of identification, including Transmission Electron Microscopy (TEM) may or may not be applicable. We utilize calibrated visual area estimation on a routine basis and do not conduct point counting unless specifically requested to do so. Estimated error for the visual determinations presented are 75% relative (<1 to 10%), 65% relative (11 to 19%), 50% relative (20 to 34%); 40% relative (35 to 50%), 35% relative (51 to 60%), and 25% relative (>60% v/v). We will not separate layers which in our opinion are not readily discernable. This report is not to be duplicated except in full without the expressed written permission of Hawaii Analytical Laboratory. This report must not be used by the client to claim product certification, approval or endorsement by NVLAP, NIST or any agency of Federal Government. Unless otherwise indicated, the sample condition at the time of receipt was acceptable.

Results and Symbols Definitions
> This testing result is greater than the numerical value listed.
< This testing result is less than the numerical value listed.
None Detected = asbestos was not observed in the sample. If trace amount of asbestos was detected below our quantifiable limits of 1.0%, <1% (trace) would be indicated and the asbestos type listed. Point counting, where applicable, are recommended to improve accuracy.

Eva Skogsberg
Laboratory Manager

EnviroQuest

202508128

PLM DATA SHEET

PROJECT NAME: LEAHI HOSPITAL ATHERTON FIRE ESCAPE

PAGE: 1 of 3

DATE: 9/10/2025

LOCATION: LEAHI HOSPITAL

PROJECT NO.: 304105

Material Description: Brown painted cementitious covebase — Friable / Non-friable (Non-friable circled)

Sample No.	Location	
304105-01A	3rd floor, wall Door 324	202560020
-01B	3rd floor, wall Door 324	202560021
-01C	3rd floor, wall	202560022

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☒ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☒ Low
Vibration Potential	☐ High	☐ Moderate	☒ Low
Air Erosion	☐ High	☐ Moderate	☒ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☒ Minimal Damage

Material Description: Beige painted leveling compound over plaster — Friable (circled) / Non-friable

Sample No.	Location	
304105-02A	3rd floor, Wall Door 324	202560023
-02B	3rd floor, Wall Door 324	202560024
-02C	3rd floor, Wall	202560025

CONDITION: % Damaged: % Localized: % Distributed: Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☐ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☒ Low
Vibration Potential	☐ High	☐ Moderate	☒ Low
Air Erosion	☐ High	☐ Moderate	☒ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☒ Minimal Damage

Sampled By: Landon Awada DOH Cert No: 5045	Relinquished By/Date/Time: Landon Awada 9/10/25	Relinquished By/Date/Time:
Delivered By:	Received By/Date/Time: Savannah Newman (signature)	Received By/Date/Time: 09-11-25A09:49 RCVD

Samples picked up at EQI office
by Hawaii Analytical Laboratory

TURNAROUND TIME: ☐ < 12 Hours ☐ 24 Hours ☒ 3 Days ☐ 5 Days ☐ ________

Surfacing	<1,000 ft² = 3 Samples	1,000 – 5,000 ft² = 5 Samples	>5,000 ft² = 7 Samples
TSI	Minimum of 3 Samples UNLESS….	<6 In. or ft² = 1 Sample	Minimum of 2 Samples *(Cement/plaster valves, elbows & 'T')*
Misc. Non-Friable	Minimum of 2 Samples (*AHERA*)	Minimum of 3 Samples (*Hawaii*)	
Misc. Friable	Minimum of 2 Samples		

Surfacing	*Sig. Damage = > 10% Dist. or 25% Local*	*Damaged = < 10% Dist. or 25% Local*	*Good = Very Limited Damage*
TSI	*Sig. Damage = >10% Missing Jacket OR >10% Dist. or 25% Local*	*Damaged = < 10% Missing Jacket OR < 10% Dist. or 25% Local*	*Good = Very Limited Damage*
Misc	*Sig. Damage = > 10% Dist. or 25% Local*	*Damaged = < 10% Dist. or 25% Local*	*Good = Very Limited Damage*

EnviroQuest

202508128

PLM DATA SHEET

PROJECT NAME: _____ PAGE: 2 of 3

DATE: _____

Material Description: Beige painted gyp. bd. w/joint compound — Friable / Non-friable

Sample No.	Location	
304105-03A	Door 324 (left)	202560026
-03B	3rd Floor, Wall	202560027
-03C		202560028

CONDITION:	% Damaged:	% Localized:	% Distributed:	Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☒ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☒ Low	
Vibration Potential	☐ High	☐ Moderate	☒ Low	
Air Erosion	☐ High	☐ Moderate	☒ Low	
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☒ Minimal Damage	

Material Description: Beige painted white caulking — Friable / Non-friable

Sample No.	Location	
304105-04A	Door 324	202560029
-04B	3rd Floor, door Door 324	202560030
-04C	Door 328	202560031

CONDITION:	% Damaged:	% Localized:	% Distributed:	Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☒ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☒ Low	
Vibration Potential	☐ High	☐ Moderate	☒ Low	
Air Erosion	☐ High	☐ Moderate	☒ Low	
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☒ Minimal Damage	

Material Description: 12"x12" beige vinyl tile w/adhesive over green 9"x1" tile w/ black adhesive over concrete — Friable / Non-friable

Sample No.	Location	
304105-05A	Door 324	202560032
-05B	3rd Floor, floor Door 324	202560033
-05C	Door 328	202560034

CONDITION:	% Damaged:	% Localized:	% Distributed:	Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☒ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☒ Moderate	☐ Low	
Vibration Potential	☐ High	☐ Moderate	☒ Low	
Air Erosion	☐ High	☐ Moderate	☒ Low	
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☒ Minimal Damage	

Samples picked up at EQI office
by Hawaii Analytical Laboratory

1001 BISHOP STREET, SUITE 21 AIEA, HAWAII 96701 PHONE: (808) 486-5881
6-15-17 KAMITSURUMA, MINAMI-KU, SAGAMIHARA-SHI, KANAGAWA-KEN 252-0302 PHONE: (042) 851-5675

EnviroQuest

202508128

PLM DATA SHEET

PROJECT NAME: ______

PAGE: 3 of 3

DATE: ______

Material Description: Black vinyl covebase w/ beige adhesive — Friable / Non-friable

Sample No.	Location	
304105-06A	3rd floor, Rm 328	202560035
-06B		202560036
-06C		202560037

CONDITION: % Damaged: — % Localized: — % Distributed: — Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☒ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☒ Low
Vibration Potential	☐ High	☐ Moderate	☒ Low
Air Erosion	☐ High	☐ Moderate	☒ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☒ Minimal Damage

Material Description: off-white painted textured concrete coating — Friable / (Non-friable circled)

Sample No.	Location	
304105-07A	Ext. Wall	202560038
-07B		202560039
-07C		202560040

CONDITION: % Damaged: — % Localized: — % Distributed: — Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☒ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☒ Low
Vibration Potential	☐ High	☐ Moderate	☒ Low
Air Erosion	☐ High	☐ Moderate	☒ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☒ Minimal Damage

Material Description: — Friable / Non-friable

Sample No.	Location

CONDITION: % Damaged: — % Localized: — % Distributed: — Total Material Quantity:

Surfacing Material		TSI		Misc.	
☐ Sig. Damage	% Crumbling -	☐ Sig. Damage	% Gouge/Punct -	☐ Sig. Damage	% Crumbling -
☐ Damaged	% Delaminating -	☐ Damaged	% Crushed -	☐ Damaged	% Delaminating -
☐ Good Cond.	% H_2O/Gouges -	☐ Good Cond.	% H_2O Stains -	☐ Good Cond.	% H_2O/Gouges-

Contact Potential	☐ High	☐ Moderate	☐ Low
Vibration Potential	☐ High	☐ Moderate	☐ Low
Air Erosion	☐ High	☐ Moderate	☐ Low
OVERALL POTENTIAL RATING	☐ Significant Damage	☐ Damage	☐ Minimal Damage

Samples picked up at EQI office
by Hawaii Analytical Laboratory

98-029 HEKAHA STREET, SUITE 21 AIEA, HAWAII 96701 PHONE: (808) 486-5881
6-15-17 KAMITSURUMA, MINAMI-KU, SAGAMIHARA-SHI, KANAGAWA-KEN 252-0302 PHONE: (042) 851-5675

Hawaii Analytical Laboratory
ANALYTICAL REPORT

Tuesday, September 16, 2025

EnviroQuest, Inc.
98-029 Hekaha Street, Suite 21
Aiea HI 96701

Phone Number: (808)486-5881
Email: eqi@enviroquestinc.com

Lab Job No: 202508130
Total Analyzed: 2
Date Collected: 9/10/2025
Date Submitted: 9/11/2025
Project Name: 304105, Leahi Hospital Atherton Fire Escape

Total Lead (paint chips)

NIOSH Method: 7082m LEAD by FAAS

Lab Sple No.	Sample ID / Description	Results	Units	Date Analyzed
202560043	**304105-01P**	< 0.004	wt %	9/11/2025
202560044	**304105-02P**	< 0.004	wt %	9/11/2025

All Quality Control data are acceptable unless otherwise noted.

EnviroQuest, Inc.
98-029 Hekaha Street, Suite 21
Aiea HI 96701

Phone Number: (808)486-5881
Email: eqi@enviroquestinc.com

Lab Job No: 202508130
Total Analyzed: 2
Date Collected: 9/10/2025
Date Submitted: 9/11/2025
Project Name: 304105, Leahi Hospital Atherton Fire Escape

General Comments
The sample[s] analysis subject of this analytical report were conducted in general accordance with the procedures associated with the "analytical method" referenced above. The analysis of sample relates only to the sample analyzed, and may or may not be representative of the original source of the material submitted for our analysis. All analysts participate in interlaboratory quality control testing to continuously document profiency. This report is not to be duplicated except in full without the expressed written permission of Hawaii Analytical Laboratory. This report should not be construed as an endorsement for a product or a service by the AIHA LAP, LLC or any affiliated organizations. Sample and associated sampling / collection data (e.g. air volume or surface area) is reported as provided by client. TWA values have been calculated based on information supplied by the client that the laboratory has not independently verified. Results have not been corrected for blank determinations unless noted in remarks. Unless otherwise indicated the sample condition at the time of receipt was acceptable. Measurement of uncertainty for lead in paint, dust, airborne particulates, and soil taken from and around buildings and related structures is available upon request. MRL for lead air is 5ug; MRL for lead wipe is 5ug; MRL for lead paint or soil is 40 mg/kg for a 0.25g

Results and Symbols Definitions
> This testing result is greater than the numerical value listed.
< This testing result is less than the numerical value listed.
# = Analytical methods marked with an "#" are not within our AIHA LAP, LLC Scope of Accreditation.
MRL = Method Reporting Limit

Eva Skogsberg
Laboratory Manager

EnviroQuest

202508130

Pb SAMPLE FORM

PROJECT NAME: LEAHI HOSPITAL ATHERTON FIRE ESCAPE

PAGE: 1 of 1

DATE: 9/10/2025

LOCATION: LEAHI HOSPITAL

PROJECT NO.: 304105

TURNAROUND TIME		MEDIA		COMMENTS
☐ <12 HRS ☐ 24 HRS	☒ 3 DAYS ☐ OTHER	☒ BULK ☐ SOIL	☐ WIPE ☐ OTHER	

SAMPLE NO	INT	EXT	FLR	ROOM	COMPONENT	SUBSTRATE	COLOR	CONDITION
304105-01P	X		3	328	wall	Drywall	White	G
								202560043
304105-02P		X	1		Door	Wood	Off-White	D
								202560044

SAMPLED BY	RELINQUISHED BY	DATE & TIME	RECEIVED BY	DATE & TIME
Landon Anada	Landon Anada	9/10/25	Savannah Newman Savannah Newman	09-11-25A09:53 RCVD

SUBSTRATE: B = BRICK; C = CONCRETE; D = DRYWALL; M = METAL; P = PLASTER; W = WOOD
CONDITION: INTACT; PEELING, CHIPPING, CHALKING, FLAKING, OR DETERIORATED PAINT

Samples picked up at EQI office
by Hawaii Analytical Laboratory

98-620 HEKAKA STREET, SUITE 21 AIEA, HAWAII 96701 PHONE: (808) 486-5881
6-15-17 KAMITSURUMA, MINAMI-KU, SAGAMIHARA-SHI, KANAGAWA-KEN 252-0302 PHONE: (042) 851-5675

EnviroQuest

APPENDIX C

XRF SUMMARY SHEET

Leahi Hospital Atherton Fire Escape

EnviroQuest Inc.
98-029 Hekaha Street, Suite 21
Aiea, Hawaii 96701

INSPECTION SITE:	Leahi Hospital
INSPECTION DATE:	9/10/2025 - 9/10/2025
REPORT NUMBER:	304105
INSTRUMENT TYPE:	Viken Detection Pb200i XRF Lead Paint Analyzer 3602
ACTION LEVEL:	1.0 (mg/cm^2)
STATEMENT:	XRF Testing

Leahi Hospital Atherton Fire Escape

Inspection Date:	9/10/2025 - 9/10/2025	Inspection Site:	Leahi Hospital
Action Level:	1.0 (mg/cm²)		
Report Number:	304105		
Total Readings:	28		
Unit Started:	09/10/2025 16:48:29		
Unit Ended:	09/10/2025 19:01:32		

Read #	Result	RTA Present	Lead (mg/cm²)	Mode
1	Negative	Off	0.0 mg/cm²	Action Level (1.0)
2	Positive	Off	1.2 mg/cm²	Action Level (1.0)
3	Negative	Off	0.9 mg/cm²	Action Level (1.0)
4	Negative	Off	0.5 mg/cm²	Action Level (1.0)
5	Positive	Off	8.0 mg/cm²	Action Level (1.0)
6	Positive	Off	14.5 mg/cm²	Action Level (1.0)
7	Negative	Off	0.2 mg/cm²	Action Level (1.0)
8	Positive	Off	1.1 mg/cm²	Action Level (1.0)
9	Positive	Off	1.3 mg/cm²	Action Level (1.0)
10	Positive	Off	2.0 mg/cm²	Action Level (1.0)
11	Negative	Off	0.6 mg/cm²	Action Level (1.0)
12	Negative	Off	0.0 mg/cm²	Action Level (1.0)
13	Positive	Off	5.8 mg/cm²	Action Level (1.0)
14	Negative	Off	0.5 mg/cm²	Action Level (1.0)
15	Negative	Off	0.2 mg/cm²	Action Level (1.0)
16	Positive	Off	1.1 mg/cm²	Action Level (1.0)
17	Positive	Off	1.2 mg/cm²	Action Level (1.0)
18	Positive	Off	2.7 mg/cm²	Action Level (1.0)

Leahi Hospital Atherton Fire Escape

Inspection Date:	9/10/2025 - 9/10/2025	Inspection Site:	Leahi Hospital
Action Level:	1.0 (mg/cm²)		
Report Number:	304105		
Total Readings:	28		
Unit Started:	09/10/2025 16:48:29		
Unit Ended:	09/10/2025 19:01:32		

Read #	Result	RTA Present	Lead (mg/cm²)	Mode
19	Positive	Off	1.2 mg/cm²	Action Level (1.0)
20	Negative	Off	0.3 mg/cm²	Action Level (1.0)
21	Negative	Off	0.1 mg/cm²	Action Level (1.0)
22	Negative	Off	0.2 mg/cm²	Action Level (1.0)
23	Negative	Off	0.6 mg/cm²	Action Level (1.0)
24	Negative	Off	0.0 mg/cm²	Action Level (1.0)
25	Positive	Off	2.6 mg/cm²	Action Level (1.0)
26	Negative	Off	0.0 mg/cm²	Action Level (1.0)
27	Positive	Off	1.1 mg/cm²	Action Level (1.0)
28	Negative	Off	0.9 mg/cm²	Action Level (1.0)

------ END OF READINGS ------

DIVISION 2 - SITE CONSTRUCTION

SECTION 02070 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.01 SUMMARY

A. Extent of selective demolition work is indicated on drawings. Selective demolition work includes, but is not limited to, removal and subsequent disposal of all materials indicated or required to be removed.

B. All materials resulting from demolition work, except as indicated or specified otherwise, shall become the property of the Contractor at the time of demolition and shall be removed from the limits of the HHSC's property and disposed of at an approved facility in accordance with City and County, State, and Federal regulations. Remove rubbish and debris from the job site daily, unless otherwise directed by the Consultant.

C. It shall be the responsibility of the Contractor to examine the project site and determine the existing conditions.

D. Execute all work in an orderly and careful manner with due consideration for all items of work to remain.

E. Obvious conditions which exist at the site shall be accepted as part of the work, even though they may not be clearly indicated on the Drawings and/or described herein, or may vary therefrom.

F. All debris of any kind accumulated from the work of this Section shall be disposed off the site in a State Department of Health (DOH) approved waste, recycle, or asbestos-containing material landfill as applicable.

G. Burning of any debris on-site will not be permitted.

H. Permits, Notice, Etc.:

1. The Contractor shall procure and pay for all necessary permits, certificates, or approvals that may be required in connection with this work.

2. The Contractor shall serve proper notice and consult with the Consultant regarding any temporary barricades and disconnections of electrical or other utility lines in the area which may interfere with the removal work, and all such lines where necessary shall be properly disconnected or relocated before commencing with the work.

1.02 SUBMITTALS

A. Submit in accordance with SECTION 01300 - Submittals.

B. Schedule: Submit 2 copies of schedule indicating proposed methods and sequence of operations for selective demolition work to the Consultant for review prior to commencement of work.

C. Landfill Disposal or Recycling Site: Submit the name of the approved DOH and Federal disposal facility to be used for this project.

D. Landfill Disposal or Recycling Manifests: Submit certified landfill disposal or recycling manifests documenting proper transit and disposal of demolition materials. Receipt of certified manifests shall be a requirement prior to progress payment for disposal or recycling. Submit manifests with the Contractor Daily Progress Report.

1.03 JOB CONDITIONS

A. Condition of Structure: The HHSC assumes no responsibility for actual condition of items or portions of structure to be demolished.

B. Conditions existing at time of commencement of contract will be maintained by the HHSC insofar as practicable.

C. Do not interfere with use of adjacent occupied spaces or buildings. Maintain free and safe passage to and from occupied spaces or other occupied buildings.

D. Partial Demolition and Removal: Items indicated to be removed but of salvageable value to Contractor, may be removed as work progresses. Transport salvaged items from site as they are removed. Storage or sale of removed items on site will not be permitted.

E. Protections: Provide temporary barricades and other forms of protection as required to protect the general public and staff from injury due to selective demolition work.

1. Provide interior and exterior shoring, bracing, or support to prevent movement, settlement, or collapse of structure or elements to be demolished, and adjacent facilities or work to remain.

2. Protect from damage existing finish work that is to remain in place and becomes exposed during demolition operations.

3. Life safety procedures and provisions shall be in conformance with all applicable Federal, State, and City and County regulations, including HIOSH.

4. Provide accessibility around temporary structures conforming to Americans with Disabilities Act Accessibility Guidelines (ADAAG) Section 201.3 and Section 206.1.

5. Remove protections, obstructions, and barricades at completion of work.

6. Where barriers are erected or placed to facilitate the work, barriers shall not affect or impact the facility's fire exiting route or alarm systems.

F. Damages: Promptly repair damages caused to adjacent facilities by demolition work at no cost to the HHSC.

G. Traffic: Conduct selective demolition operations and debris removal in a manner to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities. Do not close, block or otherwise obstruct streets, walks or other occupied or used facilities without written permission from the Consultant. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations, as directed by the Consultant.

H. Dust Control:

1. Keep dust within acceptable levels at all times, including non-working hours, weekends, and holidays, in conformance with State Department of Health, Title 11, Administrative Rues, Chapter 60.1 - Air Pollution Control, latest edition.

2. Only wet grinding or cutting of concrete will be allowed on exterior surfaces.

3. Mechanical dry sweeping not permitted. Vacuuming, wet mopping, approved limited dry hand, wet or damp sweeping is acceptable.

4. During loading operations, water down debris and waste materials to allay dust.

5. The method of dust control and all costs incurred thereof shall be the responsibility of the Contractor.

6. Enclosed chutes shall be used for removing debris from above the ground floor level.

I. Noise Control:

1. Noise shall be kept within acceptable levels at all times in conformance with State Department of Health, Title 11, Administrative Rules, Chapter 46 - Community Noise Control,

latest edition. The Contractor shall obtain and pay for community noise permit from the State Department of Health when the construction equipment or other devices emit noise at level exceeding the allowable limits.

2. All internal combustion engine powered equipment shall have mufflers to minimize noise and shall be properly maintained to reduce noise to acceptable levels.

3. Starting up of on-site vehicular equipment meeting allowable noise limits shall not be done prior to 6:45 AM without prior acceptance of the Consultant. Equipment exceeding allowable noise limits shall not be started prior to 7:00 AM.

J. Fire Safety: Fire safety during demolition shall comply with NFPA 241, "Standard for Safeguarding Construction, Alteration, and Demolition Operations", and 2012 NFPA 1, "Fire Code", as amended.

K. Demolition Work: Conform to State of Hawaii, Occupational Safety and Health Standards; Subtitle 8, Division of Occupational Safety and Health; Part 3, Construction Standards; Chapter 131.1, Demolition.

L. Other Controls:

1. Wherever trucks and/or vehicles leave the site and enter surrounding paved streets, the Contractor shall prevent any material from being spilled onto the pavement. Waste water shall not be discharged into existing streams, waterways, or drainage systems such as gutter and catch basins unless treated to comply with Department of Health pollution regulations.

2. Trucks hauling materials shall be covered as required by PUC regulation. Trucks hauling fine materials shall be covered.

PART 2 - PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

3.01 INSPECTION

A. Prior to commencement of selective demolition work, inspect areas in which work will be performed. Inventory existing conditions of structure surfaces, equipment or surrounding properties which could be misconstrued as damage resulting from selective demolition work; photograph, video or otherwise document and file with the Consultant prior to starting work.

3.02 BARRICADES AND ENCLOSURES

A. Erect temporary barricades as required to prevent people from entering into project area to extent accepted by the Consultant. The extent of barricade may be adjusted as necessary with acceptance of the Consultant. This work shall be accomplished at no extra cost to the HHSC.

B. When necessary, the Contractor shall provide, erect, and maintain lights, barriers, etc., as required by traffic and safety regulations with special attention to protection of life.

3.03 SELECTIVE DEMOLITION

A. Perform selective demolition work, including all exterior improvements indicated on the drawings, in a systematic manner. Use such methods as required to complete work indicated on drawings in accordance with demolition schedule and governing regulations.

1. Provide services for effective air and water pollution controls as required by local authorities having jurisdiction. All dust shall be suppressed by a fog spray or other approved method.

2. Extent of demolition and removal as shown are minimum requirements. Contractor shall be responsible for the extent of work required to properly accommodate the methods of construction required for the new work. Additional work required to accommodate construction shall be considered incidental to the new work and shall be done at no additional cost to the HHSC.

B. If unanticipated mechanical, electrical or structural elements which conflict with intended function or design are encountered, investigate and measure both nature and extent of the conflict. Submit report to the Consultant in written, accurate detail. Pending receipt of directive from the Consultant rearrange selective demolition schedule as necessary to continue overall job progress without delay.

3.04 DISPOSAL OF DEMOLISHED MATERIALS

A. Remove debris, rubbish, and other materials resulting from demolition operations from building site daily. Transport and legally dispose of materials off site.

1. If hazardous materials are encountered during demolition operations, comply with applicable regulations, laws, and ordinances concerning removal, handling, and protection against exposure or environmental pollution.

2. Burning of removed materials is not permitted on project site.

B. Disposition of Materials: All waste materials shall be disposed of outside the limits of HHSC-controlled land at the Contractor's expense to an approved solid waste or recycle disposal site. The Contractor shall provide to the Consultant certified disposal manifests for all materials disposed of off-site. Comply with Federal, State, and local hauling and disposal regulations. The Contractor is encouraged to recycle materials to maximum extent possible to avoid disposal at a landfill.

3.05 CLEAN-UP AND REPAIR

A. Upon completion of demolition work, remove tools, equipment, and demolished materials from site. Remove protections and leave areas broom clean.

B. Repair demolition performed in excess of that required. Return structures and surfaces to remain to condition existing prior to commencement of selective demolition work. Repair adjacent construction or surfaces soiled or damaged by selective demolition work.

C. Any existing work which is to remain and which is damaged as a result of demolition work shall be restored to its original condition or as otherwise directed by the Consultant at no cost to the HHSC.

D. All existing grass areas disturbed or damaged due to construction or ingress or egress to the site shall be repaired to original conditions. Grass areas shall be recultivated, topsoiled, and then grassed with the same kind and type of material as existing, in a manner accepted by and to the satisfaction of the Consultant.

END OF SECTION

SECTION 05720 - RAILINGS AND GUARDRAILS

PART 1 - GENERAL

1.01 SUMMARY

A. Provide all railings and guardrails and miscellaneous attachments, anchors, and fasteners as indicated on the drawings or as required to conform to current adopted ICC IBC as amended.

1.02 SUBMITTALS

A. Submit in accordance with SECTION 01300 - Submittals.

B. Manufacturer's Data: Submit manufacturer's product data for all manufactured products.

C. Shop Drawings: Submit complete shop drawings of all railing and guardrail work for review and acceptance before fabrication. Detail all members, connections, and anchorage not specifically shown but which are required to complete the work.

D. Safety Data Sheets (SDS) or Material Safety Data Sheets (MSDS): Submit SDS or MSDS for each material as applicable.

1.03 QUALITY ASSURANCE

A. Field Measurements: Take field measurements prior to preparation of shop drawings and fabrication, where possible. Do not delay job progress; allow for trimming and fitting where taking field measurements before fabrication might delay work.

B. Shop Assembly: Preassemble items in shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.

C. Qualifications of Welders: Only welders certified in the arc welding process shall perform work in connection with the work in this Section.

1.04 SYSTEM PERFORMANCE REQUIREMENTS

A. Structural Performance of Railings and Guardrails: Provide railings and guardrails capable of withstanding structural loads required by the current adopted ICC IBC Section 1607.7.1, "Handrails and Guards", as amended, but not less than the following structural loads without exceeding allowable design working stress of materials for railings, guardrails, anchors, and connections based on testing performed in accordance with ASTM E894 and ASTM E935:

1. Top Rail of Guards: Capable of withstanding the following loads applied as indicated:

    a. Concentrated load of 200 pounds per current adopted ICC IBC as amended.

    b. Uniform load of 50 pounds per linear foot per current adopted ICC IBC as amended.

    c. Concentrated and uniform loads above need not be assumed to act concurrently.

2. Infill Area of Guards: Capable of withstanding a horizontal concentrated load of 50 pounds applied to one square foot at any point in system, including panels, intermediate rails, balusters or other elements composing infill area per current adopted ICC IBC as amended. Load above need not be assumed to act concurrently with loads on to rails in determining stress on guard.

3. The structural strength of all metal railings and guardrails and all fasteners and mounting devices shall meet or exceed the accessibility requirements (250 lbf) of Americans with Disabilities Act Accessibility Guidelines (ADAAG) Section 609.8.

B. Thermal Movements: Provide railings and guardrails that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss. Temperature Change (Range) shall be 40 degrees Fahrenheit, ambient; 120 degrees Fahrenheit, material surfaces.

C. Picket Spacing: Conform to current adopted ICC IBC as amended. The rail system shall prohibit the passage of a 4-inch sphere through or around the railing.

1.05 DELIVERY STORAGE AND HANDLING

A. General: Deliver, store, and handle materials in strict conformance of the manufacturer's instructions and recommendations.

B. Protection: The Contractor shall use all means necessary to protect metal railing and guardrail work before, during, and after installation and to protect the installed work and materials of all other trades.

C. Replacement: In the event of damage, the Contractor shall immediately make all repairs and replacements necessary to the satisfaction of the Consultant and at no additional cost to the HHSC.

PART 2 - PRODUCTS

2.01 MATERIALS

A. General: Provide galvanized materials, minimum 3.9 mils thickness Grade 100 except where fabricated units will be hot-dip galvanized as a unit.

B. Structural Steel Shapes, Plates, and Bars: Conforming to ASTM A36/A36M.

C. Steel Tube: ASTM A500/A500M or AST A501/A501M.

D. Anchors and Fasteners: Where exposed shall be of the same material, color, and finish as the metal to which applied.

1. Expansion Shields: Expansion anchors shall be carbon steel threaded studs with integral tapered cone expanders and segmented expansion collars. Provide anchors with electroplated zinc coating, length identification markings, and required nuts and washers. Expansion anchors shall be evaluated in accordance with ACI 355.2/355.2R Category 1 or 2 and shall be tested in accordance with ICC ES AC 193 for all mandatory and optional tests. Provide shields recessed not less than 2-1/2 inches into concrete or masonry, unless as directed by the manufacturer.

2. Lag Screws and Bolts: ANSI/ASM B18.2.1, type and grade best suited for the purpose, hot-dip galvanized, except provide stainless steel for anchorage to concrete and masonry and dissimilar metals.

3. Bolts, Nuts, Studs, and Rivets: ANSI/ASME B18.2.2 and ASTM A307.

4. Powder Driven Fasteners: Follows safety provisions of ASSE/SAFE A10.3.

5. Screws: ANSI/ASME B18.2.1, ANSI/ASME B18.6.2, and ANSI/ASME B18.6.3.

6. Washers: Provide plain washers to conform to ANSI/ASME B18.22.1 . Provide beveled washers for American Standard beams and channels, square or rectangular, tapered in thickness, and smooth. Provide lock washers to conform to ANSI/ASME B18.21.1.

E. Electrodes for Welding: Comply with AWS Code. Use E70XX electrodes unless recommended otherwise for the specified metal.

F. Galvanizing Repair Paint: SSPC-Paint 2

2.02 FABRICATION

A. Metal Railings and Guardrails: Metal railings and guardrails shall be fabricated as detailed in the Contract Drawings and with the items specified below:

1. Tube: Tube shall be as indicated to conform with ADAAG Section 505.7.

2. Corners and Returns: Corners and returns shall be fabricated from one-inch inside radius seamless ells manufactured with diameter constant throughout the profile, and of the same material and diameter as railings.

B. Workmanship:

1. Use materials of size and thickness shown or, if not shown, of required size and thickness to produce strength and durability in finished product. Work to dimensions shown or accepted on shop drawings, using proven details of fabrication and support. Use type of materials shown or specified for various components of work.

2. Form exposed work true to line and level with accurate angles and surfaces and straight sharp edges. Ease exposed edges to a radius of approximately 1/32-inch unless otherwise shown. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.

3. Provide for anchorage of type shown, coordinated with supporting structure. Fabricate and space anchoring devices to provide adequate support for intended use.

4. Cut, reinforce, drill, and tap miscellaneous metal work as indicated to receive finish hardware and similar items.

C. Galvanizing: Provide a zinc coating for those items shown or specified to be galvanized, as follows:

1. ASTM A153/A153M for galvanizing iron and steel hardware.

2. ASTM A123/A123M for galvanizing oiled, pressed and forged steel shapes, plates, bars and strip 1/8-inch thick and heavier; and for assembled steel products.

3. Provide minimum 3.9 mils thickness Grade 100.

D. Welding of steel shall be in accordance with AWS D1.1/D1.1M. [Welding of aluminum shall be in accordance with AWS D1.2/D1.2M.]

E. Repair of Damaged Zinc-Coated Surfaces: ASTM A780/A780M, Annexes Al, "Repair Using Zinc-Based Alloys", A2, "Repair Using Zinc-Rich Paints", or A3, "Repair Using Sprayed Zinc (Metallizing)".

2.03 FINISH

A. Galvanized Steel: Field paint under SECTION 09900 - Painting.

PART 3 - EXECUTION

3.01 INSPECTION

A. Prior to all work of this Section, the Contractor shall carefully inspect the installed work of all other trades and verify that all such work is complete to the point where fabrication and installation of the work of this Section may properly commence.

B. The Contractors shall make all required measurements in the field to ensure proper and adequate fit of all metal railing and guardrail items.

C. Examine the areas and conditions under which metal railing and guardrail items will be installed and correct conditions detrimental to the proper and timely completion of the work. Do not proceed until unsatisfactory conditions have been corrected and accepted by the Consultant.

3.02 INSTALLATION

A. Fastening to In-Place Construction: Provide anchorage devices and fasteners where necessary for securing railings and guardrails to in-place construction; which will develop anchorage meeting or exceeding all system performance requirements. Fill recesses with non-shrink non-ferrous grout and cure in accordance with the manufacturer's recommendations.

B. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installation of railings and guardrails. Set work accurately in location, alignment and elevation, plumb, level, true and free of rack, measured from established lines and levels.

C. Protection from Contact of Dissimilar Materials: Surfaces in contact with dissimilar metal shall be painted with heavy-bodied bituminous paint.

D. Coordination: Anchorages, setting drawings, diagrams, templates, instructions, and directions for installation of anchorages, such as concrete inserts, sleeves, anchor bolts, and miscellaneous items having

integral anchors which are to be embedded in grout shall be furnished and coordinated. The Contractor shall coordinate delivery of such items to the project site.

E. Alignment: Align rails so that variations from level for horizontal members, parallel for aligned members, and rake for steps and sloped members shall not exceed 1/4-inch in 12-feet.

3.03 RAILINGS AND GUARDRAILS

A. The materials shall be fabricated as indicated on the Contract Drawings and as specified herein unless indicated otherwise by ADAAG Section 505 requirements. Where there is a discrepancy between the Contract Documents and ADAAG requirements, the Contractor shall immediately notify the Consultant for direction, clarification and/or corrective measures. Standard products of manufacturers specializing in similar work will be considered insofar as they fulfill the requirements and do not violate governing codes for building and standards of good construction work. Hot dip galvanize all ferrous steel after fabrication in as large components as possible.

1. Railing and Guardrail General: To maximum extent practicable, railing shall be shop fabricated. Rigid joints shall be flush-finished welded assembly. Joints shall be reinforced with tight fitting interior sleeves and shall be assembled by welding rails and post to flush-type fittings, or by mitering and welding joining rails to posts. Expansion joints shall be located at lengths of rails as recommended by the manufacturer. Expansion joints shall be the inner-sleeved slip joint type with one end of the sleeve secured to the railing. Expansion joints and splices shall be located near the intersection of rails and posts. Bends in railing shall be smooth and made in a manner that will not crush or deform the railing. All welds shall be ground smooth and railings shall be free of burrs and sharp corners and edges.

2. Metal Railing and Guardrails: Railing and guardrail shall consist of Schedule 40, tube in size as indicated, with joints butt-welded, or welded with internal connectors, and all welds dressed smooth. Plug open ends and return to walls. Provide floor attachment of design shown, and securely fasten in place to conform with system performance.

3.04 CLEAN-UP

A. After installation, all surfaces shall be cleaned and ready to receive final treatment. All unused materials, tools, and equipment shall be removed from the project site.

B. From time to time, and as directed by the Consultant and at the

completion of the work, all rubbish, debris, fines, etc., accumulated from the work of this Section shall be removed from th project site and the area left neat and clean to the satisfaction of the Consultant.

END OF SECTION

SECTION 07920 - SEALANTS

PART 1 - GENERAL

1.01 SUMMARY

A. Completely close with sealant all joints indicated or specified to be sealed to a watertight and airtight condition without staining substrates.

1.02 SUBMITTALS

A. Submit in accordance with SECTION 01300 - Submittals.

B. Manufacturer's Data: Submit copies of manufacturer's product data and specifications for type of sealant required for acceptance.

C. Safety Data Sheets (SDS): Submit SDS for each material as applicable.

D. Color Samples: Submit 4 sets of color finish samples of sealants.

E. Compatibility and Adhesion Test Reports: Submit compatibility and adhesion test reports from sealant manufacturer indicating the following:

1. Materials forming joint substrates and joint-sealant backings have been tested for compatibility and adhesion with joint sealants.

2. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.

F. Warranty: Submit warranty as stipulated in item entitled "WARRANTY" hereinbelow.

1.03 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized installer who is approved or licensed for installation of elastomeric sealants required for this project.

B. Source Limitations: Obtain each type of sealant through one source from a single manufacturer.

C. Preconstruction Compatibility and Adhesion Testing: Submit to sealant manufacturers, for ASTM C719 and ASTM C794 adhesion and cohesion testing, ASTM C510 stain testing, and ASTM C1247 immersion adhesion testing of samples of materials that will contact or affect sealants. Use manufacturer's standard test method to determine whether priming and other specific joint preparation techniques are required to obtain optimum adhesion of sealants to joint substrates. Testing will not be required if joint-sealant manufacturers submit joint preparation data that are based

on previous testing of current sealant products for adhesion to, and compatibility with, joint substrates and other materials matching those submitted.

D. Stain-Test Response Characteristics: Where elastomeric sealants are specified to be nonstaining to porous substrates, provide products that have undergone testing according to ASTM C510, ASTM C1248, and ASTM D2203 and have not stained porous joint substrates indicated for project.

E. Joint Sealants Field Test for Adhesion and Cohesion to Joint Substrates: Perform field tests for each elastomeric joint sealant according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1.1 in ASTM C1193 or Method A, Tail Procedure, in ASTM C1521, prior to installation as follows:

1. Install joint sealants in 5-foot joint lengths. Allow sealant to fully cure before testing.

2. Make a knife cut of the sealant across the joint and along each side of the joint approximately 3-inches long.

3. Place a mark on the sealant tab, one-inch from the adhered joint to the tab's free end.

4. Grasp a 2-inch piece of sealant firmly just beyond the one-inch mark and pull at a 90 degree angle.

5. Record whether or not sealant in joint maintained adhesion to substrate.

6. Record percentage length of sealant elongation.

7. Sealant product acceptance shall be based on pass/fail adhesion performance.

8. Evaluation of Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver sealants to the job site in sealed containers labeled to show the designated name, formula, or specification number, lot number, color, date of manufacture, shelf life, curing time, manufacturer's

directions, and name of manufacturer.

B. Storage: Carefully handle and store all materials to prevent inclusion of foreign materials. Remove from project site all damaged and deteriorated materials and materials exceeding shelf life.

C. Sealant materials shall be handled in accordance with the manufacturer's specifications and installed prior to expiration of shelf life.

1.05 WARRANTY

A. Contractor's Warranty:

1. Submit warranty covering labor and materials against defects resulting from the use of defective or inferior materials, equipment, or workmanship for a period of 2 years from the project acceptance date. This warranty does not extend to defects caused by ordinary wear and tear, improper use, abuse, or negligence on the part of the HHSC.

2. Where sealant is associated with a system with a longer warranty period, such as roofing, sealant warranty shall match applicable system. The Surety shall not be held liable beyond 2 years from the project acceptance date.

3. Provide the following at no cost to the HHSC:

a. Cover against leaks, air infiltration, cracks, and other failures of the installation and materials.

b. Repair of sealants to seal leaks caused by faulty materials or workmanship.

c. Repair or replacement of damage to the building or its finishes, equipment, or furniture when occasioned by such leaks.

4. Warranty excludes deterioration or failure of elastomeric joint sealants from the following:

a. Movement of the structure resulting in stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression caused by structural settlement or error attributable to design or construction.

b. Disintegration of joint substrates from natural causes exceeding design specifications.

c. Mechanical damage caused by individuals, tools, or other outside agents.

d. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

PART 2 - PRODUCTS

2.01 MATERIALS

A. General: Provide sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.

B. Sealants:

1. At Exterior and Interior Vertical and Overhead Moving Joints: One part polyurethane-based sealant, conforming to ASTM C920, Type S, Grade NS, Class 25, Use NT. Provide one of the following, or accepted equivalent:

a. Vulkem 116; Tremco, Inc.

b. Chem-Calk 900; Bostik Construction Products Div.

c. Sikaflex 1a; Sika Corp.

d. DynaTrol 1-XL; Pecora Corp.

e. NP-1; MasterSeal.

2. At Interior Vertical and Overhead Non-Moving Joints: Non-elastomeric sealant; acrylic-emulsion type, conforming to ASTM C834. Provide one of the following, or accepted equivalent:

a. AC-20 Acrylic Latex: Pecora Corp.

b. Tremco Acrylic Latex 834; Tremco, Inc.

c. Chem-Calk 600; Bostik Construction Products Div.

d. NP-420; MasterSeal.

C. Joint Cleaner: Non-corrosive and non-staining type as recommended by sealant manufacturer; compatible with joint forming materials.

D. Primer for Sealants: Non-staining, as recommended by the sealant manufacturer.

E. Sealant Backer Rod: Compressible rod stock of polyethylene foam, polyethylene-jacketed polyurethane foam, butyl rubber foam, neoprene foam or other flexible, permanent, durable, nonabsorptive material conforming with ASTM C1330 as recommended for compatibility with sealant by the sealant manufacturer to control the joint depth for sealant placement, to break bond of sealant at bottom of joint, to form optimum shape of sealant bead on back side, and to provide a highly compressible backer which will minimize the possibility of sealant extrusion when joint is compressed. Do not use oakum or other types of absorptive materials as backstops.

F. Bond-Breaker Tape: Polyethylene tape or other plastic tape as recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self adhesive tape where required.

G. Masking Tape: Non-staining, nonabsorbent type compatible with joint sealants and to surfaces adjacent to joints.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine joint widths, surfaces, and backing, and their anchorage to the structure, and conditions under which joint sealer work is to be performed, and notify Contractor in writing of conditions detrimental to proper completion of the work and performance of sealers. Do not proceed with joint sealer work until unsatisfactory conditions have been corrected in a manner acceptable to installer.

3.02 JOINT PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealers to comply with recommendations of ASTM C1193 and joint sealer manufacturers and the following requirements:

1. Remove foreign material from joint substrates which could interfere with adhesion of joint sealer, including dust; paints, except for permanent, protective coatings tested and accepted for sealant adhesion and compatibility by sealant manufacturer; oil; grease; waterproofing; water repellants; water; and surface dirt.

2. Clean concrete, masonry, and similar porous joint substrate surfaces, by brushing, grinding, blast cleaning, mechanical

abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealers. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air.

3. Remove laitance and form release agents from concrete.

4. Steel Surfaces in Contact with Sealant: Scrape and wirebrush to remove loose mill scale. Remove dirt, oil, or grease by solvent cleaning, and wipe surfaces with clean cloths.

5. Clean metal and other nonporous surfaces by chemical cleaners or other means which are not harmful to substrates or leave residues capable of interfering with adhesion of joint sealers.

6. Do not permit solvents to air dry. Wipe surfaces free of solvent using clean, dry white cloth or white lintless paper.

B. Joint Priming: Prime joint substrates where indicated or where recommended by joint sealer manufacturer based on preconstruction joint sealer-substrate tests or prior experience. Apply primer to comply with joint sealer manufacturer's recommendations. Confine primers to areas of joint sealer bond, do not allow spillage or migration onto adjoining surfaces.

C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces which otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

D. Joint Size: Examine joint size and correct to achieve depth ratio of 1/2 of joint width with a minimum width and depth of 1/4-inch, maximum width of one-inch unless specifically allowed otherwise by the sealant manufacturer.

3.03 INSTALLATION OF JOINT SEALERS

A. General: Comply with joint sealer manufacturers' printed installation instructions applicable to products and applications indicated, except where more stringent requirements apply.

B. Weather Conditions: Do not proceed with installation of sealants under adverse weather conditions. Proceed with the work only when weather conditions are favorable for proper cure and development of high early bond strength.

C. Sealant Installation Standard: Comply with recommendations of

ASTM C1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

D. Installation of Sealant Backings: Install sealant backings to comply with the following requirements:

1. Install joint fillers of type indicated to provide support of sealants during application and at position required to produce the cross-sectional shapes and depths of installed sealants relative to joint widths which allow optimum sealant movement capability.

a. Do not leave gaps between ends of joint fillers.

b. Do not stretch, twist, puncture, or tear joint fillers.

c. Remove absorbent joint fillers which have become wet prior to sealant application and replace with dry material.

2. Install bond breaker tape between sealants and joint fillers, compression seals, or back of joints where adhesion of sealant to surfaces at back of joints would result in sealant failure.

3. Install compressible seals serving as sealant backings to comply with requirements indicated above for joint fillers.

4. Compress backing material minimum of 30 percent when inserted in joint. Backing material for upper portion of joints shall be round rod or semi-circular in cross-section where in contact with sealant.

E. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

F. Primer: Immediately prior to application of the sealant, clean out all loose particles from joints. Where recommended by sealant manufacturer, apply primer to joints in concrete, masonry units, wood, and other porous surfaces in accordance with compound manufacturer's instructions. Do not apply primer to exposed finish surfaces.

G. Installation of Sealants: Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration, and providing uniform, cross-sectional shapes and depths relative to joint widths which allow optimum sealant movement capability.

H. Joint Sizes: Install sealants to depths as indicated or as recommended by sealant manufacturer but within the following general limitations:

1. For normal moving joints sealed with elastomeric sealants but not subject to traffic, fill joints to depth equal to 50 percent of joint width, but not more than 1/2-inch deep or less than 1/4-inch deep.

2. For joints sealed with non-elastomeric sealants and caulking compounds, fill joints to depth in range of 75 percent to 125 percent of joint width.

3. Measure joint dimensions and size materials to achieve required width-to-depth ratios. Acceptable joint width-to-depth ratios:

MATERIAL	JOINT WIDTH	JOINT DEPTH	
		MINIMUM	MAXIMUM
Metal or other nonporous surfaces	1/4-inch (minimum)	1/4-inch	1/4-inch
	Over 1/4-inch	1/2 of width	Equal to width
Concrete, masonry, or other porous surfaces	1/4-inch (minimum)	1/4-inch	1/4-inch
	Over 1/4-inch	1/2 of width	Equal to width
	Over 1/2 to 2-inches	1/2-inch	1/2-inch
	Over 2-inches	As recommended by sealant manufacturer	

I. Tooling of Nonsag Sealants: Immediately after sealant application and prior to time skinning or curing begins, tool sealants to form smooth, uniform beads of configuration indicated, to eliminate air pockets, and to ensure contact and adhesion of sealant with sides of joint. Remove excess sealants from surfaces adjacent to joint. Do not use tooling agents which discolor sealants or adjacent surfaces or are not approved by sealant manufacturer.

1. Provide concave joint configuration per Figure 5A in ASTM C1193, unless otherwise indicated.

2. Provide flush joint configuration per Figure 5B in ASTM C1193, where indicated.

3. Use anti-tack agent where necessary to protect freshly applied sealant from public traffic and dirt.

4. Slightly recess joints to facilitate painter's line. Hand tool and finish joints throughout construction.

5. Comply with manufacturer's specifications and recommendations.

3.04 CLEAN-UP

A. Clean off excess sealants or sealant smears adjacent to joints as work progresses by methods and with cleaning materials approved by manufacturers of joint sealers and of products in which joints occur.

B. Do not damage adjoining surfaces or finishes.

3.05 PROTECTION

A. Protect joint sealers during and after curing period from contact with contaminating substances or from damage resulting from construction operations or other causes so that they are without deterioration or damage at time of project acceptance. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealers immediately and reseal joints with new materials to produce joint sealer installations with repaired areas indistinguishable from original work.

END OF SECTION

DIVISION 9 - FINISHES

SECTION 09250 - GYPSUM WALLBOARD

PART 1 - GENERAL

1.01 SUMMARY

A. Complete all gypsum wallboard work as indicated or required by the drawings and as specified herein. Work shall include, but not be limited to, the following:

1. Gypsum wallboard on metal framing and furring.

2. Metal stud framing for wallboard.

1.02 SUBMITTALS

A. Submit in accordance with SECTION 01300 - Submittals.

B. Manufacturer's Data: Material description and manufacturer's recommended installation procedures for each material.

C. Safety Data Sheets (SDS): Submit SDS for each product.

1.03 QUALITY ASSURANCE

A. Industry Standard: Comply with applicable requirements of GA-216, "Application and Finishing of Gypsum Board", GA-214, "Recommended Specification: Levels of Gypsum Board Finish", and GA-201 , "Using Gypsum Board for Walls and Ceilings", by the Gypsum Association, except where more detailed or more stringent requirements are indicated, including the recommendations of the manufacturer.

B. Gypsum Board Terminology: Refer to ASTM C11, "Terminology Relating to Gypsum and Related Building Materials and Systems", for definition of terms for gypsum board assemblies not defined in this Section or in referenced standards.

C. Provide support systems and attachments conforming with AISC 341, "Seismic Provisions for Structural Steel Buildings".

D. Seismic: Brace partitions in accordance with ICC IBC Section 1613, “Earthquake Loads.”

1.04 DELIVERY, STORAGE, AND HANDLING

A. Deliver gypsum wallboard materials in sealed containers and bundles, fully identified with manufacturer's name, brand, type, and grade; store in

a dry well ventilated space, protected from the weather, under cover and off the ground. Stack gypsum panels flat to prevent sagging. Joint materials shall be stored in accordance with manufacturer's printed instructions. Damaged or deteriorated materials shall be removed from jobsite.

B. Environmental Limitations: Comply with GA-238, "Guidelines for the Prevention of Mold Growth on Gypsum Board", and ASTM C840, "Application and Finishing of Gypsum Board", requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.

PART 2 - PRODUCTS

2.01 MATERIALS

A. General: Provide panels in maximum lengths and widths available that will minimize joints and correspond with the applicable support system.

B. Gypsum Wallboard: ASTM C1396/C1396M, "Gypsum Board", 5/8-inch thick, tapered edge type, 48-inches wide, Type "R" regular or better.

C. Wallboard and Sheathing Fasteners: ASTM C1002, "Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs", standard bugle head self-drilling, self-tapping corrosion resistant drywall screws.

D. Reinforced Tape and Cement: ASTM C475/C475M, "Joint Compound and Joint Tape for Finishing Gypsum Board", materials for treating joints and fastener heads shall be as manufactured or recommended by the Manufacturer of the wallboard used.

E. Non-Load Bearing Studs: Comply with ASTM C754, "Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products", for conditions indicated. ASTM C645, "Nonstructural Steel Framing Members", studs shall be 1-5/8 inches, 2-1/2 inches, 3-5/8 inches, and 6-inches unless indicated otherwise on the drawings. Studs shall be rolled formed channel of 25 gauge, 22 gauge, and 20 gauge galvanized steel, ASTM A653/A 653M, "Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process", G60 coating. ProSTUD Drywall Framing System gauges for equivalent structural and composite limiting height studs are acceptable.

F. Tracks: Metal floor and ceiling tracks shall be rolled formed channel of electro-zinc plated steel of same gauge as stud with width dimensions suitable to corresponding stud sizes indicated on the drawings.

G. Framing Fasteners: ASTM C754 or ASTM C1513, "Steel Tapping Screws

for Cold-Formed Steel Framing Connections", except as specified otherwise.

H. Wallboard Accessories: ASTM C1047, "Accessories for Gypsum Wallboard and Gypsum Veneer Base", Vinyl Corp., Plastic Components Inc., Vinyl Tech, or accepted equivalent.

1. Standard Corner Bead: Vinyl Corp. Corner Bead CB 125 at all outside corners of wall and soffit as indicated.

2. Casing Trim: Vinyl Corp. "L" Bead SB 58, "J" Bead MJB 58.

3. Other Accessories: As indicated or necessary for complete installation.

4. All accessories shall be vinyl, PVC, or accepted equivalent.

I. Joint Treatment Materials: ASTM C475/C475M; type recommended by manufacturer for the application indicated, except as otherwise noted. Perforated tape, and joint and topping compound, or "all-purpose" compound.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine substrates to which drywall construction attaches or abuts preset hollow metal frames and structural framing, with installer present, for compliance with requirements for installation tolerances, existence of mold, and other conditions affecting performance of drywall construction. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.02 INSTALLATION

A. General: Comply with ASTM C840, "Application and Finishing of Gypsum Board", Gypsum Association GA-216, and ASTM C754 as applicable to the type of substrate and drywall support system indicated.

B. Tolerances:

1. Maximum variation of finish surface from true flatness shall be 1/8-inch in 10-feet in any direction unless specified otherwise.

2. Maximum variation of plumbness of wall shall be 1/8-inch in 10-feet of height.

3. Maximum variation from true position shall be 1/8-inch.

C. Metal Wall Framing:

1. Install supplementary framing, blocking, and bracing to support fixtures, equipment services, heavy trim, furnishings, and similar work which cannot be adequately supported on gypsum board alone to comply with details indicated and with recommendations of gypsum board manufacturer, or if none available, with "Gypsum Construction Handbook" published by United States Gypsum Co.

2. Isolate stud system from transfer of structural loading to system, both horizontally and vertically. Provide slip or cushioned type joints to attain lateral support and avoid axial loading.

3. Install runner tracks at floors, ceilings, and structural walls and columns where gypsum drywall stud system abuts other work, except as otherwise indicated.

4. Space studs and furring 16-inches on center, except as otherwise indicated.

5. Install steel studs so flanges point in the same direction and leading edge or end of each panel can be attached to open (unsupported) edges of stud flanges first.

6. Install each steel framing and furring member so that fastening surface does not vary more than 1/8-inch from plane of faces of adjacent framing.

D. Gypsum Wallboard General:

1. Install exposed gypsum board with face side out. Do not install imperfect, damaged or damp boards. Butt boards together for a light contact at edges and ends with not more than 1/16-inch open space between boards. Do not force into place.

2. Locate either edge or end joints over supports. Position boards so that both tapered edge joints abut and mill-cut or field-cut end joints abut. Do not place tapered edges against cut edges or ends.

3. Attach gypsum panels to steel studs so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.

4. Attach gypsum board to framing and blocking as required for additional support at openings and cutouts.

5. Isolate perimeter of non-load-bearing drywall partitions at structural abutments. Provide 1/4-inch to 3/8-inch space and trim

edge with J-type semi-finishing edge trim. Seal joints with acoustical sealant. Do not fasten drywall directly to stud system runner tracks.

6. Space fasteners in gypsum boards in accordance with referenced standards and manufacturer's recommendations, except as otherwise indicated.

E. Methods of Gypsum Wallboard Application:

1. Single-Layer Application:

a. On partitions/walls higher than 8-feet one-inch, apply gypsum board vertically (parallel), unless otherwise indicated, and provide sheet lengths which will minimize end joints.

b. On partitions/walls 8-feet one-inch or less in height apply gypsum board horizontally (perpendicular); use maximum length sheets possible to minimize end joints.

2. Single-Layer Fastening Method: Apply gypsum boards to supports by fastening with screws, spaced not to exceed 16-inch centers for walls.

F. Installation of Trim Accessories:

1. General: Where feasible, use the same fasteners to anchor trim accessory flanges as required to fasten gypsum board to the supports. Otherwise, attach trim in accordance with manufacturer's instructions and recommendations.

2. Install corner beads at external corners.

3. Install edge trim whenever edge of gypsum board would otherwise be exposed or semi-exposed. Provide type with face flange to receive joint compound except where semi-finishing type is indicated. Install L-type trim where work is tightly abutted to other work and install special kerf-type where other work is kerfed to receive long leg of L-type trim. Install U-type trim where edge is exposed, revealed, gasketed, or sealant-filled (including expansion joints).

4. Install J-type or LC-type semi-finishing trim where indicated.

3.03 DRYWALL FINISHING

A. General: Apply treatment at gypsum board joints (both directions), flanges of trim accessories, penetrations, fasteners heads, surface

defects, and elsewhere in accordance with ASTM C840 and Gypsum Association GA-216 and GA-214 as required to prepare work for decoration. Prefill open joints, rounded or beveled edges, and damaged surfaces using type of compound recommended by manufacturer.

1. Apply joint tape at joints between gypsum boards, except where a trim accessory is indicated that does not require tape.

2. Apply joint compound in 3 coats (not including prefill of openings in base) and sand between last 2 coats and after last coat. Fastener heads, dents, gouges, and cut-outs shall be filled with joint compound and sanded.

3. Accessories at exposed joints, edges, corners, openings, and similar locations shall be taped, floated with joint compound, and sanded in accordance with manufacturer's instructions and SDS to produce surfaces ready for gypsum board finishes.

B. Finish interior gypsum wallboard by applying the levels of gypsum board finish in accordance with GA-214.

3.04 CLEANING AND REPAIRING

A. After installation and before painting, correct surface damage and defects. Leave surface clean and smooth, satisfactory to the painter. No painting shall be done over gypsum board work until the joints are thoroughly dry. Joints and fastenings are to be invisible after painting.

B. Remove drywall materials from electrical boxes, hardware, fixtures, flooring, and similar items and surfaces not intended to receive drywall materials.

END OF SECTION

SECTION 09651 - RESILIENT BASE

PART 1 - GENERAL

1.01 SUMMARY

A. Provide resilient base where scheduled and as specified herein.

1.02 SUBMITTALS

A. Submit in accordance with SECTION 01300 - Submittals.

B. Manufacturer's Data: Submit manufacturer's product data for base and adhesive, including installation instructions.

C. Samples: Submit 4 samples of bases for color selection.

D. Safety Data Sheets (SDS) or Material Safety Data Sheets (MSDS): Submit SDS or MSDS for each material as applicable.

1.03 DELIVERY, STORAGE, AND HANDLING

A. Materials shall be delivered to the job site in original unopened containers marked with grade and manufacturer's brand name. Handle and store materials carefully in accordance with manufacturer's instructions.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Resilient Wall Base: Resilient base shall conform to ASTM F1861, "Resilient Wall Base", Type TS or Type TP, rubber, Group 1 or Group 2, 4-inch high, top-set type, 1/8-inch thick, with a smooth exposed surface and textured bonding surface on its unexposed face. Provide Style B, cove type. The rubber material shall be free from offensive odor and its color shall be uniform throughout the thickness of the base. Base shall be equivalent to Burke Mercer Flooring Products Cove Base, Johnsonite, Roppe, Mannington, Azrock, Armstrong, Tarkett, or accepted equivalent.

B. Adhesives: Base adhesive shall be water-based, rubber-resin formula, as recommended by the manufacturer for the specific materials used. Material shall be beige or white, solvent free with zero VOC content, low odor, no ammonia, and non-flammable in wet state. Do not use adhesive not intended for its purpose.

PART 3 - EXECUTION

3.01 INSTALLATION OF MATERIALS

A. 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.

B. Resilient base shall be applied onto thoroughly-dried walls with cove base adhesive only. Because of the thermoplastic character of base, care shall be taken not to stretch it during installation since it will shrink and leave a gap at joints. The top and bottom edges shall be in firm contact with the wall and floor.

3.02 CLEANING AND PROTECTION

A. Spots of adhesive shall be removed immediately as work progresses. Contractor shall be responsible for protecting the resilient bases until acceptance of the project. Clean bases, but do not polish them.

END OF SECTION

SECTION 09900 - PAINTING

PART 1 - GENERAL

1.01 SUMMARY

A. The work includes painting and finishing of exterior and interior items and surfaces throughout the project, whether scheduled or not, except as otherwise indicated. Painting shall include new work and existing new surfaces made bare or damaged during construction and existing surfaces as scheduled. Surface preparation, priming, and coats of paint specified are in addition to shop-priming and surface treatment specified under other sections of the work and is included in this Section.

B. The work includes field painting of exposed bare and covered pipes and conduits (including color coding), and of hangers, exposed steel and iron work, and primed metal surfaces of equipment installed under the electrical work, such as junction boxes, raceways, and cabinets, except as otherwise indicated.

C. "Paint" as used herein means all coating systems materials, including primers, enamels, sealers, and fillers, and other applied materials whether used as prime, intermediate, or finish coats, except as specifically noted herein.

D. Paint all exposed surfaces whether or not colors are designated in "schedules". Where items or surfaces are not specifically mentioned, paint these the same as adjacent similar materials or areas. If color or finish is not designated, the Consultant will select these from standard colors available for the materials systems specified.

E. Related Work Specified Elsewhere: Removal of existing lead-containing paint and preparation of surfaces with existing lead-containing paint are provided under SECTION 13282 - Lead Paint Control Measures.

1.02 SUBMITTALS

A. Submit in accordance with SECTION 01300 - Submittals.

B. Schedule of Finishes: Submit 4 sets of the proposed painting finish schedule to the Consultant for acceptance. The schedule shall indicate the wet film thickness (mils) at which the proposed paints/coatings will be applied that are necessary to achieve the final dry film thickness indicated on the Schedule of Finishes under item entitled "SCHEDULE OF FINISHES" hereinbelow.

C. Color Samples: Submit the following to the Consultant for acceptance:

1. Four sets of each color finish sample.

2. After the color finish sample has been accepted, one set of color finish samples painted onto 8-1/2 inch x 11-inch cardboard shall be submitted. The cardboard shall be divided into 3 horizontal strips and painted as follows:

   a. Prime 3 strips.

   b. First coat bottom 2 strips.

   c. Second coat bottom strip.

D. Schedule of Operations: Before work on the project is commenced, submit complete sets of a work schedule showing Contractor's sequence of operations and dates.

E. Warranty: Submit warranty as stipulated in item entitled "WARRANTY" hereinbelow.

F. Certifications: Submit copies of asbestos-free, lead-free, zinc-chromate-free, strontium-chromate-free, cadmium-free, and mercury free paint certificates.

G. Manufacturer's Product Data Sheets: Submit copies of the manufacturer's product data sheets for the primers, paints, coatings, solvents, sealing and patching materials, sealants and caulking, and other materials being used. Data sheets shall indicate thinning and mixing instructions, required film thickness (mil) and application instructions.

H. Manufacturer's Safety Data Sheets (SDS): Submit copies of the manufacturer's material safety data sheets for coatings, solvents, and other hazardous materials.

I. Comprehensive Spray Plan: Where the Contractor proposes to employ airless spraying, submit a Comprehensive Spray Plan, including the following information for acceptance:

   1. Documentation that the individual spray applicator(s) on the project have completed an accepted "Spray Applicator Certification Program".

   2. The overspray protection methods proposed.

   3. The spray application instructions and recommendations of the paint manufacturer he proposes to use.

J. Certificate of Public Liability and Property Damage Insurance.

1.03 ANALYZING AND TESTING

A. All paints and their applied thickness shall be subject to testing whenever the Consultant deems necessary to determine conformation to the requirements of these specifications. Should testing by a laboratory be required, the laboratory shall be selected by the HHSC and the cost of testing shall be borne by the Contractor. However, should test results show that the paint is in compliance with this specifications, the cost will be borne by the HHSC.

B. All rejected material shall be removed from the job site immediately. Surfaces painted with the rejected material shall be redone at no additional cost to the HHSC.

C. Where the required paint thickness is deficient, the affected surface(s) shall be recoated as necessary to provide the required paint thickness at no additional cost to the HHSC.

1.04 QUALITY ASSURANCE

A. Painting Terminology: Refer to ASTM D16, "Standard Terminology for Paint, Related Coatings, Materials, and Applications".

B. Gloss/Sheen Levels: ASTM D 523, "Specular Gloss", as follows:

Description	Units at 60 Degrees	Units at 85 Degrees
Matte or Flat	0 to 5	10 max
Velvet	0 to 10	10 to 35
Eggshell	10 to 25	10 to 35
Satin	20 to 35	35 min
Semi-Gloss	35 to 70	
Gloss	70 to 85	
High Gloss	more than 85	

C. Where the Contractor proposes to employ airless spraying, the applicator(s) shall have completed an accepted "Spray Applicator Certification Program" conducted by the Painting Industry of Hawaii.

D. As a minimum, the certification shall include material and equipment selection, use and maintenance, hands-on application, and safety training.

1.05 WARRANTY

A. The Contractor shall warrant that the work performed under this Section conforms to the contract requirements and is free of any defect in the materials used and workmanship performed by the Contractor. Such warranty shall continue for a period of 2 years from the project acceptance date and the Contractor shall remedy any such defect which

is discovered during that period at no cost to the HHSC.

B. The HHSC will notify the Contractor in writing within a reasonable time after discovery of any failure or defect.

C. Should the Contractor fail to remedy any failure or defect described in Paragraph A above within 10 working days after receipt of notice thereof, the HHSC shall have the right to repair or otherwise remedy such failure or defect and charge the Contractor for the cost of same.

1.06 SPECIAL REQUIREMENTS

A. Codes: The Contractor shall comply with the State OSHL (Occupational Safety and Health Law) and all pollution control regulations of the State Department of Health.

B. Safety methods used during coating application shall comply with SSPC-PA Guide 3.

C. Protection:

1. Persons:

a. The Contractor shall take all necessary precautions to protect public pedestrians, including tenants from injury.

b. The Contractor shall provide, erect, and maintain safety barricades around scaffolds, hoists, and wherever Contractor's operation create hazardous conditions in order to properly protect the public and workmen.

2. Completed Work: The Contractor shall provide all necessary protection for wet paint surfaces.

3. Protective Covering: The Contractor shall provide and install protective covering over equipment, floor, and other areas that are not scheduled for treatment. Protective covering shall be clean, sanitary drop cloth or plastic sheets. Paint applied to surfaces not scheduled for treatment shall be completely removed and surfaces shall be returned to original condition. Where paint application will be performed by use of airless spraying, the Contractor shall ensure that protective enclosures are erected to prevent the escape of overspray from the work area.

4. Safeguarding of Property: The Contractor shall take whatever steps may be necessary to safeguard his work and also the property of the HHSC and other individuals in the vicinity of the work area during the execution of this Contract. Contractor shall be responsible for and make good on any and all damages and for losses to work or property caused by his or his employee's

negligence. Where the damaged property cannot be cleaned and restored to its original condition (i.e. prior to being damaged) it shall be replaced with a new product of equal quality. No proration or use of "used" products will be permitted.

a. The Contractor shall assume that cars will not be temporarily relocated from parking areas during spray painting work.

b. Paint overspray shall not carry more than 5 linear feet beyond the building eave line nor within 10 linear feet of pedestrians or property and surfaces not scheduled to be painted. Spray painting shall immediately cease when overspray carries beyond these specified limits and will not continue until protective barriers are erected to properly contain the overspray and damages caused by the overspray have been corrected.

c. The Contractor shall be assessed $500.00 for each incidence of property or personal damage caused by overspray until such time that a satisfactory settlement has been agreed upon by the damaged party and corrective action has been completed. All corrective action shall be settled within 24 hours from the time the damage is discovered. Should the Contractor fail to take corrective action in a timely and expeditious manner, the Consultant will contact the Contractor's Insurance company to seek resolution on the matter.

d. The Consultant will withhold payment due the Contractor until damages have been corrected or damage claims resolved. The amount of payment withheld shall be equal to a minimum of $2,000.00 plus the estimated cost of corrective action as determined by the Consultant.

5. Fire Safety: The Contractor shall direct his employees not to smoke in the vicinity and to exercise precautions against fire at all times. Waste rags, plastic (polyester sheets), empty cans, etc., shall be removed from the site at the end of each day.

D. Right of Rejection: The Consultant will have the right to reject all work which is not in compliance with the plans and specifications. Rejected work will be redone at no additional cost to the HHSC. In addition, the Consultant will have the right to require the immediate removal of any paint applicator who demonstrates negligence, lack of competence or repeated non-compliance with the contract requirements.

E. Sequence of Operations: The sequence of operations shall divide the surfaces into work areas and present a schedule for:

1. Surface preparation and spot prime.

2. Prime coat.

3. First finish coat.

4. Second finish coat.

F. Inspection and Acceptance: The Contractor shall obtain written acceptance from the Consultant upon completion of each phase of work (phases of work are surface preparation and spot prime, prime, first finish coat, and second finish coat) before proceeding into the next phase of work. The Contractor shall give Consultant one day (24 hours minimum) advance notice of completion of any phase of work for a work area only when he deviates from the previously submitted work schedule. The Contractor shall provide necessary access to areas to be inspected. Failure to obtain acceptance of any phase of work for a work area may result in redoing the operation at no cost to the HHSC.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver paint materials to the job site in original unopened containers with original labels intact.

B. No paint material, empty cans and paint brushes and rollers, drop cloths and rags, may be stored in buildings, but shall be stored in separate storage facilities away from the buildings. Receiving, opening, and mixing of painting materials shall be done in this area.

C. The Contractor may furnish a job site storage facility. Such facility shall comply with requirements of the local Fire Department. The storage area shall be kept clean and facility shall be locked when not in use or when no visual supervision is possible.

D. Ensure the safe storage and use of paint materials and the safe storage or disposal of waste at the end of each work day.

E. Handle manufactured materials as recommended by the manufacturer.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Asbestos Prohibition: All paint shall be asbestos-free.

B. Lead Prohibition: All paint shall be lead-free.

C. Mercury Prohibition: All paint shall be mercury-free.

D. Chromate Prohibition: All paint shall be free of zinc-chromate and/or strontium-chromate.

E. Cadmium Prohibition: All paint shall be cadmium-free.

F. Material shall be equal in quality to that specified under the Schedule of Finishes and any given finish shall be as labeled by one manufacturer.

G. All materials shall be delivered to the job site in undamaged original containers bearing the manufacturer's label and shall be stored in such a manner as to prevent damage. All rejected materials shall be removed from the job site immediately.

H. Paints shall be as manufactured by Benjamin Moore, Henkel, Devoe, Devoe Coatings, Glidden, Glidden Professional, PPG Protective & Marine Coatings, Rust-Oleum, Sherwin-Williams, or accepted equivalent.

I. Thinning of paint shall be done using material recommended by the manufacturer. Mix proprietary products according to manufacturer's printed specifications. Compound thinner, mineral oil, kerosene, refined linseed oil, or gasoline shall not be used for thinning.

J. Except for metal primers, all paint shall contain maximum amount of mildewcide per gallon of paint permitted by the mildewcide manufacturer without adversely affecting the quality of the paint.

K. The supplier shall submit a signed certificate indicating the amounts of mildewcide added by both the paint manufacturer and the paint supplier. Mercurial fungicide shall not be used.

2.02 SCHEDULE OF FINISHES

A. The Schedule of Finishes is made for the convenience of the Contractor and indicates the types and quality of finishes to be applied to the surfaces. Refer to Finish Schedule for symbols indicating location for various finishes. Provide additional systems for surfaces to be painted not listed hereinafter.

B. All paints unless otherwise noted, are the products of Sherwin Williams and are so named to establish desired quality and standard of materials. Painting materials, equal to those mentioned by trade name under the various treatments may be used, provided they meet with the acceptance of the Consultant.

C. Treatments shall be applied on exposed surfaces of designated materials, in conformity with instructions of the paint product used.

D. Exterior Painting:

1. Existing Steel/Ferrous Metal:

Preparation:	Minimum SSPC-SP2.
Spot Prime:	B58T00101 - Macroproxy 920 PrePrime Rust Penetrating Epoxy PrePrime Transparent (Part A&B).
Prime Coat:	B58W00610 - Macropoxy 646 Fast Cure Epoxy (Part A&B)
2nd and 3rd Coats:	B65W00921 - Pro Industrial Waterbased Acrolon 100 Polyurethane (Part A&B)

2. Galvanized Metal:

Preparation:	Minimum SSPC-SP2.
Prime Coat:	B58W00610 - Macropoxy 646 Fast Cure Epoxy (Part A&B)
2nd and 3rd Coats:	B65W00921 - Pro Industrial Waterbased Acrolon 100 Polyurethane (Part A&B)

E. Interior Painting:

1. Galvanized Steel:

Prime Coat:	B66W01310 - Pro Industrial ProCryl Universal Acrylic Metal Primer
2nd and 3rd Coats:	B53W05151 - Pro Industrial Waterbased Alkyd Urethane Enamel (Semi-Gloss)

2. Gypsum Wallboard:

Prime Coat:	B51W00620 - PrepRite ProBlock Interior/Exterior Latex Primer/Sealer
2nd and 3rd Coats:	B66W00651 - Pro Industrial High Performance Acrylic (Semi-Gloss)

2.03 COMPATIBILITY OF PAINTING SYSTEMS AND SUBSTRATES

A. The Contractor shall ensure that painting systems specified are

compatible with existing painted surfaces. Alkyd paints shall not be applied over existing latex coating. Alkyd paints shall not be used over cementitious surfaces. Latex paints shall not be applied directly over alkyd paints without proper conditioner and accepted by the Consultant.

B. Field Tests for Alkyd or Latex Paints: The Contractor shall perform the following field tests for compatibility of substrates to new paint systems prior to ordering paint:

1. Latex films will dissolve when wiped with rubbing alcohol; alkyd films will not.

2. When sanded, latex films will "clog" sandpaper; alkyd films will sand clean.

3. Alkyds will soften after applying a 10 percent solution of Drano in water; latex films will not soften.

4. Alkyds will burn when exposed to a flame; latex film will not burn.

5. Paints which do not respond to 2 or more of these tests are probably epoxy, urethane, or other type of coating.

6. Provide a packaged swab test in accordance with the package directions.

7. Existing paint identified or suspect of having lead-containing paint shall be tested in a manner that does not produce airborne or uncontrolled lead debris.

C. Should there be any discrepancies between the specified Schedule of Finishes and the existing paint systems, the Contractor shall notify the Consultant in writing of any incompatible systems specified and submit a revised Schedule of Finishes for acceptance when necessary. With the acceptance of the revised Schedule of Finishes, the Contractor shall make any corrections and/or revisions necessary to resolve the discrepancies and/or inconsistencies. The Contractor shall not proceed with any painting systems that are incompatible, although specified otherwise, until all incompatible conditions detrimental for the proper application and performance of the painting systems have been corrected. The failures due to the application of the incompatible paint systems shall be corrected at no additional cost to the HHSC. Proceeding with the work shall imply acceptance of the specified Schedule of Finishes and the compatibility with the existing painted surfaces by the Contractor.

PART 3 - EXECUTION

3.01 SURFACE PREPARATION

A. General:

1. Surface preparation shall be in accordance with the Painting and Decorating Contractors of America, "Architectural Specification Manual", methods are applicable to all substrates.

2. Scrub surfaces with stiff nylon bristle brush and Trisodium Phosphate (TSP) solution at rate of 3/4 cup TSP per gallon of warm water to remove accumulated film of wax, oil, grease, smoke, dust, dirt, chalky, or other foreign matter which would impair bond or bleeding through new finish. Thoroughly sponge wipe surfaces with clean water. Allow surfaces to thoroughly dry before priming, painting, calking, or sealing. Following sponge wiping, the surfaces shall be allowed to dry for a minimum of 24 hours.

3. Cracks and openings found at joints and where different materials abut each other (e.g. CMU/concrete, CMU or concrete/wood, etc.) shall be sealed with a caulking compound compatible with the substrate and primer/paint. The caulking shall be applied and allowed to set in accordance with the manufacturer's recommendations and instructions.

4. Mildew Removal: Remove all mildew and sterilize the surface to be painted using one of the following methods:

a. Apply a treatment solution composed of the following ingredients and in the noted proportions to the affected surface using a sponge of low-pressure sprayer:

2/3 cup TSP
One quart household bleach
3 quarts warm water

Note: Household bleach shall not be mixed with ammonia or any detergents or cleaners containing ammonia as this will create a poisonous gas.

Scrub the surface as necessary to completely remove the mildew.

b. Apply a commercial mildew treatment solution such as Purex, Jomax Remover or equal in strict accordance with the manufacturer's recommendations and instructions.

c. Following treatment, the surface shall be cleaned with potable water and allowed to thoroughly dry before priming, painting or the applying of sealing and caulking

compounds.

B. The Painting Contractor shall be wholly responsible for the finish of his work and shall not commence any part of it until surfaces are in proper condition. If Painting Contractor considers any surfaces unsuitable for proper finish of his work, he shall notify the Consultant of this fact in writing and he shall not apply any material until the unsuitable surfaces have been made satisfactory, or until the Consultant has instructed him to proceed. Major defects shall be restored by the proper trades. In general, follow paint manufacturer's directions for surface preparation for the paint to be applied.

C. Remove all hardware, hardware accessories, machined surfaces, plates, lighting fixtures, and similar items in place and not to be finish-painted, or provide surface-applied protection prior to surface preparation and painting operations. Remove, if necessary, for the complete painting of the items and adjacent surfaces. Following completion of painting of each space or area, reinstall the removed items by workmen skilled in the trades involved.

D. Puttying of nail holes, cracks, and blemishes shall be done after priming coat has become hard and dry and before second coat is applied.

E. Surfaces adjacent to areas being finished shall be protected and left clean of paints, etc. Clean drop cloths shall be used until completion of job.

F. Unprimed galvanized metal shall be washed with a solution of chemical phosphoric metal etch and allowed to dry.

G. Metal surfaces shall be made clean and free of any defects or condition that may produce unsatisfactory finish. Touch-up any chipped or abraded places on surfaces that have been shop coated with the proper primer.

H. Gypsum Board:

1. Surface Cleaning: Surfaces shall be dry. Remove loose dirt and dust by brushing with a soft brush or rubbing with a dry cloth prior to application of the first coat material.

2. Repair of Minor Defects: Prior to painting, repair joints, cracks, holes, surface irregularities, and other minor defects with patching plaster or spackling compound and sand smooth.

3.02 PAINT APPLICATION

A. General:

1. Apply coating materials in accordance with SSPC-PA 1. SSPC-

PA 1 methods are applicable to all substrates, except as modified herein. Thoroughly work coating materials into joints, crevices, and open spaces. Touch-up damaged coatings before applying subsequent coats.

2. Work shall be done in a workmanlike manner by skilled and experienced mechanics and shall conform to the best painting practices.

3. Materials shall be applied in accordance with the manufacturer's specifications and the finished surfaces shall be free from runs, sags, drips, ridges, waves, laps, streaks, brush marks, and variations in color, texture, and finish (glossy or dull). The coverage shall be complete and each coat shall be so applied as to produce a film of uniform thickness. No paint, varnish or enamel shall be applied until the preceding coat is thoroughly dry and acceptance.

4. No exterior painting of unprotected surfaces shall be done in rainy, damp weather. Coats shall be applied only to surfaces that are thoroughly dry.

5. Interior areas shall be broom clean and dust free before and during the application of coating material.

6. Mixing shall be done outside the building.

B. Application:

1. Paint application shall be by brush, roller, airless spray painting, or combination thereof or as required by manufacturer. Nuts and bolts shall be brush painted in lieu of spray-painted.

2. Where airless spraying is provided, a nozzle of the proper size in accordance with the paint manufacturer's recommendations to properly apply the paint shall be used.

3. Spray painting method shall be used only under accepted conditions. Spraying shall be done only when there is no wind, or under very low wind velocity. When wind velocity increases, all spraying operation shall be stopped. Before start of spraying, all surfaces that do not require painting shall be completely masked and protected. Adequate drop cloths shall be provided over floors, adjacent sidewalks, and over all cars parked nearby that may be stained or damaged from the spray work.

4. Drying Time: Allow time between coats, as recommended by the coating manufacturer, to permit thorough drying. Provide each coat in specified condition to receive the next coat.

5. Primers and Intermediate Coats: Do not allow primers or intermediate coats to dry more than 30 days, or longer than recommended by the manufacturer, before applying subsequent coats. Follow manufacturer's recommendations for surface preparation if primers or intermediate coats are allowed to dry longer than recommended by manufacturers of subsequent coatings. Each coat shall cover the surface of the preceding coat or surface completely, and there shall be a visually perceptible difference in shades of successive coats.

6. Finished Surfaces: Provide finished surfaces free from runs, drops, ridges, waves, laps, brush marks, and variations in selected colors.

C. Colors: Each coat shall be tinted a different shade from the preceding coat. Colors shall be in accordance with the color schedule on the drawings or as selected by the Consultant.

D. Finish Film Thickness: Apply primer, intermediate, and finish coats to not less than 1.5 mils dry film thickness, 4 mils wet unless recommended otherwise in writing by the manufacturer, for each coat and in accordance with the manufacturer's recommendations. Verify mil thickness by use of a suitable wet film gauge. Use a Tooke or other dry film gauge to test for total dry film thickness.

3.03 MISCELLANEOUS

A. Installation of Removed Items: After completion of final paint coat, removed items shall be reinstalled.

B. At the completion of other trades, touch-up damaged surfaces.

3.04 CLEAN-UP

A. During the progress of the work, all debris, empty crates, waste, drippings, etc., shall be removed by the Contractor and the grounds about the areas to be painted shall be left clean and orderly at the end of each work day.

B. Upon completion of the work, staging, scaffolding, containers, and all other debris shall be removed from the site. All paint, shellac, oil or stains splashed or spilled upon adjacent surfaces not requiring treatment (hardware, fixture, floor) shall be removed and the entire job left clean and acceptable.

END OF SECTION

DIVISION 13 - SPECIAL CONSTRUCTION

SECTION 13281 - ASBESTOS ABATEMENT

PART 1 - GENERAL

1.01 SUMMARY

A. In performing this project, all possible safeguards, precautions and protective measures shall be utilized to prevent exposure of any individual to asbestos particulates.

1.02 DESCRIPTION OF WORK

A. Furnish all labor, materials, equipment, and services, necessary to carry out the safe removal and disposal of asbestos containing material in compliance with these specifications, EPA, OSHA, State of Hawaii regulations, and any other applicable Federal and State regulations. Whenever there is a conflict or overlap of the above references, the most stringent shall apply. The asbestos work at the Leahi Hospital Atherton Building shall generally include:

1. Limited removal of the asbestos containing black mastic under two layers of non asbestos containing vinyl floor tile to allow for the safe removal of the doors located in the third floor hallways as identified in the Inspection Report and Project Drawings.

2. Contractor to coordinate all work with the HHSC hired Qualified Consultant. Contractor is responsible to satisfy himself as to the total extent of all work, including to but not limited to the quantity, location, thickness, layers, accessibility, etc. of all material prior to commencement of any work.

B. In general, the principal items of the asbestos removal work shall be as follows:

1. Worker Protection.

2. Decontamination Enclosure System.

3. Preparation of Work Area.

4. Removal of asbestos containing materials.

5. Removal of protective sheeting.

6. Disposal.

C. Cleaning shall include areas within and immediately around the work area affected by the abatement work and all areas contaminated by the Contractor's work.

D. The asbestos abatement work shall include removal of all asbestos containing materials within the work area as specified herein.

E. Contractor shall comply with all regulations pertaining to asbestos removal. If there is a conflict with the specifications, the more stringent requirement shall apply.

1.03 COORDINATION WITH OTHER SECTIONS

A. Prior to commencement of work, an annotated description of all existing damaged and missing items shall be submitted to HHSC. It will be the Contractor's responsibility to repair and/or replace, to the HHSC's satisfaction, all items identified as damaged and/or missing that cannot be proven to have been in this condition prior to the commencement of this project.

1.04 SUBMITTALS PRIOR TO WORK

A. Submit in accordance with SECTION 01330 - SUBMITTAL PROCEDURES.

B. Payment: Final payment will not be made until copies of all submittals have been furnished to and accepted by the HHSC. Submit one completed and compiled electronic copy of the submittal package, no later than 10 consecutive working days from award notice, which will include the items listed below.

C. Notices: As early as possible but prior to commencement of work, as regulated by each agency and before commencement of any on-site project activity, send a courtesy 10-day notice in accordance with 40 CFR Part 61.145 of Subpart M, of the proposed asbestos abatement work with copies to the HHSC and to the following agencies:

1. The Administrator of the Environmental Protection Agency (EPA) Regional Office having jurisdiction over the project.

2. State of Hawaii, Department of Health, "Notification of Demolition and Renovation" form. Send to: State of Department of Health, Indoor and Radiological Health Branch, 99-945 Halawa Valley Street, Aiea, Hawaii 96701.

D. Permits and Licenses: Copies of all permits, licenses (C-19) and arrangements for removal, transportation and disposal of asbestos containing materials and waste water.

E. Insurance: Proof of insurance for Workman's Compensation and General Liability which covers asbestos, lead, and pollution.

F. Manufacturer's Data: Copies of manufacturer's specifications, installation instructions and field test procedures for each material and all equipment related to asbestos handling and abatement and include other data as may be required to show compliance with these specifications and

proposed uses.

G. Samples: Samples of the following items for approval prior to ordering materials:

1. Surfactant: Copies of manufacturer's literature including all laboratory data, mixing and application instructions.

2. Tapes and Adhesives: Copies of manufacturer's literature including all laboratory data.

3. Warning Labels and Signs: Copies of examples of all required signage.

4. Protective Clothing: Copies of manufacturer's literature on all protective clothing and one sample of each item which will be returned to the Contractor.

5. Respirator Equipment: Copies of manufacturer's literature on all respirator equipment and one sample of each item which will be returned to the Contractor.

6. Asbestos Encapsulant(s): Copies of manufacturer's literature including all laboratory data, application instructions.

H. Work Plan: Submit a project Work Plan for the asbestos containing material disturbance work written and signed by the Contractor's State of Hawaii, Department of Health certified Asbestos Project Designer. The Contractor shall also provide detailed information concerning:

1. Preparation of the work area.

2. Personal protective equipment including respiratory protection, protective clothing and fall protection.

3. Decontamination procedures for the personnel who may be exposed to asbestos.

4. Handling and disposal methods and procedures to be used.

5. Required air monitoring procedures and sampling protocols.

6. Procedures for final cleanup.

7. A sequence of work and performance schedule in coordination with other trades.

8. Emergency procedures.

I. Shop Drawings: Submit shop drawings for the following items as a minimum:

1. Descriptions of any equipment to be employed not discussed in this section.

2. Security provisions, if any, in and around the project area.

3. Outline of work procedures to be employed.

4. Location of construction barriers.

5. Location of waste dumpster.

6. Staging of the work, the sequence.

7. Entrances and exits to the work place.

8. Location and construction of worker decontamination units.

J. Documentation for Instruction: Submit documentation that each and every individual, including foremen, supervisors, and other company personnel or agents and any other individual who may be exposed to airborne asbestos fibers, who may be responsible for any aspect of abatement activities, or who is allowed or permitted to enter areas where such exposure may occur has currently attended and passed the Abatement Worker and/or Abatement Contractor/Supervisor course, whichever is relevant to that workers responsibilities as specified in 40 CFR Part 763, "Asbestos Materials in Schools". These courses shall be EPA approved or approved by a State Accreditation Program in the most current listing of the Federal Register. No worker shall be allowed on site if they are found to have either an expired accreditation certificate or States not comply with the requirements set forth in 40 CFR Part 763 on training. All workers shall be certified for asbestos related work in accordance with Department of Health, Chapter 11-504, Hawaii Administrative Rules, *Asbestos Abatement Certification Program*. The Contractor shall be responsible for keeping the documentation up to date and subsequent submittals to the HHSC before any additional employee or individual, not currently on the list, is allowed within the project site. Submit completed and signed "Employee Acknowledgment of Instruction and Release" forms. A sample "Employee Acknowledgment of Instruction and Release" form is provided at the end of this section.

K. Documentation from Physician: Submit documentation from a physician that all employees or agents who may be exposed to airborne asbestos have been provided with an opportunity to be medically monitored to determine whether they are physically capable of working while wearing the respirator required without suffering adverse health effects. In addition, document that all individuals permitted within the project site have received medical monitoring or had such monitoring made available to them as required in OSHA 29 CFR 1926.1101. The Contractor must be aware of and provide information to the examining physician about unusual conditions in the workplace environment (e.g. high temperatures, humidity, chemical contaminants) that may impact on the employee's ability to perform work activities. The Contractor shall keep and make

available to all affected individuals a record and the results of such examinations.

L. HEPA Vacuums: Submit manufacturer's certification that vacuums conform to ANSI Z9.2-2018, Fundamentals Governing the Design and Operation of Local Exhaust Systems as applicable to this project.

M. Rental Equipment: When rental equipment is to be used in abatement areas or to transport asbestos contaminated waste, a written notification concerning intended use of the rental equipment must be provided to the rental agency with a copy submitted to the HHSC.

N. Emergency Planning Procedures: Contractor shall submit for review and acceptance by the HHSC, an emergency plan prior to abatement initiation.

1. Emergency procedures shall be in written form and prominently posted adjacent to the Worker Protection Notices specified hereinafter. Everyone prior to entering the work area must read and sign these procedures to acknowledge receipt of emergency exits and emergency procedures.

2. Emergency planning shall include notification of police, fire, and emergency medical personnel of planned abatement activities work schedule, and layout of the work area, particularly barriers that may affect response capabilities.

3. Emergency planning shall include considerations of fire, explosion, toxic atmospheres, electrical hazards, slips, trips and falls, and heat related injury. Written procedures shall be developed, and employee training procedures shall be provided in Contractor's plan.

1.05 SUBMITTAL AFTER WORK IS COMPLETED

A. Submit in accordance with SECTION 01330 - SUBMITTAL PROCEDURES.

B. Report: At the completion of the work, a final report shall be prepared by the Contractor for acceptance by the HHSC. One completed and compiled electronic copy of the report shall be submitted and shall include the items listed below.

1. The project name, Abatement Contractor, Abatement Contractor license number, notification form to the Hawaii Department of Health and EPA, work duration, material removed, respiratory protection employed, asbestos waste manifest, total quantity of waste, employee exposure air sample results, and results of the most current PAT round results for the laboratory or laboratories conducting the employee exposure air sample analysis.

2. Certification of the Abatement Contractor's employees.

3. Visitor/Worker Entry Log: The daily log of all personnel including the Contractor's employees and agents who enter the work area while asbestos abatement operations are in progress, until final clearance is received that the work area is asbestos free. The log shall contain the listed information as a minimum and shall be certified by the Qualified Consultant.

    a. Date of visit/worker entry.

    b. Visitor/Worker's name, employer, business address and telephone number.

    c. Time of entry and exit from work area.

    d. Purpose of visit.

    e. Type of protective clothing and respirator worn.

    f. Certificate of release signed and filed with the Contractor.

4. Certification Statement: A statement signed by the Asbestos Abatement Contractor that all asbestos abatement and disposal was completed in compliance with this specification, Federal and State regulations, and the approved Work Plan.

1.06 PRODUCT HANDLING

A. Delivery and Storage of Materials: Deliver materials to the site in original packages, containers or bags fully identified with manufacturer's name, brand and lot number. Store materials in a dry well-ventilated space, under cover, off the ground and away from surfaces subject to dampness or condensation as approved by the HHSC. Material that becomes contaminated with asbestos shall be disposed of in accordance with applicable regulations. Replacement materials shall be stored outside the contaminated work area until abatement is completed.

1.07 PROTECTION

A. Site Security: The work area is to be restricted only to authorized, trained, and protected personnel. These may include the Contractor's employees, employees of subcontractors, the HHSC and its representatives, State and local inspectors and any other designated individuals. A list of authorized personnel shall be established prior to job start.

    1. Entry to the work area by unauthorized individuals shall not be permitted without the express approval of the HHSC and any such entry shall be reported immediately to the HHSC by the Contractor.

2. A Visitor/Worker Entry Log shall be maintained.

3. The Contractor shall have control, subject to approval of the HHSC, of security in the work area and in proximity of Contractor's equipment and materials.

B. Site Protection and Safety: As a minimum follow the requirements of the EPA, HIOSH (State of Hawaii), and OSHA. Take all necessary precaution to ensure there is no asbestos contamination to those areas not included in the work schedule.

C. Protective Covering: The Contractor shall provide and install protective covering on an "as required" or "upon request" by the Qualified Consultant. Protective covering shall be clean plastic sheets minimum thickness of 6-mil.

D. Safeguarding of Property: The Contractor shall take whatever steps necessary to safeguard his work and also the property of the HHSC and other individuals in the vicinity of his work area during the execution of this Contract. He shall be responsible for and make good on any and all damages by his employees' negligence. Do not load structure with weight that will endanger the structure.

E. Completed Work: The Contractor shall provide all necessary protection for surfaces encapsulated under this section.

1.08 ABBREVIATIONS

A. ANSI: American National Standards Institute, Inc.

B. CFR: Code of Federal Regulations.

C. HIOSH: Division of Occupational Safety and Health, Department of Labor and Industrial Relations, State of Hawaii.

D. EPA: U.S. Environmental Protection Agency.

E. NESHAP: National Emission Standards for Hazardous Air pollutants.

F. NIOSH: National Institute for Occupation Safety and Health.

G. OSHA: Occupational Safety and Health Administration.

1.09 GENERAL REQUIREMENTS

A. Contractor shall examine and have at all times in his possession at his office (one copy) and in view at each job site office (one copy) a current issue of the following publications:

1. State of Hawaii, Department of Health, Title 11, Chapter 501-1, Asbestos Requirements.

2. State of Hawaii, Department of Health, Title 11, Chapter 501-2, Asbestos Containing Materials in Schools.

3. State of Hawaii, Department of Health, Title 11, Chapter 501-4, Asbestos Abatement Certification Program.

4. Title 29, Code of Federal Regulations, Section 1910.134 - General Industry Standard for Respiratory Protection, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor.

5. Title 29, Code of Federal Regulations, Section 1926.1101 - Asbestos, Construction Industry, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor.

6. Title 29, Code of Federal Regulations, Section 1910.2 - Definitions.

7. Title 29, Code of Federal Regulations, Section 1910.1200 - Hazard Communication, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor.

8. Title 40, Code of Federal Regulations, Part 61, Subparts A and M (Revised Subpart B), National Emission of Standards for Hazardous Air Pollutants, U.S. Environmental Protection Agency (EPA).

9. Guidance for Controlling Asbestos Containing Materials in Buildings, EPA 560/5-85-024 (Purple Book), U.S. Environmental Protection Agency (EPA).

10. Title 34, Code of Federal Regulations, Part 231, Appendix C, Procedures For Containing and Removing Building Materials Containing Asbestos, U.S. Environmental Protection Agency (EPA).

11. Title 29, Code of Federal Regulations, Section 1910.145 Specifications for Accident Prevention, Signs and Tags, Occupational Safety and Health Administration (OSHA), U.S. Department of Labor.

12. ANSI Z88.2-80 Practice for Respiratory Protection.

13. EPA, Final Response to the Asbestos Hazard Emergency Response Act (AHERA), 40 CFR, Part 763, Subpart E.

B. The Contractor shall comply with the above requirements and any applicable State and City and County of Honolulu regulations. Where conflict or any inconsistency among requirements or with this specification exists, the more stringent requirements shall apply. Ignorance of the above requirements and any applicable State and City and County of Honolulu regulations resulting in additional cost to the

Contractor shall be solely the Contractor's responsibility.

C. All regulations shall govern over these specifications, except that any more stringent specification or specification providing greater protection against asbestos exposure, injury, loss or liability, shall control to the extent permitted by regulation. Any question regarding conflict or inconsistency between specification and/or regulations should be directed to the HHSC.

D. Whenever approval of the HHSC is required prior to proceeding with other work, the following shall be complied with:

1. The Contractor shall allow the HHSC 72 hours from notification to respond to the request for inspection.

2. The Contractor shall designate one person (either a foreman or superintendent) who will be authorized to request for inspections. The name of the designated person shall be submitted in writing to the HHSC prior to commencing with the work. Request from any other person will not be considered an official request.

1.10 DEFINITIONS

A. Abatement: Procedure to control fiber release from asbestos containing building materials.

1. Removal: All herein specified procedures necessary to remove asbestos containing materials at an approved site in an acceptable manner.

2. Post-Removal Surface Encapsulation: Procedures necessary to coat surfaces from which asbestos containing materials have been removed and where designated on the drawings to control any residual fiber release.

B. Air Monitoring: The process of measuring the fiber content of a specific, known, volume of air in a stated period of time.

C. Amended Water: Water to which a surfactant has been added to reduce water surface tension and thereby provide a more rapid penetration.

D. Authorized Visitor: The HHSC, the Qualified Consultant, his representatives, air monitoring personnel, or a representative of any regulatory or other agency having jurisdiction over the project.

E. Holding Area: A secure area used for the storage of double-bagged asbestos containing material before removal from the project site to an approved disposal site.

F. Fixed Object: A unit of equipment or furniture in the work area which cannot be removed from the work area without dismantling.

G. Friable Asbestos: Asbestos containing material which can be crumbled to dust, when dry, under hand pressure.

H. HEPA Filter: A High Efficiency Particulate Air filter capable of trapping and retaining 99.97 percent of asbestos fibers greater than 0.3 micron in length.

I. HEPA Vacuum Equipment: Vacuuming equipment that utilizes a High Efficiency Particulate Air (HEPA) filter.

J. Surfactant: A chemical wetting agent added to water to improve penetration, thus reducing the quantity of water required for a given operation or area.

K. Post-Removal Encapsulation: A liquid material which can be applied to surfaces from which asbestos containing material has been removed to control the possible release of residual fibers, either by creating a membrane over the surface (bridging encapsulant) or by penetrating into the material and binding its components (penetrating encapsulant). Selected product shall be compatible with the existing finishes including wood, metal, and plastic.

L. Qualified Consultant: Consultant hired by the HHSC who will perform air monitoring and inspection during abatement work and shall have the authority to initiate engineering controls. The Qualified Consultant will be accredited as a State of Hawaii Department of Health accredited Asbestos Project Monitor.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Plastic Sheeting: Minimum thickness is 6-mil polyethylene film.

B. Plastic Bags: Minimum thickness 6-mil polyethylene film labeled as specified hereinafter.

C. Tapes: Tape shall be capable of sealing joints of adjacent sheets of polyethylene and for attaching polyethylene sheets to finished or unfinished surfaces of dissimilar materials and capable of adhering under both dry and wet conditions, including the use of amended water. Use cloth duct tape, minimum 2-inches wide or accepted equivalent.

D. Adhesives: Adhesives shall be capable of sealing joints of adjacent sheets of polyethylene and for attachment of polyethylene sheet to finished or unfinished surfaces of dissimilar materials and capable of adhering under both dry and wet conditions, including use of amended water.

E. Warning Labels and Signs: As required by OSHA regulations 29 CFR 1926.1101. Permanent signage for access panels and areas with

encapsulated asbestos containing materials shall be as specified hereinafter. Signage shall be as approved by the HHSC.

F. Protective Clothing: As specified hereinafter. The Contractor shall have all the required sets of coveralls required for this project on island prior to the start of work. There will be no time extension for the unavailability of coveralls or related equipment.

G. Post-Removal Encapsulation: The encapsulant shall be applied to surfaces from which asbestos containing material has been removed to control the possible release of residual fibers, either by creating a membrane over the surface (bridging encapsulant) or by penetrating into the material and binding its components (penetrating encapsulant) and shall be compatible with the existing finishes including wood, metal, and plastic.

H. Other Materials: Provide all other materials, such as, but not limited to lumber, plywood, nails, fasteners, metal studs, hardware, foam sealants, and caulking which may be required to properly prepare and complete this project.

2.02 TOOLS AND EQUIPMENT

A. General: Provide and fabricate suitable tools for the asbestos abatement procedures.

B. Water Sprayer: Airless or a pressure sprayer for amended water application as applicable.

C. Air Purification Equipment: High Efficiency Particulate Air (HEPA) filtration systems.

D. Paint/Encapsulant Sprayer: Airless type.

E. Other tools and equipment as necessary.

2.03 PERSONNEL PROTECTION REQUIREMENTS

A. The Contractor acknowledges he alone is responsible for instruction and for enforcing personnel protection requirements and that these specifications provide only a minimum acceptable standard.

B. Provide workers with sufficient sets of disposable protective full body clothing consisting of material impenetrable by asbestos fibers and of the proper size for each individual to accommodate movement without tearing. Such clothing shall consist of full body coveralls, footwear, gloves and headgear. Provide hard hats as required by applicable safety regulations. Disposable clothing shall not be allowed to accumulate and shall be disposed of as asbestos contaminated waste. Protective clothing shall be worn by all personnel within the work area from the start of the removal and post-removal encapsulation work until the work area has received its final clearance.

C. Insulated non-skid rubber boots or an accepted equivalent shall be required for all individuals entering the work area. Protective full body clothing without elastic at sleeves and legs shall require separate elastic or taped protection to seal the opening. Visitors shall be provided full body protective clothing.

D. No visitors shall be allowed in work areas, except as authorized by the HHSC. Visitors must supply their own respiratory protection and show proof training in accordance with DOH 11-501-504. Provide authorized visitors with suitable disposable protective full body clothing consisting of material impenetrable by asbestos fibers and of the proper size for each individual to accommodate movement without tearing. Such clothing shall consist of full body coveralls, footwear, gloves and headgear including hard hat when required and insulated rubber boots or equal. The Contractor shall include in his Bid the expense of a total of 2 changes of clothing per day for each day of asbestos abatement work for visitor's use. The quantity shall accumulate and may be used at any time during asbestos abatement work at the discretion of the HHSC.

E. All electrical systems used for asbestos abatement operations shall as a minimum be protected with "Ground Fault Circuit Interrupters" selected and installed in strict accordance with the manufacturer's instructions, the National Electric Code and all other pertinent codes.

F. Additional safety equipment (e.g. hardhats meeting the requirements of ANSI/ISEA Z-89.1-2014 R2019, eye protection meeting the requirements of ANSI/ISEA Z87.1-2015, safety shoes meeting the requirements of ASTM F2412-18a and ASTM F2413-24, disposable PVC gloves), as necessary, shall be provided to all workers and authorized visitors.

PART 3 - EXECUTION

3.01 SEPARATION OF WORK AREAS FROM NON-WORK AREAS

A. Penetrations: Windows and doors and any other openings to the work area, shall be sealed with 2 layers of 6-mil poly sheeting and secured with duct tape.

B. Emergency Exits: Designate and maintain emergency and fire exits from the work area in accordance with local codes and regulations. Provide knockout/cut away panels in the barriers in the direction of emergency egress. Properly mark the knockout/cut away panels, seal them airtight, and on a continuing basis instruct workers and authorized personnel as to their locations. Post a diagram in each Clean Room and Equipment Room locating the emergency exits. In case of fire while doing work in the work areas, emergency exit procedures have priority over normal work exiting procedures.

C. Inspection: The Contractor shall inspect all barriers at least twice a day (once prior to the start of each day's abatement operations and following

the day's abatement operations). Document the inspections and observations in a daily project log.

D. Emergency Exits: Designate and maintain emergency and fire exits from the work area in accordance with local codes and regulations.

3.02 DECONTAMINATION ENCLOSURE SYSTEMS

A. General: The Contractor shall construct the decontamination enclosure system or use portable units acceptable to the Qualified Consultant and as described in the approved Work Plan.

B. Personnel Decontamination Area: At a minimum provide a personnel decontamination area consisting of a Dirty Area, Wipe Down Area, and Clean Area.

C. Maintenance of Decontamination Area: At the beginning of each work shift and throughout abatement operations all areas shall be kept clean at all times.

1. Personnel Decontamination Area:

a. The Contractor shall maintain Clean Area and shall repair and sanitize respirator equipment after each use.

b. Disposable sanitary hand wipes shall be available at all times.

c. Provide a disposal bag for contaminated filters in the Wipe Down area at all times.

D. Worker Protection Notice: Post the following notice in each Clean Area:

1. Workers and authorized personnel, in order to enter the work area, shall:

a. Remove all clothing, unless it is to remain in the Dirty Area for eventual disposal.

b. Don the appropriate respiratory protection, follow all training procedures and manufacturer's instructions.

c. Don protective clothing (full body coveralls, gloves, boots, headgear etc.) after donning respirator.

2. All workers and authorized personnel, in order to leave the work area, shall:

a. Remove gross (visible) contamination from themselves and their equipment. Brush off dust with

a fine bristle brush and leave the brush outside the Equipment Room in the work area.

b. Enter the Dirty Area and keeping your respirator in place, remove all protective clothing, including full body coveralls, gloves, boots, and headgear. Place contaminated clothing in the bag(s) provided. Store reusable gloves and boots in their respective areas in the Dirty Area.

c. Respirator still in place, move into the Wipe Down area and wipe off thoroughly.

d. Proceed to the Clean Area: Get dressed and return respirator to its proper place.

e. No smoking, eating, drinking shall be allowed inside the work area or the decontamination enclosures.

3.03 COMMUNICATIONS

A. Provide a communications system suitable to monitor all activities within the work area and to readily transfer messages from one location to another.

3.04 WORK AREA PREPARATION

A. Work by the Asbestos Abatement Contractor:

1. Step 1:

a. Posting of Danger Signs: Post danger signs in and around the work area to comply with 29 CFR 1926.1101 and all other Federal, State and local requirements. Signs shall be posted at a distance sufficiently far enough away from the work area to permit a person to read the sign and take the necessary protective measures to avoid exposure.

b. Critical Seals (Barriers): Seal all windows, doors, and openings to the regulated work area including ducts, vents, electrical penetrations, and any other penetrations of the work areas with plastic sheeting. Plastic sheeting is to remain in place for the duration of the asbestos abatement or until specified by the QC.

c. Install another barrier or isolation method which prevents the migration of airborne asbestos and debris from the regulated work area.

d. Inspect the Building Openings: At the beginning of

each workday, the Contractor shall inspect and ensure that all doors, windows and other openings of affected building(s) and all surrounding buildings are closed and locked (as applicable).

e. Sealing Openings: Seal all penetrations with plastic sheeting sealed with tape.

2. Step 2:

a. Provide Decontamination Units/Areas where appropriate: Personnel Decontamination Unit(s) specified hereinafter shall be required.

3. Step 3:

a. Plasticizing: Objects which may be contaminated during abatement or difficult to clean shall be taped and sealed in a minimum of 6-mil polyethylene plastic sheeting. A minimum of 2 layers of 6-mil polyethylene plastic sheeting shall be used for preparation of critical barriers and containments.

b. When sealing (plasticizing), plastic sheet shall be protected against damages by sharp edges, projections, etc. Provide 2-inch squares of duct tape at all sharp projections prior to applying plastic sheet to prevent puncture and tearing.

c. NOTE: Combining lower mil thickness sheets to total the minimum mil thickness is not acceptable.

d. Marking Exits: Maintain and mark both normal and emergency exits from the work areas to include large tape or spray-painted orange arrows in the direction of egress and at curtained doorways which side of plastic sheeting to access first. One arrow marking shall be visible from every work location. Establish a color or designation system to distinguish normal exiting to the personnel decontamination unit and emergency exiting when life safety conditions prevail.

4. Step 4: After the sealing work is completed, notify the Qualified Consultant and get his approval prior to proceeding with abatement.

3.05 REMOVAL OF FLOOR TILES AND MASTIC

A. Thoroughly wet the affected floor covering with amended water before starting the removal.

B. Prevent contamination spreading to the surrounding public area. A fine spray of amended water shall be applied in small sections to reduce fiber release preceding the removal of the asbestos-containing material. Spray the asbestos containing material repeatedly during the removal operations to maintain a wet condition and to minimize asbestos fiber dispersion. The Qualified Consultant shall have the authority to stop all work due to improper removal techniques.

C. The asbestos-containing material shall be removed in small sections. Before beginning the next section, the material shall be packed while still moist into sealable 6-mil double polyethylene bags and sealed airtight. No removed material, whether bagged or unbagged, shall be allowed to dry, fall to the ground, be crumbled into small pieces, pulverized, or made friable.

D. It shall be the responsibility of the Contractor to verify the thickness of the material and satisfy himself as to the total work and/or effort to remove said material.

E. The contractor is prohibited from using methods of removal that create excessive amounts of dust and debris.

F. ACM will be removed using manual methods only; mechanical methods will not be used unless the area is completely enclosed in a negative pressure containments. This includes covering all walls, floor to ceiling, and all ceilings.

3.06 EQUIPMENT CLEANING

A. All contaminated equipment and tools used for removal work shall be washed and cleaned in the work area prior to removing them from the work area. No washing of contaminated equipment and tools will be allowed outside the work area.

3.07 ASBESTOS CONTAINING WASTE HANDLING

A. Collect and bag all asbestos debris and any other contaminated debris found in the work area. Clean the visible residual by wet wiping.

B. Debris shall be bagged and sealed in 6-mil plastic bags immediately after removal. All gross debris created by the removal process shall be bagged and sealed at the end of each removal day.

C. The bags containing the asbestos waste material shall be checked for evidence of waste material attached to the outside of the bags. If dirty, the bags shall be washed down in the work area. The bags are then moved to the Holding bin. Bags and containers shall be marked with OSHA label prescribed by the Hawaii OSHA regulations referenced in this Section. Label shall state, "DANGER - CONTAINS ASBESTOS FIBERS - AVOID CREATING DUST - CANCER AND LUNG DISEASE HAZARD." Additionally, label bags in accordance with OSHA 40 CFR 61.150; or EPA 40 CFR 763 if more restrictive. Labeling shall include the

name of the waste generator and the site where the waste was generated.

D. Asbestos contaminated waste with sharp edges (e.g. nails, screws, metal lath, etc.) will tear the polyethylene bags and sheeting and therefore shall be placed in drums or enclosed with cardboard and double wrapped and sealed with plastic.

3.08 CLEANING AND CLEARANCE OF THE WORK AREA

A. Should the Contractor fail to commence work to clean-up and make the work area asbestos free within one working day after the clean-up thereof has been requested by the HHSC, and thereafter to expeditiously complete the said clean-up, HHSC may without further notice and without termination of contract, have the clean-up done and deduct the cost thereof from the contract.

B. Visual Clearance of Removal Work Areas: Remove all visible accumulation of asbestos containing materials and debris by HEPA vacuums, sponging, and wet wiping. The work areas shall be totally visibly clean and remaining material encapsulated. The Contractor, in the presence of the Qualified Consultant, shall make a complete visual inspection of the work area to ensure dust-free conditions.

C. Once the Qualified Consultant certifies that the work areas are essentially clean of asbestos containing debris the other Contractors may proceed with their work. The removal of signage required by the Asbestos removal work shall be allowed after all asbestos containing material designated to be removed is removed. Signage applicable to job site safety and the performance of the remaining portions of the work shall remain as applicable.

3.09 DISPOSAL OF ASBESTOS CONTAINING MATERIAL

A. As the work progresses and asbestos containing waste is generated the Contractor shall transport all waste generated on a pre-scheduled day to the State of Hawaii, Department of Health's authorized disposal site, or as specifically approved by the HHSC to delay a disposal operation. Transport all waste to the predesignated disposal site in accordance with EPA regulations and specific landfill requirements. Contaminated material shall be double bagged in bags with an OSHA label prescribed by the HIOSH regulations referenced in these specifications. Label shall state, "DANGER - CONTAINS ASBESTOS FIBERS - AVOID CREATING DUST - CANCER AND LUNG DISEASE HAZARD." Additionally, label bags in accordance with OSHA requirement 29 CFR 1926.1101 or EPA 40 CFR 61.150 if more restrictive. Labeling shall include the name of the waste generator and the site where the waste was generated.

B. Mark vehicles used to transport asbestos containing waste material during the loading and unloading of the waste so that the signs are visible. The marking must be displayed in such a manner and location that a person can easily read the legend. Refer to 40 CFR Part 61.149

for lettering size, fonts and wording of sign requirements. For all loading and unloading activities, the sign referred to in 40 CFR Part 61.150 (b) (3) shall be displayed prominently.

C. Vehicles used for transporting waste to the disposal sites shall have a completely enclosed, lockable storage compartment. Storage compartments shall be plasticized and sealed with a minimum of one layer of 6 mil polyethylene sheeting on the sides and top and 2 layers of 6 mil polyethylene on the floor (bed). Waste materials, except those with sharp edges (metal lath, screws, nails, metal suspension system, etc.), properly double bagged may be transported to the disposal site without being placed in drums if the transporting vehicle is prepared as specified above in addition to any more stringent requirements by HIOSH. The compartments shall be thoroughly wet-cleaned and/or HEPA vacuumed following the disposal of each load at the disposal sites at an approved location with electrical power as required. At the conclusion of the asbestos abatement, or before transport vehicles are used for other purposes, the polyethylene sheeting shall be properly removed and disposed of as contaminated waste. After this has been accomplished, compartments shall once again be wet cleaned and HEPA vacuumed in order to eliminate all debris.

D. At the landfill, upon delivery of the waste for disposal, the Contractor shall notify the Scale Attendant and Landfill Spotter that the waste to be disposed of is asbestos material.

E. Workers unloading bags at the disposal sites shall be dressed in full body protective clothing and dual cartridge respirators.

F. Waste disposal manifest forms shall be properly completed to assure custody and disposal of all asbestos containing material and asbestos contaminated waste at approved disposal sites. Forms shall be kept on file as directed by the HHSC with copies submitted to the Qualified Consultant the next working day after each trip. NOTE: IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASSURE THAT ANY LANDFILL USED FOR DISPOSAL OF ASBESTOS-CONTAINING OR ASBESTOS CONTAMINATED WASTE IS APPROVED FOR THAT PURPOSE.

G. Bags must be placed in the hole for burial. Dumping of bags from the containers will not be allowed. However, if a bag is torn and if acceptable by the landfill, the entire container may be buried.

H. Liquid waste for disposal shall be filtered as specified herein.

I. The Contractor shall pay the waste disposal charge and any special handling charges at the landfills. All expenses for landfills shall be the complete responsibility of the Contractor. The bagged material shall be loaded in drums except as noted previously and transported to a landfill authorized by the State Department of Health to accept material containing asbestos. In the event the bag is torn, the tear shall be immediately mended with duct tape and the bag placed into another bag

and sealed, and the wrapped material covered with another wrap and sealed. The Contractor shall make all prior arrangements with the landfill.

3.10 LOCK DOWN

A. After clean-up of gross contamination and final visual inspection, a compatible post removal (lockdown) encapsulant shall then be spray applied to all surfaces. The removal area shall include but not to be limited to constructed enclosures, barriers, polyethylene sheeting that covers any equipment articles to be discarded, critical barriers, air locks, load out units for bag removal, and on-site constructed decontamination unit.

3.11 CONTRACTOR RESPONSIBILITIES

A. The Contractor shall be responsible for his employees' personnel protection, personal air monitoring and necessary records as required by OSHA (29 CFR 1926.1101) and all other applicable laws and as required in these specifications. The Contractor shall provide all required documentation to the HHSC. Contractor shall collect daily personal air samples on at least 25 percent of the personnel performing removal work with the most exposure for the duration of the project.

B. The Contractor shall procure legally required reports for air monitoring as part of the contract. All air monitoring reports shall include all field data, laboratory reports, test results and other pertinent information about the daily work activities.

Asbestos Notification of Demolition & Renovation
(Ref. HAR Chapter 11-501)

SEND TO: **STATE DEPARTMENT OF HEALTH**
INDOOR AND RADIOLOGICAL HEALTH BRANCH
99-945 HALAWA VALLEY STREET
AIEA, HAWAII 96701
Phone (808) 586-5800 Fax (808) 586-5811

I. Type of notification: O=original R=revised C=cancelled		
II. Type of operation: D=Demolition R=Renovation OD=Ordered Demolition ER=Emergency Renovation		
III. Facility information		
Owner name:		
Address:		
City:	State:	Zip code:
Contact person:		Telephone #:
Removal contractor:		License #:
Address:		
City:	State:	Zip code:
Contact person:		Telephone #:
Other operator:		
Address:		
City:	State:	Zip code:
Contact person:		Telephone #:
IV. Is asbestos present (y/n): Inspector's name:	Certification #:	State of certification:
V. Facility description (Include building number, floor and room number)		
Building name:		
Address:		
City:	State:	Zip code:
Location(s) on site:		
Building size (sq. ft.):	# Floors:	Age:
Present use:	Prior use:	
Official Use Only		
Postmark Date:	**Received by:**	**State Record Number:**

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VI. Procedure used to detect the presence of asbestos Laboratory name: Analytical method:			
VII. Specify the nature of the asbestos material (TSI, surfacing, VAT, miscellaneous):			
Amount of asbestos, including: 1. RACM to be removed 2. CAT I left in place, and 3. CAT II left in place	RACM to be removed	Nonfriable ACM (not) to be removed	
		Category I	Category II
Pipes (linear ft.)			
Surfacing (square ft.)			
Facility components (cu. ft.)			
Scheduled asbestos abatement dates Start (mm/dd/yy): Finish (mm/dd/yy) Circle workdays and times: weekdays: daytime nighttime weekends: daytime nighttime			
Scheduled renovation/demolition dates Start (mm/dd/yy): Finish (mm/dd/yy) Circle workdays and times: weekdays: daytime nighttime weekends: daytime nighttime			
Description of the planned renovation/demolition work and methods to be used:			
Description of the work practices and engineering controls to be used to prevent emissions of asbestos from the work-site: Project designer name: Certification #: State:			
XII. Waste transporter #1			
Name:			
Address:			
City:	State:	Zip code:	
Contact Person:	Telephone:		
Waste transporter #2			
Name:			
Address:			
City:	State:	Zip code:	
Contact Person:	Telephone:		
XIII. Waste disposal site			
Facility Name:	Telephone:		
Address:			
City:	State:	Zip code:	

XIV. For demolition ordered by a government agency, please identify	
Name:	Title:
Authority (Agency):	
Date of order (mm/dd/yy):	Date ordered to begin (mm/dd/yy):
XV. For emergency renovations (Please call 808-586-5800 for additional instructions)	
Date and time of emergency Date (mm/dd/yy): Time: (a.m./p.m.)	
Description of sudden, unexpected event and the damage caused:	
Explanation of how the event caused an unsafe condition or would cause equipment damage or an unreasonable financial burden:	
Person contacted for approval at the Indoor and Radiological Health Branch: Name: Date (mm/dd/yy): Time: (a.m./p.m.)	
XVI. Description of procedures to be followed in the event that unexpected asbestos is found or previously nonfriable asbestos material becomes crumbled, pulverized or reduced to powder:	
XVII. I certify that an individual trained in the provisions of Hawaii administrative rules chapter 11-501, and certified as a contractor/supervisor, will be on-site during the entire renovation and/or demolition and evidence that the required training has been accomplished for this and all workers will be available at the work-site. Signature of owner/operator Date (mm/dd/yy):	
XVIII. I certify that the information on this notification is correct. Signature of owner/operator Date (mm/dd/yy):	
XIX. Additional Comments:	

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VISITOR/WORKER ENTRY LOG
(Sample)

DATE

PROJECT

ALL PERSONNEL MUST SIGN-IN AND SIGN-OUT EVERY TIME THEY ENTER/EXIT THE WORK AREA. PLEASE PRINT CLEARLY. ATTACH EMPLOYEE RELEASE FORM FOR ALL VISITORS.

NAME	EMPLOYER Name, *Address, *Phone	TIME IN	TIME OUT	*PURPOSE OF VISIT	**TYPE OF PPE ISSUED

*NOT required of Contractor's employees

** Type of PPE (Personal Protective Equipment) Issued to include list of protective clothing worn and type of respirator used (Type "C", half-face dual cartridge, etc.)

EMPLOYEE ACKNOWLEDGMENT OF INSTRUCTION AND RELEASE FORM
(sample)

Employee Name: _____

Employee Address: _____

Employee Telephone No.: _____

DOH Asbestos Certification Number: _____

Classification of Worker: _____

Have you had in the past, or present, any respiratory problems?

Yes: _____ No: _____

Have you worked in the past with asbestos or fiberglass type materials?

Yes: _____ No: _____

The project you will be working on involves the use of asbestos and the removal of the asbestos from the building. Asbestos is considered a health hazard.

The company is supplying all necessary safety clothing and working conditions required and necessary for your protection from asbestos hazard.

You shall be instructed a commencement of the job on the required use of safety equipment, clothing, working conditions and procedures. These must be rigidly adhered to. Smoking is not permitted in the work areas. Disregarding of safety instructions shall result in instant dismissal.

I acknowledge that safety instructions have been given to me by the company at my work commencement and I am thoroughly conversant with them and have answered the above questions truthfully.

Signed: _____
Employee

Date: _____

ASBESTOS DISPOSAL FORM
(sample)

Date:_____

Owner or Operator of Landfill:_____

Name:_____

Address:_____

City:_____State:_____ Zip:_____

Phone:_____

Name of Landfill:_____

Name:_____

Address:_____

City:_____State:_____ Zip:_____

Phone:_____

Hauler:_____

Approximate Volume of Asbestos Received: _____

Type of Container Asbestos is in:_____

Asbestos Container Labeled? YES:_____ NO:_____

I certify that the above statements are true and that the landfill has been approved for the disposal of asbestos. The delivered material will be covered within 6 inches (15 cm.) of non-asbestos material within 24 hours.

Signed:_____

Landfill Owner-Operator:_____

END OF SECTION

SECTION 13282 - LEAD PAINT CONTROL MEASURES

PART 1 - GENERAL

1.01 SUMMARY

A. In performing the handling of building components with lead, all possible safeguards, precautions and protective measures shall be utilized to prevent exposure of any individual to lead particulates.

1.02 DESCRIPTION OF WORK

A. Furnish all labor, materials and equipment necessary to carry out the safe removal, clean-up, proper handling, transportation and disposal of existing lead paint and building components with lead paint with all applicable laws and regulations concerning lead, including all incidental and pertinent operations. The lead work at the Leahi Hospital Atherton Building shall generally include:

1. Incidental disturbance of lead paint during the renovation activities as identified in the Inspection Report and Project Drawings.

2. Spot removal and disposal of intact paint from the various surfaces to allow for safe renovation/demolition and/or new work as identified in the Inspection Report and Project Drawings.

3. Selective demolition, removal and disposal of lead painted items as identified in the Inspection Report and Project Drawings.

B. The Contractor shall be responsible for ensuring that all work generating lead debris conforms to the following applicable federal, state and local laws, codes, rules and regulations.

1. Occupational Safety and Health Administration (OSHA); Hawaii Occupational Safety and Health (HIOSH) standards and rules.

2. Environmental Protection Agency (EPA), Toxic Substance Control Act (TSCA), 40 CFR Part 745, Lead, Requirements for Lead Based Paint Activities in Target Housing and Child Occupied Facilities.

3. Environmental Protection Agency (EPA), Resource Conservation and Recovery Act (RCRA) of 1976, amended in 1980 and 1984.

1.03 COORDINATION WITH OTHER SECTIONS

A. The Contractor shall coordinate all of his lead paint removal and demolition of lead components with the HHSC Representative and the Owner Rep.

1.04 CONTRACTOR RESPONSIBILITIES

A. The Contractor acknowledges that he alone is responsible for the instruction and for enforcing personnel protection requirements and that these specifications provide only a minimum acceptable standard. Contractor shall comply with all requirements of 29 CFR 1926.62. The Contractor shall also be responsible for complying with all applicable EPA regulations in regards to lead containing materials.

B. Respirators: Use appropriate respirators and filters which meet all requirements of OSHA 29 CFR 1926.62.

C. Protective Clothing: Use appropriate personal protective clothing (disposable suits, eye protection, gloves, etc.) as required by OSHA 29 CFR 1926.62.

1.05 GENERAL REQUIREMENTS

A. The work specified herein shall include the handling of components coated with lead based paint and paint with lead, transportation and disposal procedures as required of lead containing materials by persons with at least EPA Lead Training. This work must be performed in compliance with all applicable federal, state, and local regulations and be performed by workers who are capable of and willing to perform the work of this contract.

B. Applicable Standards and Guidelines: All work under this contract, and any other trade work conducted with the project, shall be done in strict accordance with all applicable federal, state and local regulations, standards and codes governing lead demolition, transportation and disposal of lead materials.

1. The most recent edition of any relevant regulation, standard, document or code shall be in effect.

C. Specific Statutory and Regulatory Requirements:

1. Title 29, Code of Federal Regulations, Section 1926.62, entitled "Lead Exposure in Construction; Interim Final Rule".

2. Title 29 Code of Federal Regulations Part 1910.134, Respiratory Protection.

3. Federal Register: Vol. 54, No. 131; Tuesday, July 11, 1989. Department of Labor, Occupational Safety and Health Administration; 29 CFR Parts 1910, 1915, 1917, and 1918; Occupational Exposure to Lead; Statement of Reasons; Final Rule.

4. Title 40 Code of Federal Regulations Part 61, National Emissions Standards for Hazardous Air Pollutants.

5. Title 40 Code of Federal Regulations Part 745, Lead; Requirements for Lead Based Paint Activities in Target Housing and Child Occupied Facilities; Final Rule.

6. Guidelines for the Evaluation and Control of Lead Based Paint Hazards in Housing.

1.06 DEFINITIONS

A. Action Level (AL): Employee exposure averaged over an 8-hour period, without regard to the use of respirators, to a particular airborne concentration. OSHA requirements become effective at this level. Lead: 30 micrograms per cubic meter of air.

B. Air Monitoring: The process of measuring the content of a specific, known, volume of air in a stated period of time. For this project, NIOSH 7082 method for lead monitoring.

C. Authorized Visitor: The HHSC Representative, their representatives, air monitoring personnel, or a representative of any regulatory or other agency having jurisdiction over the project.

D. Competent Person: Person employeed or hired by the Contractor, who is educated and trained in recognizing and evaluating work place hazards and stress (in this instance, lead demolition and related work in accordance with 29 CFR 1926.62) and providing guidance on the methods and means of removing or correcting such hazards and stresses within the work environment.

E. Contaminated Area: An area where unwanted toxic or harmful substances exists.

F. HEPA Filter: A High Efficiency Particulate Air filter capable of trapping and retaining 99.97 percent of particulates greater than 0.3 micron in length.

G. Lead: Metallic lead, all inorganic lead compounds, and inorganic lead soaps. Excluded are all other organic lead compounds.

H. Monitoring Specialist: A person under the supervision of the Lead Superviosr who is trained in health and safety requirements for lead exposure and air-monitoring in accordance with 40 CFR 745, 29 CFR 1926.62.

I. Permissible Exposure Limit (PEL): The employer shall ensure that no employee is exposed to concentrations greater than the PEL as determined from an 8-hour time weighted average. Lead: 50 micrograms per cubic meter.

J. Personal Monitoring: Contractor's sampling of lead in air concentrations within the breathing zone of an employee to determine the 8-hour time

weighted average. The samples shall be representative of the employee's work tasks. The breathing zone shall be considered an area within 12-inches of the nose or mouth of an employee.

K. Qualified Consultant: Consultant hired by the HHSC who will perform air monitoring and inspection during lead disturbance work and shall have the authority to initiate engineering controls.

1.07 ABBREVIATIONS

A. CFR: Code of Federal Regulations.

B. HIOSH: Department of Occupational Safety and Health, Department of Labor and Industrial Relations, State of Hawaii.

C. EPA: U.S. Environmental Protection Agency.

D. NIOSH: National Institute for Occupational Safety and Health.

E. OSHA: Occupational Safety and Health Administration.

F. NESHAP: National Emissions Standards for Hazardous Air Pollutants.

G. LP: Lead Paint.

H. TCLP: Toxicity Characteristic Leaching Procedure.

1.08 SUBMITTALS PRIOR TO WORK

A. Submit in accordance with SECTION 01330 - SUBMITTAL PROCEDURES.

B. Payment: Final payment will not be made until copies of all submittals have been furnished to and accepted by the HHSC Representative. Submit one completed and compiled electronic copy of the submittal package no later than 10 work days from the notice of award unless otherwise specified in this section. The submittal package will include the items listed below.

C. Detailed Work Plan: The Contractor shall submit a project work plan for the lead disturbance work. The Plan shall be prepared by the Certified Industrial Hygienist. The Contractor shall also provide detailed information concerning:

1. Preparation of the work area.

2. Personal protective equipment including respiratory protection and protective clothing.

3. Employees who will participate in the project: include documentation of experience, documented proof of lead removal training based on 29 CFR 1926.62 and/or the proposed EPA

Model Accreditation for Lead Based Paint Removal Work Training, in addition to any current EPA regulatory requirements, and assigned responsibilities during the project.

4. Decontamination procedures for the personnel who may be exposed to lead.

5. Lead handling and disposal methods and procedures to be used.

6. Required air monitoring procedures and sampling protocols.

7. Procedures for final cleanup.

8. A sequence of work and performance schedule in coordination with other trades.

9. Emergency procedures.

D. Shop Drawings: Submit shop drawings for the following items as a minimum:

1. Descriptions of any equipment to be employed not discussed in this section.

2. Security provisions, if any, in and around the project area.

3. Outline of work procedures to be employed.

4. Location of the waste storage area.

5. Staging of the work, the sequence.

6. Entrances and exits to the work place.

7. Location and construction of worker decontamination units.

E. Competent Person: Qualification of the Contractor's Competent Person.

F. Notices: The Contractor shall obtain a Generator's EPA Identification number (if necessary) for the lead containing waste material generated from the project that is determined to be hazardous.

G. Insurance: Proof of insurance for Workman's Compensation and General Liability which covers asbestos, lead, and pollution.

H. Manufacturer's Data: Copies of manufacturer's specifications, installation instructions and field test procedures for each material and all equipment related to lead handling and abatement and include other data as may be required to show compliance with these specifications and proposed uses.

I. Documentation for Instructions:

1. Submit documentation satisfactory to the HHSC Representative that the Contractor's employees, including foremen, supervisors, and any other company personnel or agents who will be exposed to airborne lead dust or who shall be responsible for any aspects of the lead removal work activities, have received training in accordance with this specification, 29 CFR 1926.62, (OSHA Lead Awareness or the EPA Model Accreditation for Lead Based Paint Removal Work Training) and any current EPA regulatory requirements.

2. Submit to the HHSC Representative a written respiratory protection program meeting the requirements of 29 CFR 1910.134(b)(d)(e) and (f), documentation that all employees using respirators have received training, and documentation of respirator fit-testing for all Contractor employees and agents who will enter the work area wearing negative pressure respirators. The Contractor shall be solely responsible for his employee's personal protection.

J. Documentation from Physician: Before exposure to lead dust or fumes, the Contractor shall provide workers with a comprehensive medical examination as required by 29 CFR 1926.62, or whichever is stricter. This examination will not be required if adequate records show the employees have been examined as required by the aforementioned regulations within the last year.

K. Respirators: Submit document NIOSH approvals for all respiratory protective devices used on site. Include manufacturer certification of HEPA filtration capabilities for all cartridges and filters.

L. Emergency Planning Procedures:

1. The Contractor shall submit an emergency evacuation plan for the HHSC Representative’s acceptance prior to the commencement of work. This plan shall include consideration of fire explosion, toxic atmospheres, electrical hazards, slips, trips and falls, confined spaces and heat related injury. In non-life threatening situations, the injured or incapacitated employee shall decontaminate following normal procedures, with assistance from co-workers if necessary, before exiting the work area to obtain proper medical treatment. In life threatening situations, worker decontamination shall take least priority after measures to stabilize the injured worker, remove the injured worker from the work area, and secure proper medical treatment.

2. Emergency Response and Evacuation: The Contractor shall provide and document training in emergency response and evacuation procedures to all workers entering the work area.

M. Weekly Submittals During the Lead Disturbance Work: Copies of the following:

1. Contractor's weekly job progress reports detailing lead disturbance, handling, transportation, and disposal activities. In the job progress reports, the Contractor shall include information on the review of progress concerning previously established milestones and schedules, major problems and action taken, injury reports, equipment breakdown, and bulk material and air sampling results.

2. Work site entry logbooks with information on worker and visitor access.

3. Daily logs documenting filter changes on respirators, HEPA vacuums, and other engineering controls.

4. Waste disposal manifest forms for all lead containing waste material removed from the lead removal site and transported to the disposal site. The papers will include a chain-of-custody form with the names and addresses of the facility, the Contractor, the landfill operator, as well as the estimated quantity of lead containing waste material, and the number and type of containers used. The form shall be signed and dated by the Facility Owner, the Contractor, and the landfill operator as the material changes custody. If a separate hauler is employed, their name, address, telephone number, and signature also shall appear on the form.

N. Waste Disposal and Landfill Requirements: Contractor shall separate lead chips and debris from non-hazardous waste materials such as used plastics, disposable tools, etc. Contractor shall clean all bulk lead containing debris and waste from non-hazardous plastic, tools, suits, etc. prior to disposal.

1. If Toxic Characteristic Leaching Procedure (TCLP) test results of the containers of waste material are below the EPA limit the lead containing waste materials shall be disposed of at a landfill approved for such purposes. The Contractor shall submit to the HHSC Representative, documentation that the lead containing waste material removed from the work area has been accepted by the landfill Owner.

2. If the TCLP test results are above the EPA limit or if materials are identified as hazardous waste, the lead containing waste materials shall be disposed of at an EPA approved facility capable of accepting such hazardous waste.

3. The Contractor shall submit to the HHSC Representative, documentation that disposal of the lead containing waste material at the selected landfill is approved by the State of Hawaii, or the EPA approved mainland facility for hazardous lead containing waste material.

1.09 SUBMITTAL AFTER WORK IS COMPLETED

A. Submit in accordance with SECTION 01330 - SUBMITTAL PROCEDURES.

B. Report: At the completion of the work, a final report shall be prepared by the Contractor for acceptance by the HHSC Representative. One completed and compiled electronic copy of the report shall be submitted and shall include the items listed below.

1. The project name, Abatement Contractor, Abatement Contractor license number, EPA waste generator nimber, work duration, material removed, respiratory protection employed, waste manifest signed by the Contractor, waste transporter, and ladnfill operator, and total quantity of waste, TCLP lead reports, employee exposure air sample results, and results of the most current PAT round results for the laboratory conducting the employee exposure air sample analysis.

2. Certification of the Abatement Contractor's employees.

3. Visitor/Worker Entry Log: The daily log of all personnel including the Contractor's employees and agents who enter the work area while lead abatement operations are in progress, until final clearance is received from the Qualified Consultant. The log shall contain the listed information as a minimum and shall be certified by the Qualified Consultant.

a. Date of visit/worker entry.

b. Visitor/Worker's name, employer, business address and telephone number.

c. Time of entry and exit from work area.

d. Purpose of visit.

e. Type of protective clothing and respirator worn.

f. Certificate of release signed and filed with the Contractor.

4. Clearance: Clearance certifications received from the Qualified Consultant.

5. Certification Statement: A statement signed by the Abatement Contractor Contractor that all lead abatement and disposal was completed in compliance with this specification, Federal and State regulations, and the approved Work Plan.

PART 2 - PRODUCTS

2.01 TOOLS AND EQUIPMENT

A. General: Provide and fabricate suitable tools for the lead disturbance procedures.

B. Other tools and equipment as necessary.

2.02 PERSONNEL PROTECTION REQUIREMENTS

A. The Contractor acknowledges he alone is responsible for instruction and for enforcing personnel protection requirements and that these specifications provide only a minimum acceptable standard.

B. Provide workers with sufficient sets of disposable protective full body clothing consisting of material impenetrable by lead and of the proper size for each individual to accommodate movement without tearing. Such clothing shall consist of full body coveralls, footwear, gloves and headgear. Provide hard hats as required by applicable safety regulations. Disposable clothing shall not be allowed to accumulate and shall be disposed of as lead contaminated waste. Protective clothing shall be worn by all personnel within the work area from the start of the removal to final visual clearance.

C. Insulated non-skid rubber boots or accepted equivalent shall be required for all individuals entering the work area. Protective full body clothing without elastic at sleeves and legs shall require separate elastic or taped protection to seal the opening. Visitors shall be provided with full body protective clothing.

D. Additional safety equipment (e.g. hardhats meeting the requirements of ANSI/ISEA Z-89.1-2014 R2019, eye protection meeting the requirements of ANSI/ISEA Z87.1-2015, safety shoes meeting the requirements of ASTM F2412-18a and ASTM F2413-24, disposable PVC gloves), as necessary, shall be provided to all workers and authorized visitors.

PART 3 - EXECUTION

3.01 POTENTIAL LEAD HAZARD

A. The disturbance or dislocation of lead containing materials may cause lead containing dust to be released into the atmosphere, thereby creating a potential health hazard to the workers and the general public. Apprise all workers, supervisory personnel, subcontractors, consultants, authorized visitors, occupants and neighbors who will be at or near the job site of the seriousness of the hazard and of proper work and protective procedures which must be followed.

B. Where in the performance of the work, workers, supervisory personnel,

subcontractors, or consultants who may encounter, disturb, or otherwise function in the immediate vicinity of any identified lead containing materials, take appropriate continuous measures as necessary to protect all workers and the general public from the potential hazard of exposure to respirable airborne lead dust. Such measures shall include the procedures and methods described in the regulations of applicable federal, state and local agencies.

3.02 WORK AREA PREPARATION

A. Protect occupants, and surrounding area from possible contamination. Inform occupants of the removal work involving lead.

B. Treatment of Surfaces: During disturbance work, acceptable industry standard dust control methods shall be used to control dust (such as wetting items to be disturbed, by misting; provide dust screens; remove items in large, whole pieces; avoid crushing and pulverizing removal methods; encapsulate material prior to disturbance; use amended water; and containerize wet waste material). Prevent contamination spreading to the surrounding public and residential area.

C. Barriers: Standard barriers such as construction warning tape, fencing, etc. shall be used to prevent the general public access on to the work site. Seal any penetrations to the affected work area with 6 mil polyethylene plastic sheeting and duct tape.

D. NESHAP Compliance: Compliance with the requirements of EPA's NESHAP regulation is required for this project. Proper notification of the renovation of the building to the Department of Health shall be the Contractor's responsibility.

E. Ensure that all personnel working on site during the demolition work are properly trained and protected as required by law.

3.03 CLEANUP AND TESTING

A. Post-abatement visual clearance will be conducted by the Qualified Consultant.

B. All non-hazardous waste shall be removed from the site by the completion of the project. The Contractor, in the presence of the Qualified Consultant, shall collect representative samples of the waste stream for TCLP lead analysis. All hazardous waste shall be removed from the site to an EPA approved disposal facility within 90 days of the removal work.

C. Clean Up and Testing: Wet clean and HEPA vacuum clean surfaces and surrounding ground within the lead control area daily. Do not allow lead debris to accumulate. Restrict the spread of dust and debris. Keep waste from being distributed over the general area. Do not dry sweep or use compressed air to clean the area. When the removal operation has been completed, the area will be cleaned of all visible lead debris

contamination by vacuuming with a High Efficiency Particulate Air (HEPA) filtered vacuum cleaner followed by wet mopping where applicable. The Qualified Consultant will visually inspect the affected surfaces for residual lead debris and accumulated dust before the eventual removal of the lead controlled area. The Contractor shall reclean areas showing dust or residual lead debris or if he fails visual clearance. If recleaning is required, the process will be repeated until the visual clearance is given by the Qualified Consultant. Do not remove the lead control area or roped-off perimeter and warning signs prior to the receipt of the Qualified Consultant's lead clearance certification.

3.04 TRANSPORTATION AND DISPOSAL

A. Disposal of Hazardous Waste and Non-Hazardous Waste: Contractor shall separate potentially non-hazardous waste material (i.e. plastic sheeting, disposable protective suits, etc.) from hazardous waste material prior to testing. All other debris, scraps, waste materials, rubbish and trash contaminated with lead and contaminated dust from the immediate work area and place in UN approved (49 CFR 178) and appropriately labeled containers and store on site for TCLP lead testing. The Contractor shall be responsible for collecting and paying of all TCLP testing.

1. Local waste landfill facilities do not accept any RCRA hazardous waste. All hazardous waste must be disposed of at an EPA approved mainland U.S. hazardous waste disposal facility. Hazardous waste must be disposed of within 90 days of the waste being created.

2. Non-hazardous lead waste and debris may be disposed of at the local waste landfill facility that is approved to accept such waste.

a. Notify Non-Hazardous Waste Landfill Operator: The Contractor shall advise the Non-hazardous Waste landfill operator, at least 24 hours prior to transportation, of the material to be delivered.

b. Provide the Non-hazardous Waste Landfill Operator with applicable TCLP results which indicate that the waste material is non-hazardous.

B. Disposal of Non-Hazardous Construction Debris (TCLP for Lead Not Exceeding EPA Limits): Remove non-hazardous lead waste including, debris, scraps, waste materials, rubbish, and trash from the site and disposed of at a landfill approved for disposal.

C. The Contractor shall submit disposal manifest and receipts showing acceptance of all waste material by the approved waste disposal site to the HHSC Representative. The shipping papers shall include a chain-of-custody form and include names and addresses of the Facility Owner, the Contractor, and the Landfill Operator and information on the type and number of waste containers.

3.05 CLEARANCE CRITERIA

A. Visual clearance of the work area will be performed by the Qualified Consultant. Any additional clearance inspection initiated by the Contractor or required due to failure of the first set of clearance inspection, shall be at the Contractor's expense.

B. The Contractor shall remove all visible signs of any paint chip debris or painted building materials.

3.06 TESTING AND AIR MONITORING

A. The Qualified Consultant shall have the authority to instigate engineering controls during the project.

B. Testing, daily area (environmental) air monitoring and final clearance inspections shall be provided by the Qualified Consultant, for the purpose of:

1. Verifying compliance with this section and the applicable regulations listed in this section.

2. Ensuring that the documentation required by this section and by law is collected and reported to the HHSC Representative.

3. Instigating engineering control during the project.

3.07 CONTRACTOR RESPONSIBILITIES

A. The Contractor shall be responsible for all TCLP lead testing and analysis.

B. The Contractor shall be responsible for his employees' personnel protection, personal air monitoring and necessary records as required by OSHA, Hawaii State Law and all other applicable laws and as required in these specifications. The Contractor shall provide all required documentation to the HHSC Representative. Contractor shall collect daily personal air samples on at least 25 percent of the personnel performing removal work with the most exposure for the duration of the project.

3.08 MONITORING RESULTS

A. Airborne lead levels in areas adjacent to the work area or in any part of the work site impacted by the removal activities shall not exceed 30 micrograms per cubic meter of air.

B. If the ambient concentrations exceed 30 micrograms per cubic meter of air, the Contractor shall cease all work immediately in any work area causing or contributing to such a condition. The Contractor shall take remedial action (e.g. misting with more water, encapsulation, provide

dust screens, etc.) to reduce concentrations to acceptable levels.

C. The Contractor is solely responsible for monitoring his personnel in compliance with all OSHA and HIOSH requirements.

END OF SECTION

SECTION 13288 - ASBESTOS TESTING AND MONITORING

PART 1 - GENERAL

1.01 GENERAL CONDITIONS: The General Instructions to Offerors, the General Conditions, and Special Provisions preceding these specifications shall govern this section of the work.

1.01 SUMMARY

A. Abatement Contractor's Responsibilities for personnel monitoring and record keeping.

B. Project air monitoring and inspectional services for the purposes of:

1. Verifying compliance with the specifications listed in SECTION 13281 - ASBESTOS ABATEMENT.

2. Ensuring that the City and County of Honolulu's legally required documentation is collected.

3. Providing engineering controls during the project.

1.02 DEFINITIONS

A. ACM: asbestos containing materials.

B. Air Monitoring Specialist: A qualified person who enters the work area to set up the air monitoring device and then collects the various air samples to be sent to the laboratory for analysis.

C. Building representative(s): The person or persons designated by the users of the building to act on their behalf.

D. Competent Person: The Contractor shall employ a Competent Person who is educated and trained in recognizing and evaluating workplace hazards and stress and providing guidance on the methods and means of removing or correcting such hazards and stresses within the work environment.

E. Contractor: The construction firm engaged to remove, encapsulate and/or dispose of the ACM.

F. Consultant: The firm contracted by the HHSC to inspect the work of the Contractor during the removal, encapsulation and disposal of the ACM and is capable or has a subcontractor to perform air monitoring, sampling and testing before, during and after the asbestos removal and/or encapsulation.

G. Project Designer: The person or firm who prepared the plans and specifications to remove, encapsulate and dispose of the ACM. The Project Designer shall be certified by the State of Hawaii Department of Health as an Asbestos Project Designer.

H. Project Monitor: A person hired by HHSC that is certified by the State of Hawaii Department of Health as an Asbestos Project Monitor.

I. Qualified Consultant: Consultant hired by HHSC who will perform asbestos air monitoring and inspection during the asbestos disturbance work and shall have the authority to initiate engineering controls. The Qualified Consultant will be accredited as a State of Hawaii Department of Health accredited Asbestos Project Monitor.

1.03 COORDINATION WITH OTHER SECTIONS: Coordinate with the General Contractor's Consultant/Project Monitor for the testing and monitoring requirements included in SECTION 13281 - REMOVAL AND DISPOSAL OF ASBESTOS CONTAINING MATERIALS for testing/ air monitoring consultants or Project Monitor, and all applicable Federal, State and local regulations.

1.04 PRE-CONSTRUCTION CONFERENCE

A. Hold conference prior to construction and shall be conducted by the HHSC Representative assisted by the Project Designer.

1. Attendance: Present also shall be the Contractor, Project Designer and/or the Project Monitor and Building Representative(s). When the abatement Contractor is a Subcontractor to a General Contractor, a representative of the General Contractor shall also attend.

2. Agenda:

a. Review final schedule for project.

b. Verify legal requirements and special conditions.

c. Verify compliance with pre-construction requirement.

d. Obtain copies of all mandatory notifications.

e. Inspect sample respiratory equipment and other abatement equipment.

f. Review procedures and responsibilities.

g. Clarify the scope of work and its best impact on the users of the building.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 GENERAL CONTRACTOR'S RESPONSIBILITIES: Testing and monitoring will be supplied by the Contractor.

3.02 ABATEMENT CONTRACTOR'S RESPONSIBILITIES

A. The Contractor shall be responsible for providing the daily personal air monitoring and necessary records for all of the Contractor's employees for the duration of the project as required by OSHA (29 CFR 1926.62), and all other applicable laws.

B. The Contractor shall obtain the OSHA required reports for personnel air monitoring as part of the contract.

C. The Contractor shall be responsible for daily personal air samples that shall be collected on at least 25% of the Contractor's personnel performing removal work on similar tasks and for the duration of the project. Submit within 5 working days to the HHSC Representative.

D. The Contractor is solely responsible for protecting his workers, other personnel, and the public from any of his work activities at the work site and on HHSC property.

E. Monitoring information developed by the Contractor's Project Monitor's activities shall be for the use of the HHSC Representative. The information will be available and offered to the Contractor when developed, but not thereafter, and shall not waive the Contractor's obligations stated elsewhere in this section.

F. Air monitoring and testing which becomes necessary to follow up on the work by the Contractor which is rejected as not conforming to the requirements will be supplied by the HHSC Representative. However, the full cost of such additional monitoring and testing shall be borne by the Contractor and shall be deducted from the final contract payment.

G. Personal air monitoring that becomes part of the Consultant's scope of work shall be accommodated by the Contractor.

3.03 AIR MONITORING AND INSPECTIONAL SERVICES

A. Duties of the Project Monitor:

1. Photographic Record of Project: Record the asbestos abatement project with representative photos to the HHSC Representative. All photos shall become the property of the HHSC and are to be accompanied by a detailed log.

2. Project Log: Maintain daily field reports detailing all key activities during abatement and make a submittal of summary project activities to the project designer and the HHSC Representative. Incorporate the contents of the daily field reports with other project data into a final project report.

3. Visual Inspection of all Containment Areas: Perform regular inspection of all containment areas. Conduct inspections during the actual work performance of the Contractor to document the work practices employed by the Contractor and conduct visual clearances to verify that all materials scheduled for abatement were removed and the area was properly cleaned. Submit clearances to the HHSC Representative.

B. Air Monitoring: The Contractor's hired on-site Project Monitor shall perform the following activities associated with this portion of the project:

1. On-site environmental and personnel air monitoring as required by EPA, HDOH, OSHA, HIOSH, and the project specifications (See methodology below).

2. Laboratory analysis by PCM analysis using NIOSH 7400 method.

3. Monitoring of decontamination procedures at site entry/exit.

4. Monitoring of containment maintenance by visual and instrumental inspection.

5. Interface with project inspectors, building representatives, representatives of regulatory agencies, and project designers during site visits.

6. Ensure that proper respiratory protection is utilized by all persons at the project site.

7. Relay to the HHSC Representative any discrepancies in contractor's action with provisions of project specifications.

8. Act quickly in case of emergencies with appropriate response.

3.04 SAMPLING DESIGN

A. The following is a typical sampling design per containment area during the actual construction. The number of samples and volume quantities may vary, depending on each project's specifications.

1. Background Samples: Background baseline samples shall be taken prior to abatement to establish pre-abatement airborne fiber concentration levels. Three high volume continuous flow samples shall be taken per estimated containment area. All work area

samples shall be analyzed by the NIOSH 7400 method. All personal samples shall be analyzed in accordance with OSHA 29 CFR 1926.1101. The reference TWA (time weighted average) shall be established one day prior to the masking and sealing operations.

2. Work Area Samples: Low volume samples of 480 liters each shall be taken in the work area. Ambient air samples shall be taken in the work area for comparison to barrier samples in an to ensure that containment systems are secure and that the persons entering the work area are wearing proper respiratory protection. If monitoring inside and outside the asbestos abatement work area shows airborne concentrations have reached the predetermined specified TWA, the consultant shall stop all work, notify the State immediately, have the contractor correct the condition(s) causing the increase and ensure that the contractor obtains the State's approval prior to restarting the removal work.

3. Barrier Samples: Monitoring outside the temporary barriers determines if leakage is occurring outside the work area due to loss of negative pressure or faulty seals. Two high volume samples shall be taken per eight-hour day per barrier.

4. Outside Environmental Samples: Each removal area shall be sealed so that airborne fibers cannot escape into occupied areas. Air is forcibly drawn from the removal area by a negative air machine, filtered and exhausted to the outside environment. High volume samples shall be taken at the negative air unit exhaust to ensure compliance with the levels required by the project specifications and/or any applicable regulations. One sample per eight-hour day per containment area shall be taken.

5. Final Clearance Samples: For all interior removal work, the clearance air samples shall be collected for analysis by phase contrast microscopy. If the test results reveal that the air has been cleaned to the acceptable standards, the area may be opened for re-occupancy.

3.05 LABORATORY ANALYSIS: All air samples collected by the HHSC Project Monitor shall be analyzed by an AIHA certified laboratory for the analysis being requested. All laboratories shall be registered with the Hawaii Department of Health.

3.06 DAILY TESTING RECORDS: At the conclusion of every day's testing, the HHSC Project Monitor shall provide copies of all air monitoring records of each containment area to the HHSC Representative within 5 working days of collection.

END OF SECTION

SECTION 13289 - LEAD TESTING AND MONITORING

PART 1 - GENERAL

1.01 SUMMARY

A. In performing this project, all possible safeguards, precautions, and protective measures should be utilized to prevent exposure of any individual to lead.

1. These specifications are based upon procedures and standards derived from U.S. regulatory agencies (EPA, OSHA, NIOSH) and the Hawaii State Department of Health as well as from industry and sound industrial hygiene practice. They must be followed to ensure that no measurable amounts of contaminants are released to the uncontrolled work and public areas.

B. Testing, daily area air monitoring and visual inspections shall be provided by the Qualified Consultant hired by HHSC for the purpose of:

1. Verifying compliance with the specifications and the applicable regulations listed in SECTION 13282 - LEAD PAINT CONTROL MEASURES.

2. Ensuring that the HHSC legally required documentation is collected.

3. Providing engineering control during the project.

1.02 DEFINITIONS

A. Action Level (AL): Employee exposure, without regard to the use of respirators, to an airborne concentration of lead of thirty micrograms per cubic meter of air (30 $\mu g/m^3$) calculated as an 8-hour time-weighted average (TWA).

B. Building Representative: The person or persons designated by the users of the building to act on their behalf.

C. Contractor: The Construction firm engaged to remove and dispose of the materials painted/coated with lead.

D. Qualified Consultant: Consultant hired by HHSC who will perform air monitoring and inspection during abatement work and shall have the authority to initiate engineering controls. The Qualified Consultant will be accredited as a State of Hawaii Department of Health accredited Lead Supervisor.

E. Engineering Controls: Measures other than respiratory and other personal protection or administrative controls that are implemented at the worksite to contain, control, and/or otherwise reduce exposure to lead-

contaminated dust and debris. The measures include process and product substitution, isolation, and ventilation.

F. Project Designer: The person or firm, certified by the DOH, State of Hawaii, who prepared the plans and specifications to remove and dispose of the lead-containing materials.

G. Project Manager: The HHSC Representative responsible for administering the construction contract and ensuring that the work of the Contractor is conducted according to the contract documents and in compliance with applicable laws, regulations, ordinance, etc.

H. Project Monitor: A member of the construction management team who enters the work area to set up the air monitoring device and then collects the various air samples to be sent to the laboratory for analysis.

1.03 COORDINATION WITH OTHER SECTIONS

Coordinate with the HHSC Project Monitor for the testing and monitoring requirements included in Section 13282 - LEAD PAINT CONTROL MEASURES and all applicable Federal, State, and local regulations.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 CONTRACTOR'S RESPONSIBILITIES

A. The Contractor shall be responsible for providing the daily personal air monitoring and necessary records for all the Contractor's employees for the duration of the project as required by OSHA (29 CFR 1926.62), and all other applicable laws.

B. The Contractor shall obtain the OSHA required reports for personnel air monitoring as part of the contract.

C. The Contractor shall be responsible for daily personal air samples that shall be collected on at least 25% of the Contractor's personnel performing removal work on similar tasks and for the duration of the project. Submit within 5 working days to the HHSC Representative.

D. The Contractor is solely responsible for protecting his workers, other personnel, and the public from any of his work activities at the work site regardless of the testing and monitoring conducted by the HHSC.

E. Monitoring information developed by the Qualified Consultant's activities while under contract with the HHSC shall be for the use of the HHSC Representative. The information will be available and offered to the Contractor when developed, but not thereafter, and shall not waive the Contractor's obligations stated elsewhere in this section.

F. Air monitoring and testing which becomes necessary to follow up on the work by the Contractor which is rejected as not conforming to the requirements shall be the responsibility of the HHSC. However, the full cost of such additional monitoring and testing shall be borne by the Contractor and shall be deducted from the final contract payment.

G. Personal air monitoring that becomes part of the Consultant's scope of work shall be accommodated by the Contractor.

H. Prior to disposal of lead contaminated wastewater, one wastewater (as applicable) sample shall be collected by the Contractor, to determine whether it can be disposed of as non-hazardous waste or with an EPA approved hazardous waste disposal facility as hazardous waste. Contractor shall obtain and submit to the HHSC Representative, a permit to conduct such disposal into the sanitary sewer system prior to disposal. Disposal of all wastewater suspected of being contaminated with lead in the storm drain system is prohibited. Wastewater, no matter what its lead content, shall not be dumped on the ground. Contractor is ultimately responsible for and shall include in his bid the cost to properly dispose of all waste, hazardous or non-hazardous. Submit a copy of the permit to the HHSC Representative.

I. Perform lead Toxic Characteristic Leaching Procedure (TCLP) metals testing on all solid waste debris contaminated with lead (except for painted scrap metal), in accordance with 40 CFR Part 261 “Identification and Listing of Hazardous Waste”. Painted metal debris shall be separated from the rest of the lead-contaminated waste and disposed of as scrap metal at a metal recycler (when disposed of as scrap metal, TCLP testing is not required). The TCLP testing shall be used to determine whether waste is hazardous or non-hazardous prior to disposal. Dispose of lead-contaminated debris as hazardous waste if the waste is determined to be hazardous by the TCLP testing. If the TCLP testing indicates that the waste is non- hazardous, the Contractor shall dispose of the waste as non-hazardous, construction waste.

3.02 AIR MONITORING AND INSPECTIONAL SERVICES

A. Duties of the Qualified Consultant:

1. Photographic Record of Project: Record the lead abatement project with representative photos to the HHSC Representative. All photos shall become the property of the HHSC Representative and are to be accompanied by a detailed log.

2. Project Log: Maintain daily field reports detailing all key activities during abatement and make a submittal of summary project activities to the project designer and the HHSC Representative. Incorporate the contents of the daily field reports with other project data into a final project report.

3. Visual Inspection of all Containment Areas: Perform regular inspection of all containment areas. Conduct inspections during the actual work performance of the Contractor to document the work practices employed by the Contractor and conduct visual clearances to verify that all materials scheduled for abatement were removed and the area was properly cleaned. Submit clearances to the HHSC Representative.

B. Air Monitoring: The HHCS Project Monitor shall perform the following activities associated with this portion of the project:

1. Laboratory on-site personnel air monitoring (if not provided by the Contractor) as required by OSHA and HIOSH, and the project specifications.

2. Laboratory analysis for lead-in-air using NIOSH 7082 or OSHA method.

3. Monitoring of decontamination procedures at site entry/exit.

4. Monitoring of containment maintenance by visual and instrumental inspection.

5. Interface with project inspectors, building representatives, representatives of regulatory agencies, and project designers during site visits.

6. Ensure that proper respiratory protection is utilized by all persons at the project site.

7. Relay to the HHSC Representative any discrepancies in Contractor's action with provisions of project specifications.

8. Act quickly in case of emergencies with appropriate response.

3.03 LABORATORY ANALYSIS

All personal air samples collected by the Contractor shall be analyzed by an AIHA certified laboratory for the analysis being requested. All laboratories shall be registered with the Hawaii Department of Health.

3.04 DAILY TESTING RECORDS

At the conclusion of every day’s testing the HHSC Qualified Consultant/Project Monitor shall provide copies of all testing and monitoring records to HHSC.

END OF SECTION

DIVISION 16 – ELECTRICAL

SECTION 16010 - BASIC ELECTRICAL REQUIREMENTS

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes: Electrical power and lighting, telecommunications, and fire alarm system drawings are schematic and indicate general layout and approximate locations of outlets, switches, luminaires, feeder runs, devices, and other electrical equipment.

1. Make minor adjustments in layouts to ensure coordination.

2. Coordinate electrical devices' terminal locations with architectural drawings and interior drawings.

B. Review Contract Drawings and Specifications and verify locations of structural members, equipment, apparatus, and other conditions which may affect work of this Division. Provide conduit transitions and offsets, junction boxes, and similar fittings as necessary to install complete electrical systems. Accomplish and pay for modifications to indicated locations and arrangement to suit jobsite conditions.

C. Record Drawings: Maintain in accordance with DIVISION 1 Sections.

D. Coordinate work with wiring and equipment included in other Sections of the specifications.

E. Design and location indicated on Drawings are based on specified products and equipment. Provide modifications to materials, components and equipment required to accommodate products and equipment other than specified. Any equipment used in place of specified equipment must meet the standards and certifications of the specified equipment. Perform modifications, and additional testing and certification to substantiate compliance, at own expense.

F. Obtain Consultant's review of significant deviations from drawing layouts before performing the Work.

G. Consultant reserves the right to relocate any device within 10 feet of its indicated location up to the time of its installation without any change in Contract Sum.

1.02 SUBMITTALS

A. Submit under provisions of SECTION 01330 - SUBMITTAL PROCEDURES.

B. Proposed Products List: Include list of products and items proposed to be provided.

C. Submit shop drawings and product data grouped to include complete submittals of related systems, products and accessories in a single submittal.

D. Mark dimensions and values in units to match those specified.

E. Record Documents: Provide in accordance with DIVISION 1 Specification Sections.

F. Instruction of HHSC Representative's Personnel: Comply with procedures and requirements specified in DIVISION 1 Specification Sections and in applicable Sections of this Division.

G. Substitutions: Comply with SECTION 01330 - SUBMITTAL PROCEDURES.

H. Warranty: Submit warranty as noted under item entitled "WARRANTY" hereinbelow.

1.03 QUALITY ASSURANCE

A. Regulatory Requirements:

1. Building Code: International Building Code, Latest Edition.

2. Electrical: NFPA 70 National Electrical Code (NEC), 2017 Edition, ANSI C1 National Electrical Safety Code, and applicable NFPA regulations.

3. International Energy Conservation Code (IECC), 2015 Edition.

4. Lateral Forces: International Building Code, Latest Edition, Seismic Risk Zone 2.

5. Make arrangements and coordinate with Utility Companies requirements concerning their work.

6. Obtain permits and request inspections from authority having jurisdiction.

1.04 PROJECT CONDITIONS

A. Install work in locations shown on Drawings, unless prevented by project conditions.

B. Prepare clarification drawings and showing proposed rearrangement of work to meet project conditions, including changes to work specified in other Sections. Submit to Consultant for review before proceeding.

C. Coordinate work with the various trades. Where items must fit spaces previously constructed, verify measurements at the site. Insure that all required inserts and attachments are properly set and that adequate provision is made for installing this work.

D. Defective or Improper Work: Remove work or materials not acceptable, and replace with approved materials or work at own expense.

1.05 ELECTRICAL SYSTEM SUPPORT DEVICES

A. General:

1. Electrical equipment and materials shall not be suspended or supported from pipe, electrical conduit, ceiling systems or any nonstructural member.

2. Electrical equipment and systems shall be installed and enclosed to resist seismic forces in accordance with Lateral Forces requirements specified above.

3. Electrical systems and conduit shall not penetrate ductwork.

B. Concrete Anchoring: Use cast inserts in new construction; stamped metal inserts will not be acceptable. Expansion shells may be used in existing construction; powder actuated inserts will not be acceptable.

1.06 SEQUENCING AND SCHEDULING

A. Construct Work in sequence under provisions of DIVISION 1 Sections.

1.07 WARRANTY

A. Special Warranty: Provide special warranties specified in applicable section of DIVISION 16 - ELECTRICAL.

B. Warrant lamp sources for 50 percent of rated life.

PART 2 – PRODUCTS

Not used.

PART 3 – EXECUTION

Not used.

END OF SECTION

SECTION 16100 - BASIC MATERIALS AND METHODS

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:

1. Materials, equipment fabrication, installation and tests in conformity with applicable codes and authorities having jurisdiction.

2. Raceways.

3. Wire and cable.

4. Boxes.

5. Low voltage distribution equipment.

6. Motor controllers.

7. Wiring devices.

8. Supporting devices.

9. Telecommunication (voice and data) raceway system.

10. Grounding.

B. Related Sections:

1. DIVISION 9 - FINISHES.

2. Furnishing and setting of motors under the sections corresponding to equipment that have motors.

1.02 DEFINITIONS

A. Specifications are of a simplified form and include incomplete sentences. Words such as, “shall be”, “furnish”, “a”, “an”, “the”, etc., have been omitted for brevity.

1. “Furnish” or “provide”: To supply, install and connect up complete and ready for safe and regular operation of particular work referred to unless specifically otherwise noted.

2. “Install”: To erect, mount and connect complete with related accessories.

3. “Supply”: To purchase, procure, acquire and deliver complete with related accessories.

4. "Work": Labor, materials, equipment, apparatus, controls, accessories, and other items required for proper and complete installation.

5. "Wiring": Raceway, fittings, wire, boxes and related items.

6. "Concealed": Embedded in masonry or other construction, installed in furred spaces, within double partitions or hung ceilings, in trenches, in crawl spaces, or in enclosures.

7. "Exposed": Not installed under ground or "concealed" as defined above.

8. "Indicated", "Shown" or "Noted": As indicated, shown or noted on Drawings or Specifications.

9. "Similar" or "Equal": Of base bid manufacture, equal in materials, weight, size, design, and efficiency of specified product, conforming with "Base Bid Manufacturers".

10. "Reviewed", "Satisfactory", "Accepted" or "Directed": As reviewed, satisfactory, accepted, or directed by or to Consultant.

1.03 SUBMITTALS

A. Submit under provisions of SECTION 01330 - SUBMITTAL PROCEDURES.

B. Submittals shall be complete, bound under cover and indicating project title. Contractor shall review submittals for conformance with Contract Documents, make necessary revisions and submit to Consultant, indicating the following:

1. Manufacturer's name, brand name and catalog reference of equipment supplied.

2. Drawings pertinent to deviations from the Contract. Comply with all applicable references mentioned in this Section. Coordinate with other trades and field conditions and show dimensions and details including building construction and access for servicing.

a. Record Documents (as-built drawings): During progress of the work, maintain an accurate record of changes made in the work of this Section from the layout shown on the Drawings and the materials and methods described in this Section. Changes shall be recorded daily to assure completeness and accuracy.

b. Upon the completion of the work, submit to the Consultant for approval a reproducible set of the contract drawings modified to reflect all changes accrued during the work progress.

3. Detailed description of items supplied, including specifications, performance characteristics, materials, wiring diagrams and schedules.

4. Operation and maintenance instructions for circuit breakers and motor starters.

5. Installation, testing instructions and field test procedures for circuit breakers and motor starters.

6. List of manufacturer's recommended spare parts and address of nearest representative.

1.04 QUALITY ASSURANCE

A. All equipment and accessories to be the product of a manufacturer regularly engaged in its manufacture.

B. Supply all equipment and accessories new, free from defects and listed by Underwriters' Laboratories, Inc., or bearing its label.

C. Supply all equipment and accessories in compliance with the applicable standards listed in this Section and with all applicable United States and local codes.

D. All items of a given type shall be the products of the same manufacturer.

1.05 DELIVERY, STORAGE AND HANDLING

A. Equipment shall be shipped in its original packages, to prevent damaging or entrance of foreign matter. All handling and shipping shall be performed in accordance with manufacturer's recommendations. Provide protective coverings during construction.

B. Replace at no expense to HHSC Representative, equipment or material damaged during storage or handling, as directed by the Consultant.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Raceways:

1. Complete with boxes, fittings and accessories.

2. Rigid Steel Conduit: Full weight pipe, galvanized, threaded, minimum diameter 3/4 inch. Use for all exposed feeders, submains, branch circuits above finish slab to a height of eight feet.

3. Electrical Metallic Tubing (EMT): Thin wall pipe, galvanized, threadless, minimum diameter 3/4 inch.

4. Flexible Steel Conduit: Continuous single strip, 5 feet maximum per NEC, galvanized, 3/4 inch minimum diameter or larger as required for wiring. PVC covered for liquid tight. Provide ground wire in all flexible conduits.

5. Wireways: Complete with all fittings and accessories. Size as noted, baked enamel finish inside and outside, approved for support at minimum 10 feet on centers.

   a. Interior Use: Hinged cover and base, minimum thickness 16 gauge galvanized steel.

   b. Acceptable Manufacturer: Similar to Circle AW, Hoffman Engineering Co., Square D. Co., Universal Mfg. Co., or accepted equivalent.

6. Polyvinyl Chloride Covered Rigid Steel Conduit: Full weight pipe, galvanized, threaded, polyvinyl chloride covered on exterior, minimum diameter 3/4 inch. Use for underground locations.

B. Fittings and Accessories:

1. Raceway Fittings:

   a. Rigid Conduit: Steel or malleable iron, galvanized. Zinc die cast fittings; not permitted.

   b. EMT: Set screw type.

   c. Flexible Metallic Conduit: Angle wedge type with insulated throat.

   d. Bushings: Metallic insulated type. Weatherproof or dustight installations; liquid-tight with sealing ring and insulated throat.

   e. Expansion and Deflection Fittings: O.Z./Gedney Type “DX” or accepted equivalent.

2.02 600 VOLT WIRE AND CABLE

A. Complete with accessories; sizes AWG, except as noted.

B. Conductors:

1. Solid copper for sizes No. 10 and smaller and stranded copper for sizes No. 8 and larger.

2. General Uses: Minimum size No. 12. At 120 volts and over 100 feet circuit length, minimum size No. 10. At 277 volts and over 220 feet circuit length, minimum size No. 10.

3. Control and Alarm Wires: Minimum size No. 14. At 120 volts and over 200 feet circuit length, minimum size No. 12.

4. Increase raceway sizes as required for larger wires, as indicated, or in accordance with NEC Table 3A based on RHW wires.

5. Aluminum cables will not be permitted.

C. Insulation: 600 volt insulation types.

1. Branch Circuits: Type XHHW, THHN, or THWN.

2. Type MC: Branch circuits not including circuit home run. Public and back-of-house areas not including circuit home runs.

3. Color Coding: As per code. Where color coded insulation is unavailable, overlap color taping conductors (minimum length, six inches) in accessible and visible locations.

D. Accessories:

1. Tags:

a. Flameproof linen or fiber in accessible locations.

b. Feeders: Control or alarm: Indicate type of controls or alarm and points of origin and terminations with Brady wire markers in all junction boxes, cabinets, and equipment.

2. Terminations, Splices and Tapes:

a. Copper Conductors No. 10 and Smaller: Compression type connectors and clear nylon insulated covering.

b. Copper Conductors No. 8 and Larger: Hydraulic compression type using manufacturers recommended tooling.

c. Cable Lugs and Connectors: Compression type of same metal as conductor to match cables with marking indicating size and type.

d. For copper lug connections to bus bars provide anti-seize compound.

E. Manufacturer: Similar to General Cable, Anaconda, Anixter, or accepted equivalent.

2.03 BOXES

A. Outlet and small junction boxes shall be zinc-coated pressed steel of ample size. Light outlets shall be fitted with no-bolt type fixture studs as necessary for fixture support. Minimum size of outlet boxes, 4 inch square or octagon.

B. Extension or raised rings for pressed boxes pressed from NEC gauge steel and galvanized.

C. Provide all boxes in finished walls with plaster rings. Provide plaster ring and finish blank device plates for all small flush junction boxes.

D. Telecommunication outlets shall be as indicated and 4-11/16 inch square by 2 inch deep minimum junction boxes unless noted otherwise.

2.04 LOW VOLTAGE DISTRIBUTION EQUIPMENT

A. Disconnect Switches:

1. Non-fused or fused as indicated.

2. Voltage: 250 volts rated on 120/208 volt circuits and 600 volts rated on 277/480 volt circuits.

3. Heavy-duty, quick-make quick-break.

4. Horsepower rated for motor loads.

5. NEMA 1 indoors and NEMA 4X stainless steel in exterior locations.

6. Knife Blade Type Switches:

a. Load break type with arc quenchers.

b. Manufacturer: Similar to Westinghouse, Square D, ITE, General Electric, or accepted equivalent.

2.05 WIRING DEVICES

A. Local Wall Switches:

1. Heavy duty, toggle, quiet type, specification grade.

2. 20 amp, 120/277 volt, AC.

3. Similar to Hubbell Catalog Numbers as Follows:

a. Single pole, No. 1221-I/W/B.

4. Motion Sensor Light Switches:

a. Appropriate for use size and geometry of the room.

b. Infrared, ultrasonic or dual technology type as appropriate for the use, size and geometry of the room.

c. Cooper controls or accepted equivalent.

B. Insertion Receptacles:

1. Grounded, except as noted.

2. Similar to Harvey Hubbell Catalog Numbers as Follows:

a. Duplex Convenience - Specification Grade.

1) 125 volts, 2 pole, 3 wire, U-ground slot.

2) 15 amp, similar to 5262-I.

3) 20 amp, similar to 5362-I.

b. Special Receptacles: Specification grade, rating and type as indicated or to suit equipment served by the receptacle.

NOTE: Contractor responsible to verify exact configuration of special receptacles against plug types on equipment or provide matching plug and connection of plug to equipment.

3. Ground Fault Interrupter Receptacles: Self-protecting type, similar to Leviton Catalog No. 6598-I. Leviton Decora series in public areas.

C. Device Plates:

1. One piece solid.

2. For receptacles with other than 120 volt, inscribe voltage available.

3. Offices: Smooth plastic to match surface or as selected by the Consultant. Contractor shall coordinate with the Consultant or interior finish.

4. Securing screws shall match color of faceplate.

D. Acceptable Manufacturers: Similar to local wall switches, receptacles, device plate and pilot lights.

1. Arrow-Hart Inc.

2. Bryant Electric.

3. Harvey Hubbell Inc.

4. Leviton.

5. Cooper Wiring Devices.

6. Or accepted equivalent

2.06 INSERTS AND SUPPORTS

A. Maximum Loading: 75 percent of rating.

B. Inserts:

1. Expansion Cases and Concrete Fasteners: Grinnel Figure 117 and Series R or accepted equivalent.

2. Concrete drilled to receive required expansion cases of concrete fasteners.

3. All inserts shall be approved by the Structural Consultant.

C. Supports from Building Construction: Beam clamps, cantilever brackets, or other acceptable means after review.

D. Grouped Lines and Services: Supported by trapeze hangers of bolted angle or channels.

E. Where building construction is inadequate, provide additional acceptable framing after review.

F. All electrical equipment shall be installed as indicated and per Island of Oahu earthquake zone requirements.

2.07 TELECOMMUNICATION (VOICE AND DATA) AND TELEVISION SYSTEM

A. Empty conduit raceway system following BICSI EIA/TIA standards as indicated on the drawings.

B. Components:

1. Wall Outlets: 4-11/16 inch square with plastic ring and bushed coverplate.

2. Device plates for telecommunication outlets shall be single gang provided by telecommunication contractor. Coordinate with telecommunication contractor

3. Grounding per BICSI EIA/TIA 606 Standard.

2.08 NAMEPLATES

A. Nameplates Provided For:

1. Disconnect switches.

2. Circuit breakers.

3. Motor controllers.

PART 3 - EXECUTION

3.01 GENERAL

A. Drawings are diagrammatic and indicate general arrangement of systems and work included. Follow Drawings in laying out work and check Drawings of other trades relating to work to verify spaces in which work will be installed. Maintain headroom and space condition to all points.

B. Set and layout work on premises. Base all measurements from approved bench marks and correct setting or work to agree with established lines and levels. Should discrepancy exist between actual measurements and those indicated, notify Consultant in writing and do not proceed with work affected until written instructions are received from Consultant.

C. All minor appurtenances not specifically mentioned herein that are necessary to make a complete working installation, are included in the work with any necessary field engineering or detail drawings required. Submit Drawings as specified in item entitled “SUBMITTALS” hereinabove.

D. Install equipment, rigid and secure, plumb and level, and in true alignment with related and adjoining work. No welding of electrical materials for attachment or support is permitted.

E. Provide supporting members as required to set and connect rigidly the work.

F. Correct noise and vibration exceeding specified limits or due to faulty equipment at no expense to HHSC Representative.

G. Cutting: Cutting shall conform with requirements as approved by Consultant.

H. Patching: Patching shall conform with requirements as approved by Consultant.

3.02 INSTALLATION OF RACEWAYS

A. Run raceways concealed, except as noted.

B. Supports: Supports shall have adequate strength to support equipment wiring and enclosures against earthquake forces.

1. Ceiling trapeze, strap hangers, or wall brackets.

2. U-bolt or pipe straps at each floor level of riser raceways.

3. Secure raceways to supports with pipe straps or U-bolts.,

4. Maximum Spacing: 7 feet on centers for metallic conduit and wireways.

5. Mount Support to Structure With:

a. Toggle bolts on hollow masonry.

b. Expansion shields or insets on concrete.

c. Machine screws on metal.

d. Wood screws on wood.

e. Nails, Rawl plugs or wood plugs; not permitted.

C. Run exposed raceways parallel with or at right angles to walls.

D. Clearance from Water, Steam or Other Piping: Minimum three inches separation from hot water pipes, except four inches from pipe cover at crossings.

E. Keep raceways clear of motor foundations and underside of boilers.

F. Raceways for outlets in hung ceiling shall be run in hung ceilings. Provide supports to structure. Do not support to ceiling systems.

G. Run raceways in walls vertically.

H. Maintain grounding continuity of interrupted metallic raceways with minimum No. 2 AWG insulated, copper ground conductor and ground bushings at conduit terminations.

I. For empty raceways over 10 feet long, provide with pull wire or 200 pound strength nylon pull line.

J. Seal around raceway penetrations through walls and floors and provide fire rated, approved compound consistent with penetrated fire rated walls and floors.

K. Raceways for telecommunication system shall comply with requirements for premise wiring/Category 5e type cabling as required by BICSI EIA/TIA standards.

L. Steel Conduit:

1. Paint threads of field threaded conduit with graphite base pipe compound.

2. Install in exposed locations subject to physical damage, such as from floor to 8 feet above floor.

3. Direct Buried Conduit: Provide continuously with waterproofing tape, half lapped, or two coats of asphaltum paint, dried thoroughly between paintings and before backfilling.

4. Not permitted in terrazzo floor finish and in concrete.

5. Minimum one inch cover in concrete fill.

M. EMT: Install generally for interior dry locations; above dry ceilings, in dry walls and in concrete above ground floor.

N. Flexible Steel Conduit:

1. For short connections where rigid conduit is impracticable. Maximum length limited to five feet.

2. From Outlet Box to Recessed Lighting Fixture: Minimum four feet, maximum six feet length.

3. For final connection to motor terminal box and transformers with polyvinyl sheathing. Minimum Length: 18 inches with minimum 50 percent slack.

4. Not permitted except as stated above.

O. Outlet Boxes:

1. Set square and true with building finish and secure to building structure by adjustable strap irons.

2. Verify outlet locations in finished spaces with Drawings of interior details and finishes.

3. Provide barriers between switches connected to different phase for voltages exceeding 150 volts to ground.

P. Junction Boxes:

1. Location: Clear of other work. Conceal junction boxes in finished spaces and maintain accessibility.

2. Support from building structure, independent of conduit. Do not support to ceiling systems.

3. Outlet boxes for fixtures recessed in hung ceiling; accessible through opening created by removal of fixture.

4. Motor Terminal Boxes: Coordinate with motor branch circuit conduit and wiring.

3.03 INSTALLATION OF WIRE AND CABLE

A. 600 Volt Cable: Separate raceways for conductors of 120/208, 277/480 volt and emergency systems, except 480 volt motor branch circuit wiring and related 120 volt control wiring.

B. Low voltage cable shall be installed in separate raceways.

C. MC Cable:

1. Use for time share branch circuit wiring only not including home runs.

2. Use for branch circuit wiring luminaire to luminaire and wiring device to wiring device on the same circuit.

3. Support and secure per code.

3.04 INSTALLATION OF POWER, CONTROL AND ALARM WIRING SYSTEMS

A. General: Complete wiring from service to distribution and utilization equipment and as described below.

B. Motor Wiring:

1. Under Electrical Work, Unless Otherwise Noted:

a. Disconnect switches.

b. Motor controllers unless furnished by other trades or equipment supplier.

c. Wiring From Power Source To: Motors, disconnect switches and control devices, motor controller and motor control centers.

2. Motor Terminal Boxes: Provide motor suppliers with minimum requirements to receive indicated wiring.

3. Raceways:

a. Rigid conduit or electric metallic tubing except flexible (with slack) for final motor connection.

b. Install clear of motor foundations.

c. Allow clearance for motor removal and maintenance.

C. HVAC Temperature Control and Motor Interlock Wiring: Under HVAC Work:

1. Temperature control wiring and devices.

2. Motor interlock wiring in accordance with sequence of operation and/or wiring diagrams provided under DIVISION 15 - MECHANICAL.

D. Fire Smoke Dampers: Coordinate location of all fire smoke dampers. Provide 120V emergency power and interface with fire alarm system.

E. Mechanical System Control Panels: Provide power to all mechanical systems control panels and energy management system controllers. Coordinate with Mechanical Contractor.

F. Wiring Diagrams: Obtain required wiring diagrams for respective work of other trades and provide wiring as indicated by these diagrams and in accordance with applicable Specifications.

3.05 GROUNDING

A. Motors, metallic enclosures, raceways and electrical equipment grounded according to requirements of National Electrical Code, Article 250. Ground connection to equipment, raceways, motors, grounding type receptacles and other metallic parts directly exposed to ungrounded electric conductors by continuous metal raceways, or No. 14 AWG minimum, AWG copper, NEC type TW, green insulated. At water meter and “Di-electric” union joints, install pipe clamps, Thomas & Betts Co. No. 3900 series, on both sides of meter on metallic pipes and connect together with No. 1/0 bare copper. Connection shall not interfere with installation or removal of water meter. Install ground wire, size in accordance with NEC.

B. All grounding wire runs within buildings shall be in rigid steel conduits. Where practicable, all ground wires shall be run together with circuit conductors.

3.06 FINISHING

A. Patch, repair and restore all structural and architectural elements cut or drilled for installation of electrical system. Drilling, cutting, patching, repairing and restoring shall be subject to approval of Consultant.

B. Attach electrical equipment to wood by wood screws, and attach to concrete by embedded or expansion inserts and bolts. Use power-driven charge with approval only. Close unused knock-outs on boxes or enclosures with metal cap. Powder actuated fasteners shall not be used on precast concrete. Do not use powder activated fasteners to attach enclosures and boxes to the building.

C. Wipe clean all exposed raceways and enclosures with rag and solvent. Prime painting and finishing of unfinished raceways and enclosures shall conform to DIVISION 9 - FINISHES. Factory finished enclosures shall not be painted except in finished spaces, such as public rooms, offices, etc. Panelboards, switches, circuit breakers, junction boxes, and equipment shall be identified by stenciling with engraved plastic nameplates on cover or door. Voltage and phase shall be indicated on nameplates for panelboards, switches and circuit breakers.

D. Connect circuits to circuit assignments shown on drawings. Provide neatly typewritten circuit directory for all panelboards. Circuit directory shall indicate location of loads served by each circuit.

E. Label all panels and service equipment with neatly printed or lettered labels. Securely attach labels to equipment.

3.07 CLEANING

A. Brush and clean work prior to concealing, painting and acceptance. Performed in stages if directed.

B. Clean and repair soiled or damaged painted exposed work and match adjoining work before final acceptance.

C. Remove debris from inside and outside of material, equipment and structures.

3.08 FIELD TESTS

A. General: Perform field tests in the presence of the Consultant except as otherwise specified. Provide required labor, materials equipment and connections to perform tests, document results and submit them to Consultant for approval and repair or replace all defective work.

B. Test on 600 Volt Wire and Cable: Perform the following test prior to connecting the equipment:

1. All wiring shall be tested to ensure proper operation according to functions specified.

C. Tests on Low Voltage Distribution Equipment: Open and close switching devices under load.

D. Tests on Motor Controllers: Verify operation of controllers and open and close controllers and load break switches under load.

END OF SECTION

SECTION 16500 - LIGHTING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Materials, equipment, fabrication, installation and tests in conformity with applicable codes and authorities having jurisdiction.

2. Lighting fixtures (luminaires).

3. Components.

4. Contractor shall take delivery, store, assemble, install and connect fixtures furnished by the HHSC Representative.

5. Provide all 0-10V wiring for all 0-10V dimmable drivers.

1.02 SUBMITTALS

A. Submit in accordance with SECTION 01330 - SUBMITTAL PROCEDURES.

B. Submittals shall be complete, bound under cover and indicating project title. Contractor shall review submittals for conformance with Contract Documents, make necessary revisions and submit to Consultant, indicating the following:

1. Manufacturer's name, brand name, and catalog reference of equipment supplied.

2. Details of construction and finishes of fixtures.

3. Drawings: To scale (indicate scale).

4. Photometric data, including optical performance rendered by independent testing laboratory developed according to IES Methods as follows:

a. For Down and Semi-Down Lights Used For General Illumination:

1) Coefficients of utilization.

2) Candlepower data, presented graphically and numerically, in 10 degree increments (5 degree, 15 degree, etc.). Data developed for up and down quadrants normal, parallel, and at 45 degree to lamps if light output is asymmetric.

3) Zonal lumens stated numerically in 10 degree increments (5 degree, 15 degree, etc.) as above.

b. For Other Fixtures: Candlepower curves, presented graphically and numerically, in 10 degree increments (5 degree, 15 degree, etc.), or smaller increments for narrow-beam fixtures.

5. Luminaire and Lamp Lists: Submit list of luminaires and lamp types of quantities.

6. Warranty: Submit warranty as stipulated in item entitled "WARRANTY" hereinbelow.

1.03 QUALITY ASSURANCE

A. All equipment and accessories to be the product of a manufacturer regularly engaged in its manufacture.

B. Supply all equipment and accessories new, free from defects and listed by Underwriters' Laboratories, Inc., or bearing its label.

C. Supply all equipment and accessories in compliance with the applicable standards listed in this Section and with all applicable United States and local codes.

D. All items of a given type shall be the products of the same manufacturer.

1.04 DELIVERY, STORAGE AND HANDLING

A. Ship equipment in its original packages to prevent damaging or entrance of foreign matter. All handling performed in accordance with manufacturer's recommendations. Provide protective coverings during construction.

B. Replace at no expense to HHSC Representtive, equipment or materials damaged during storage or installation as directed by the Consultant.

1.05 OPERATION AND MAINTENANCE DATA

A. Maintenance Data: Include replacement parts list.

1.06 WARRANTY

A. Warranty of equipment and labor by manufacturer for one year from written notification of acceptance by the HHSC Representative.

PART 2 - PRODUCTS

2.01 GENERAL

A. Type of fixtures indicated by letters or letters followed by numbers. See drawings for tabulation of fixture types.

B. Light Emitting Diodes (LED): Minimum CRI 80, 3000K or 3500K color temperature as specified, minimum 50,000 rated life.

C. Sheet Metal Fixture Housings: Welded construction, with exceptions noted under fixture types.

D. Fixtures with baffles riveted or welded to housing; not acceptable.

E. Fixture catalog numbers used to illustrate equipment type do not necessarily denote required mounting equipment or accessories. Provide accessories to suit.

F. Removable From Fixture Housings: Chains, springs, hinges or other fastening devices required on apertures, reflectors and baffles.

2.02 FIXTURE CONSTRUCTION

A. Free of light leaks.

B. Weatherproof and Vaportight Fixture Finishes: Weatherproof enamel, galvanized or epoxy, including hangers.

2.03 DRIVERS

A. General:

1. High power factor, except as noted.

2. Of required voltage and frequency.

3. Dimmable where specified.

2.04 CONTACT SURFACES

A. Aluminum to Bronze: Coating equal to Minnesota Mining and Manufacturing Co., No. 1706, “Coro-Guard,” applied to both surfaces.

B. Aluminum to Concrete: Coating of polyurethane base paint, similar to Lehman Bros. “Ox-O-Deck”; or asphaltum.

2.05 WIRING

A. 120/208 Volt Luminaire Wiring: 300 volt, 302 degree F (150 degree C), Type AP or SFF, beginning at separately mounted outlet box.

B. 277/480 Volt Luminaire Wiring: 600 volt, 220 degree F (105 degree C). Appliance-type AWM or THHN, beginning at separately mounted outlet box.

C. Splices: Mechanical spring pressure connector or crimp connector.

D. Minimum 3/8 inch (9.5 mm) flexible conduit connections for recessed fixtures except as indicated. Maximum length: 6 feet, 0 inches (1.85 M).

2.06 SUPPORTS

A. All fixture supports shall be suitable for earthquake Zone 3.

B. All Ceiling Mounted Fixtures: Carry weight of fixture to building structure, clear of ducts or pipes. Do not support to ceiling systems or supports for mechanical systems. For fluorescent troffers, provide a minimum of three suspensions and for incandescent small luminaires. Provide minimum of one suspension support to concrete ceiling or roof structure.

C. Pendant Mounted Fixtures: With conduit stems supported to building structure. Self-leveling fittings.

D. Wall Mounted Fixtures: Support fixture directly to structure of wall (i.e., studs).

2.07 FINISHES

A. Painted Surfaces, Except as Noted:

1. Synthetic enamel, with acrylic, aklyd, epoxy, polyester, or polyurethane base, light stabilized, baked on at 350 degrees F (177 degrees C) minimum, catalytically or photochemically polymerized after application.

2. White Finishes: Minimum of 85 percent reflectance.

3. Metal Parts: Cleaned and treated with phosphate or chromate bonding process after fabrication for maximum paint adhesion.

B. Unpainted Aluminum Surfaces:

1. Satin anodized, except as noted.

C. Plastic Lenses and Diffusers: Destaticize, clear acrylic unless otherwise noted. Polycarbonate plastic shall be U.V. stabilized.

D. Reflectors and Baffles: Free of marks, labels or blemishes.

2.08 BASE BID MANUFACTURERS

A. Base bid for lighting fixtures on manufacturers indicated.

PART 3 - EXECUTION

3.01 INSTALLATION OF LIGHTING FIXTURES

A. Locations:

1. On Drawings: Dimensioned and Diagrammatical.

2. Coordinate with Architectural Reflected Ceiling Drawings, Interior Design Drawings and Mechanical Drawings.

3. Coordinated space conditions with other trades.

4. Fixture Rows: In straight lines except as noted.

5. Pendant or Surface Mounting: As noted.

B. Mounting:

1. Ceiling Construction:

a. Refer to Architectural Drawings for finish schedules.

b. Refer to manufacturer's installation details and applicable codes for required fixture mounting accessories.

c. Provide proper type of trim and accessories to match suspended ceilings.

2. Recessed in Plaster Ceilings - Provide Plaster Frames:

a. For setting, under General Construction Work.

b. With bottom of frames flush with finished ceiling and forming screed edge.

c. Individually Pendant Mounted Units: With canopies for pendants and junction box at the ceiling line for each fixture.

d. Continuously Pendant Mounted Units: With canopies and swivel ball aligners for pendants and junction box for each continuous run except as noted.

C. Reflector Cones, Baffles, Aperture Plates, and Decorative Elements: Install after completion of ceiling tiles, painting and general cleanup. Wipe clean of dust and fingerprints.

D. Replace blemished, damaged, or unsatisfactory fixtures and ballasts as directed.

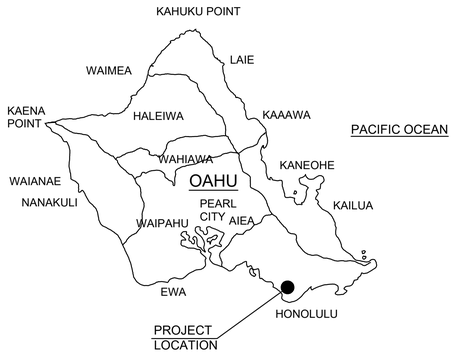
E. Relamp all non-operating fixtures immediately prior to HHSC Representative's acceptance of building.

END OF SECTION

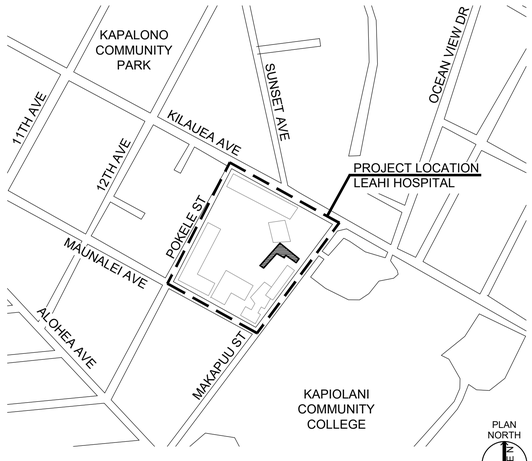
LEAHI HOSPITAL - ATHERTON
BUILDING FIRE ESCAPE REPAIR

3675 KILAUEA AVENUE,
HONOLULU, HI 96816
T.M.K.: 3-2-031:001

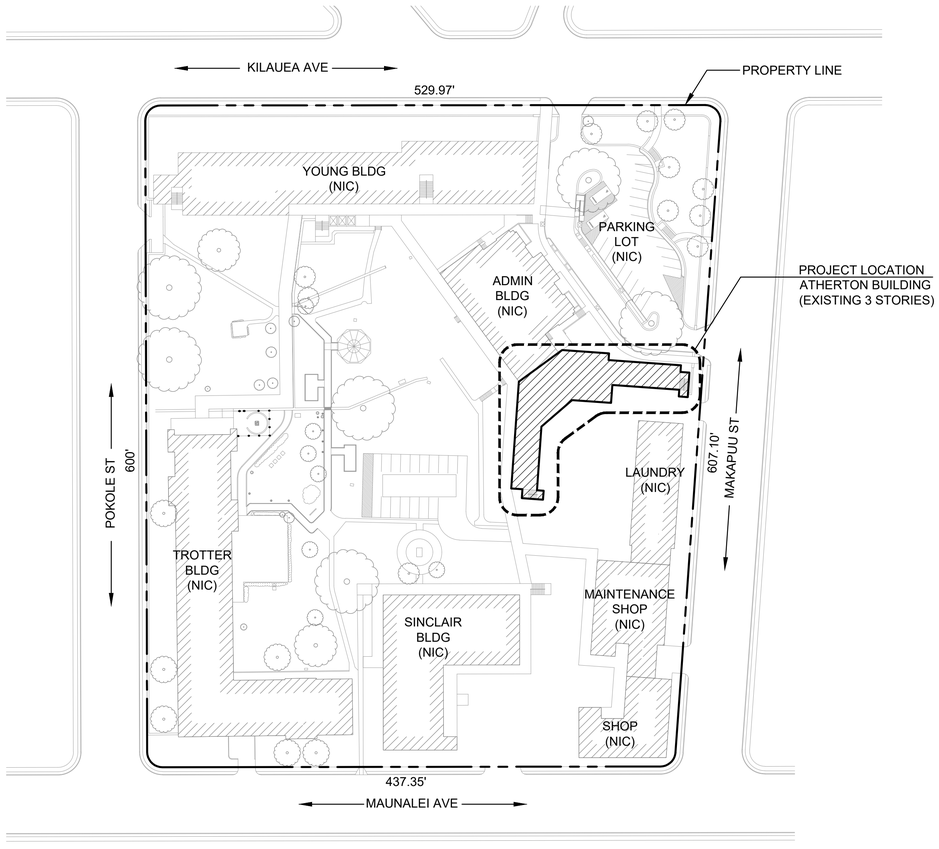
ISLAND MAP (NTS)



LOCATION MAP (NTS)



VICINITY MAP (NTS)



DESIGN TEAM

ARCHITECT:
INK ARCH, LLC
650 IWILEI ROAD #288
HONOLULU, HI 96817

STRUCTURAL:
I3NGINEERING, INC
201 MERCHANT STREET #905
HONOLULU, HI 96813

ELECTRICAL:
ALBERT CHONG ASSOC
1117 KAPAHULU AVE
HONOLULU, HI 96816

PROJECT DESCRIPTION

THE WORK SHALL GENERALLY CONSIST OF BUT NOT LIMITED TO:

- REPAIR AND REPAINT CORRODED METAL FIRE ESCAPE STAIRS
- GUARDRAIL/ HANDRAIL MODIFICATION
- REMOVE EXIT SIGNAGE FROM DOORS TO NON-COMPLIANT ESCAPE ROUTES
- REPLACE EXTERIOR LIGHTS

PROJECT SUBMITTAL

FINAL

APRIL 2026

INK ARCHITECTS

INK ARCH LLC
650 Iwilei Road, Suite 288
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E-mail: ink@inkarch.com

Revisions:

No.	Description	Date

Project Title:

LEAHI HOSPITAL

ATHERTON BUILDING FIRE ESCAPE REPAIR

3675 KILAUEA AVE
HONOLULU, HI 96816

SCOTT R.J. HARADA
LICENSED PROFESSIONAL ARCHITECT
No. 14637
HAWAII, U.S.A.

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

SIGNATURE
EXP. DATE: 04/30/26

Sheet Title:

TITLE SHEET

Project Phase:

FINAL

Date:

APRIL 2026

Sheet No.:

001

GENERAL NOTES

THE FOLLOWING UNDERLINED TERMS AS USED HEREIN SHALL BE DEFINED AS:

- THE OWNER: HAWAII HEALTH SYSTEMS CORPORATION (HHSC)
- THE OWNER'S REPRESENTATIVE: HHSC REPRESENTATIVE
- THE ARCHITECT: INK ARCH, LLC

1. LAWS AND ORDINANCES: AS USED HEREIN SHALL MEAN ALL COUNTY, STATE, AND NATIONAL CODES, ORDINANCES, STANDARDS, RULES, AND REGULATIONS OF ANY NATURE WHICH ARE PERTINENT TO, OR REGULATORY OVER, THE WORK COVERED BY THE CONTRACT DOCUMENTS OF THIS PROJECT. ALL CONTRACTORS SHALL COMPLY FULLY WITH ALL APPLICABLE LAWS AND ORDINANCES. ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT BUILDING CODE AND THE LATEST STATE OF HAWAII AMENDMENTS OR THE RESPECTIVE CITY AND/OR COUNTY AMENDMENTS BY EACH AGENCY HAVING JURISDICTION OF THE PROJECT.

2. CONFLICT: IN THE CASE OF ANY CONFLICT WHEREIN THE METHODS, OR STANDARDS OF INSTALLATION, OR THE SPECIFIED MATERIALS ARE NOT IN COMPLIANCE WITH THE REQUIREMENTS OF THE LAWS OR ORDINANCES, THE LAWS OR ORDINANCES SHALL GOVERN. IN THE CASE OF A DISCREPANCY IN THE DRAWINGS OR SPECIFICATIONS, BUT NOT DIRECTLY RELATED TO THE PROVISIONS, CODES, OR ORDINANCES, THE CONTRACTOR SHALL 1) PROVIDE THE BETTER QUALITY, OR GREATER QUANTITY OF WORK, OR 2) COMPLY WITH THE MORE STRINGENT REQUIREMENT IN ACCORDANCE WITH THE ARCHITECT'S INTERPRETATION, OR 3) REQUEST IN WRITING ADDITIONAL CLARIFICATION OR INFORMATION. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE OF ALL CONFLICTS IN WRITING.

3. CONDITIONS OF THE WORK: THE INFORMATION INDICATED ON THE DRAWINGS IS BASED ON LIMITED FIELD INVESTIGATION AND ON THE AVAILABLE RESOURCES AT THE TIME OF DOCUMENT PREPARATION. AS A RESULT, THE ACCURACY AND COMPLETENESS OF THE INFORMATION IS NOT GUARANTEED ON DATE OF COMMENCEMENT OF CONSTRUCTION. THEREFORE, THE CONTRACTOR SHALL VERIFY THE DIMENSIONS SHOWN ON THE DRAWINGS WITH ACTUAL FIELD MEASUREMENTS, EXAMINE THE JOB SITE, VERIFY ALL FIELD CONDITIONS AND PERTINENT DIMENSIONS PRIOR TO PREPARING LAYOUTS, SUBMITTALS, SHOP DRAWINGS, AND/OR ORDERING ANY MATERIAL, AND PROVIDE THE LABOR AND MATERIALS REQUIRED TO COMPLETE THE REQUIRED WORK.

4. WORKMANSHIP: ALL WORK SHALL BE PERFORMED IN A PROFESSIONAL MANNER. WORKMANSHIP SHALL BE REPRESENTATIVE OF THE BEST HAWAII INDUSTRY STANDARD OF THE RESPECTIVE TRADES. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE IN WRITING PRIOR TO THE COMMENCEMENT OF WORK, IF THERE ARE ANY DIMENSIONAL DISCREPANCIES, OR IF THERE ARE ANY CONDITIONS THAT EXIST WHICH MAY PREVENT THE CONTRACTOR'S WORKMANSHIP AND PERFORMANCE OF WORK PER CONTRACT DOCUMENTS, AND/OR OF ANY AND ALL ADDITIONAL WORK THAT MAY BE REQUIRED AS A RESULT OF THE OBSERVED CONDITIONS.

5. OMISSIONS: OMISSIONS OF DRAWINGS, OR SPECIFICATIONS, OR THE OMISSIONS OF DETAILS OF WORK WHICH ARE MANIFESTLY NECESSARY TO CARRY OUT THE INTENT OF THE DRAWINGS AND SPECIFICATIONS, AND/OR WHICH ARE PER HAWAII INDUSTRY STANDARD CUSTOMARILY PERFORMED, SHALL NOT RELIEVE THE CONTRACTOR FROM PERFORMING SUCH OMITTED, OR INCORRECTLY DESCRIBED DETAILS OF THE WORK, BUT SHALL BE PERFORMED AS IF FULLY AND CORRECTLY SET FORTH AND DESCRIBED IN THE DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR UPON DISCOVERY OF OMISSION SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE VERBALLY OF SUCH OMISSIONS AND PROVIDE A WRITTEN STATEMENT OF THE OMISSIONS WITHIN (2) WORKING DAYS OF VERBAL NOTIFICATION.

6. INTENT OF THE DRAWINGS: THE DRAWINGS ARE INTENDED TO DEFINE AND ESTABLISH THE PHYSICAL REQUIREMENTS OF THE PROJECT, I.E., THE DESIGN, LOCATIONS AND DIMENSIONS OF THE WORK, BASED ON RECOGNIZED STANDARDS EVEN IF NOT ACTUALLY SHOWN, BUT REASONABLY INFERRED. THE CONTRACTOR SHALL REVIEW AND VERIFY THE INFORMATION ON ALL DRAWINGS WITHIN A REASONABLE TIME BEFORE PERFORMING ANY WORK AND UPON DISCOVERY OF ANY OMISSION AND/OR CONFLICT IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE IN WRITING OF ANY OMISSIONS, CONFLICTS AND DISCREPANCIES. THE CONTRACTOR SHALL COORDINATE THE WORK OF ALL SUBCONTRACTORS/TRADES TO ACHIEVE THE DESIGN INTENT AND SPECIFIED REQUIREMENTS AND IS RESPONSIBLE TO COMPLETE ANY AND ALL WORK ASSOCIATED WITH SUCH COORDINATION.

7. TEMPORARY PROTECTION: THE CONTRACTOR SHALL ERECT AND MAINTAIN A TEMPORARY SAFETY BARRICADE A MINIMUM OF 5'-0" OUTSIDE THE PROJECT AREA AS APPLICABLE TO COMPLETELY ENCOMPASS THE PROJECT AREA TO PROTECT THE OCCUPANTS AND THE PUBLIC. THE BARRICADE SHALL REMAIN DURING THE DURATION OF THE PROJECT OR UNTIL APPROVAL IS GIVEN BY THE OWNER'S REPRESENTATIVE FOR ITS REMOVAL. A DESIGNATED STAGING AREA WILL BE ALLOWED AT THE PROJECT SITE AS INDICATED ON THE DRAWINGS. STAGING AREA SHALL BE USED FOR MATERIALS, DUMPSTER, HEAVY EQUIPMENT, LIFT, ETC. THE CONTRACTOR SHALL ERECT CONSTRUCTION FENCING AROUND THEIR DESIGNATED STAGING AREA TO PREVENT UNAUTHORIZED PERSONS FROM ENTERING. ANY EXTERIOR BARRICADES AND FENCING SHALL BE LOCATED AS REQUIRED AND IN SUCH A MANNER AS TO MAINTAIN AT ALL TIMES ALL REQUIRED FIRE LANES AND FIRE EXITS FROM THE PROJECT BUILDING/SITE AS WELL AS ADJACENT OCCUPIED BUILDINGS DURING THE CONSTRUCTION CONTRACT PERIOD.

8. COMPLETION OF THE WORK: THE CONTRACTOR SHALL IN THE EXECUTION OF WORK BY ALL TRADES, PERFORM ANY AND ALL CUTTING, PATCHING, REPAIRING, RESTORING AND THE LIKE NECESSARY TO COMPLETE THE WORK. THE CONTRACTOR SHALL RESTORE ANY DAMAGED OR AFFECTED SURFACES RESULTING FROM THE WORK OF THIS CONTRACT TO THEIR ORIGINAL CONDITION AND FINISH TO THE SATISFACTION OF THE OWNER. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION, INCLUDING, BUT NOT LIMITED TO SAFETY PRECAUTIONS, FASTENERS, ANCHORAGES, ETC. UNLESS NOTED OTHERWISE.

9. RECORD DRAWINGS: THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A SET OF "AS-BUILT" DRAWINGS OF HIS WORK.

10. DIMENSIONS: UNLESS OTHERWISE NOTED IN THE CONSTRUCTION DOCUMENTS, ALL DIMENSIONS ARE TAKEN TO THE FACE OF EXISTING STRUCTURE, OR FACE OF FINISH CONSTRUCTION. WRITTEN DIMENSIONS PREVAIL. DO NOT SCALE DRAWINGS UNLESS GRAPHIC SCALE IS PROVIDED ON THE SPECIFIC DRAWING. SHOULD DIMENSIONAL DISCREPANCIES BE FOUND, CONTACT THE OWNER'S REPRESENTATIVE IMMEDIATELY FOR CLARIFICATION PRIOR TO PROCEEDING WITH THE WORK.

11. CLEAN UP: THE CONTRACTOR SHALL CLEAN AND REMOVE ALL TRASH, DIRT, DEBRIS, AND SPILLAGE ARISING FROM THE WORK AREA DAILY TO THE SATISFACTION OF THE OWNER AND THE ARCHITECT, INCLUDING BUT NOT LIMITED TO: CLEANING OF DIRT, PUTTY, PAINT, OVERSPRAY, DUST, ETC. FROM FLOORS, WORK AREAS, COUNTER TOPS, DOOR AND WINDOW FACES AND FRAMES.

12. SAFE OPERATIONS: THE CONTRACTOR SHALL ENSURE THAT ANY AND ALL CONSTRUCTION ACTIVITIES DO NOT IMPACT OR INTERFERE WITH NORMAL OR SAFE OPERATIONS AT THE PROJECT SITE. THE CONTRACTOR SHALL TAKE ALL SAFETY PRECAUTIONS NECESSARY TO PROTECT THE BUILDING OCCUPANTS AND THE PUBLIC THROUGHOUT THE DURATION OF THIS PROJECT.

13. PREVENT DAMAGE: THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT DAMAGE TO EXISTING AND COMPLETED STRUCTURES/LANDSCAPING/SITE IMPROVEMENTS OF THIS PROJECTS AS WELL AS ON ADJACENT PROPERTY(IES) TO THAT OF THIS CONTRACTED WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR LABOR/MATERIAL COSTS OF ANY DAMAGES TO ANY CONSTRUCTED WORK AND/OR EXISTING STRUCTURES/LANDSCAPING/SITE IMPROVEMENTS CAUSED BY HIS OPERATIONS.

14. DO NOT BLOCK EXITS: THE CONTRACTOR SHALL NOT BLOCK OR OBSTRUCT ANY FIRE LANES AND FIRE EXIT WAYS DURING THE EXECUTION OF WORK THROUGHOUT THIS PROJECT DURING THE CONSTRUCTION CONTRACT PERIOD.

15. SOUND AND NOISE CONTROL: THE CONTRACTOR SHALL NOTIFY AND COORDINATE WITH THE OWNER'S REPRESENTATIVE ALL WORK THAT WILL GENERATE EXCESSIVE NOISE WHICH MAY DISRUPT NORMAL OPERATING ACTIVITIES.

16. MATERIAL DISPOSAL: UNLESS NOTED IN THE DRAWINGS OR SPECIFICATIONS, MATERIALS RESULTING FROM THE DEMOLITION WORK SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS OR AS SPECIFIED.

17. DEFINITIONS:
   a) "FURNISH" MEANS "FURNISH ONLY". MATERIALS OR ITEMS TO BE FURNISHED SHALL BE NEW AND CONSIGNED TO THE CONTRACTOR AND DELIVERED TO THE SITE.
   b) "INSTALL" MEANS "INSTALL ONLY" FURNISHED MATERIALS OR ITEMS. SUCH MATERIALS OR ITEMS SHALL BE RECEIVED AT THE SITE, UNLOADED, STORED, PROTECTED, AND INSTALLED IN PLACE, INCLUDING FINAL CONNECTION, UNLESS SUCH WORK IS SPECIFICALLY EXCLUDED.
   c) "PROVIDE" MEANS "FURNISH AND INSTALL" COMPLETE, IN PLACE AND READY FOR USE, INCLUDING FINAL CONNECTIONS. ALL WORK SHOWN IN THE DRAWINGS SHALL BE UNDERSTOOD AS "PROVIDE" WHETHER NOTES INDICATING "PROVIDE" ARE INDICATED OR NOT.
   d) WORDS "CONTRACTOR SHALL" ARE IMPLIED AND SHALL BE SO UNDERSTOOD WHEREVER A DIRECTION IS STATED IN IMPERATIVE MOOD AND DIRECTION "PROVIDE" IS USED.
   e) UNLESS SPECIFICALLY STATED AS "EXISTING", ALL MATERIALS SHALL BE NEW IN ALL CASES WHEN MATERIAL NOTES ARE ADDED TO DRAWINGS. USES OF "FURNISH" AND "PROVIDE" AUTOMATICALLY MEAN "NEW" UNLESS SPECIFICALLY STATED AS "EXISTING".

18. PRE-CONSTRUCTION ASSESSMENT: BEFORE STARTING ANY WORK ON ANY EXISTING CONSTRUCTION THE CONTRACTOR SHALL MAKE A THOROUGH AND COMPLETE INVESTIGATION OF ANY RECIPIENT SURFACES AND DETERMINE THEIR SUITABILITY TO RECEIVE REQUIRED ADDITIONAL CONSTRUCTION AND FINISHES. THE CONTRACTOR SHALL MAKE WHATEVER REPAIRS AND CONDITIONING REQUIRED TO PROPERLY PREPARE SUCH SURFACES.

19. EXISTING UTILITIES: PRIOR TO COMMENCING ANY CONSTRUCTION THE CONTRACTOR SHALL COORDINATE AND VERIFY THE LOCATIONS OF ALL UNDERGROUND OR OVERHEAD UTILITY LINES WITH THE OWNER'S REPRESENTATIVE TO AVOID CONFLICTS AND/OR SHUT DOWN DURING ALL STAGES OF CONSTRUCTION.

20. SUBCONTRACTORS: THE USE OF UNLICENSED CONTRACTORS IS STRICTLY PROHIBITED. THE CONTRACTOR IS RESPONSIBLE TO THE OWNER FOR ACTIONS OF THE CONTRACTOR'S EMPLOYEES, SUBCONTRACTORS AND THEIR AGENTS AND EMPLOYEES, AND OTHER PERSONS PERFORMING ANY PORTIONS OF WORK UNDER CONTRACT WITH THE CONTRACTOR.

21. HAZARDOUS MATERIALS: HAZARDOUS MATERIAL ABATEMENT MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AS INDICATED IN THE DRAWINGS AND/OR SPECIFICATIONS. BURNING OF ANY DEBRIS IS NOT PERMITTED. EXPLOSIVES ARE NOT ALLOWED.

22. WOOD: ALL NEW WOOD SHALL BE TERMITE TREATED. ALL PAINT ON WOOD SURFACES SHALL CONTAIN A MILDEWCIDE ADDITIVE. PROVIDE WRITTEN CERTIFICATION OF TERMITE TREATMENT.

23. DISSIMILAR METAL PROTECTION: THE CONTRACTOR SHALL PROVIDE DISSIMILAR METAL PROTECTION.

24. MECHANICAL AND ELECTRICAL ITEMS: ALL NEW EXPOSED MECHANICAL AND ELECTRICAL PIPING, CONDUITS, DUCTWORK, SUPPORTS AND RELATED FITTINGS, AND FASTENERS ARE TO BE PAINTED THE SAME COLOR/SHEEN AS THE COLOR/SHEEN OF THE SURFACE IT IS ATTACHED TO UNLESS OTHERWISE NOTED.

25. PAINTING: PAINT ALL NEW WORK THAT IS COMPLETED AND LEFT EXPOSED TO VIEW, UNLESS OTHERWISE NOTED. PAINT PRODUCT(S) SHALL BE COMPATIBLE TO THE SUBSTRATE OR SURFACE IT IS APPLIED TO AND SHALL RECEIVE THE PROPER SURFACE PREPARATION AND COATINGS AS RECOMMENDED BY THE PAINT MANUFACTURER. THE CONTRACTOR SHALL CONFIRM WITH THE ARCHITECT ALL FINISH PAINT COLOR AND SHEEN SELECTION(S).

26. SHORING WORK: THE CONTRACTOR SHALL PROPERLY SHORE ANY AND ALL BUILDING WALLS, CEILINGS AND ANY OTHER COMPONENTS AFFECTED BY THE WORK AS REQUIRED TO MAINTAIN A SAFE, STABLE AND STRUCTURALLY SOUND STRUCTURE.

27. "EXISTING" VERSUS "NEW" WORK : ALL BUILDING, AND DETAIL COMPONENTS, SHOWN ON THESE DRAWINGS SHALL BE UNDERSTOOD AS "NEW" UNLESS PREFIXED BY THE WORD "EXISTING". IN THE EVENT THE CONTRACTOR DISCOVERS CONFLICTING INFORMATION, THE CONTRACTOR SHALL IMMEDIATELY SUBMIT IN WRITING, A FORMAL REQUEST FOR INFORMATION ("RFI") TO THE ARCHITECT FOR A RESOLUTION TO THE RFI.

INDEX TO DRAWINGS

SHEET NO.	SHEET ID.	SHEET TITLE
		GENERAL
1	001	TITLE SHEET
2	G-001	INDEX TO DRAWINGS, GENERAL NOTES, ARCHITECTURAL SYMBOLS AND ABBREVIATIONS
3	G-002	CODE INFORMATION AND EXITING PLANS
		ARCHITECTURAL
4	AD101	OVERALL DEMOLITION BASEMENT FLOOR PLAN
5	AD102	OVERALL DEMOLITION FIRST FLOOR PLAN
6	AD103	OVERALL DEMOLITION SECOND FLOOR PLAN
7	AD104	OVERALL DEMOLITION THIRD FLOOR PLAN
8	AD401	FIRE ESCAPE STAIRS 1 - ENLARGED DEMOLITION FLOOR PLANS
9	AD402	FIRE ESCAPE STAIRS 2 - ENLARGED DEMOLITION FLOOR PLANS
10	A-101	OVERALL BASEMENT FLOOR PLAN
11	A-102	OVERALL FIRST FLOOR PLAN
12	A-103	OVERALL SECOND FLOOR PLAN
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14	A-201	EXTERIOR ELEVATIONS
15	A-401	FIRE ESCAPE STAIRS 1 - ENLARGED FLOOR PLANS
16	A-402	FIRE ESCAPE STAIRS 2 - ENLARGED FLOOR PLANS
17	A-601	MATERIAL FINISH SCHEDULE AND MISCELLANEOUS DETAILS
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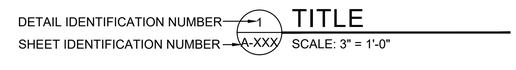
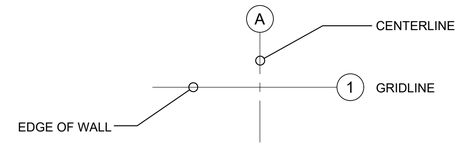
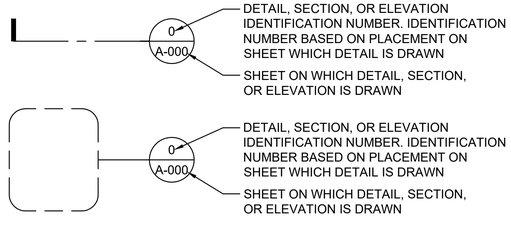
18	ED101	OVERALL BASEMENT LIGHTING DEMOLITION PLAN
19	ED102	OVERALL FIRST FLOOR LIGHTING DEMOLITION PLAN
20	ED103	OVERALL SECOND FLOOR LIGHTING DEMOLITION PLAN
21	ED104	OVERALL THIRD FLOOR LIGHTING DEMOLITION PLAN
22	E101	OVERALL BASEMENT NEW LIGHTING PLAN
23	E102	OVERALL FIRST FLOOR NEW LIGHTING PLAN
24	E103	OVERALL SECOND FLOOR NEW LIGHTING PLAN
25	E104	OVERALL THIRD FLOOR NEW LIGHTING PLAN

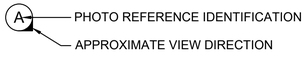
ARCHITECTURAL SYMBOLS





SYMBOL FOR DETAIL DRAWING





ARCHITECTURAL ABBREVIATIONS

AC	ASPHALT CONCRETE	INFO	INFORMATION	SF	SQUARE FEET
AFF	ABOVE FINISHED FLOOR			STL	STEEL
		L	LENGTH/LONG	STRUCT	STRUCTURAL
CMU	CONCRETE MASONRY				
UNIT		MIN	MINIMUM	THK	THICK
		MAX	MAXIMUM	TYP	TYPICAL
				T.M.K.	TAX MAP KEY
DAFS	DIRECT APPLIED FINISH SYSTEM	NIC	NOT IN CONTRACT		
DN	DOWN	NTS	NOT TO SCALE	W/	WITH
DWGS	DRAWINGS	N/A	NOT APPLICABLE	W	WIDTH/WIDE
HSS	HOLLOW STRUCTURAL STEEL			℄	CENTERLINE
				Ø	DIAMETER

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Revisions:

No.	Description	Date

Project Title:

LEAHI HOSPITAL

ATHERTON BUILDING FIRE ESCAPE REPAIR

3675 KILAUEA AVE
HONOLULU, HI 96816

SCOTT R.J. HARADA
LICENSED PROFESSIONAL ARCHITECT
No. 14637
HAWAII, U.S.A.

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SIGNATURE
EXP. DATE: 04/30/26

Sheet Title:

INDEX TO DRAWINGS, GENERAL NOTES, ARCHITECTURAL SYMBOLS AND ABBREVIATIONS

Project Phase:

FINAL

Date:

APRIL 2026

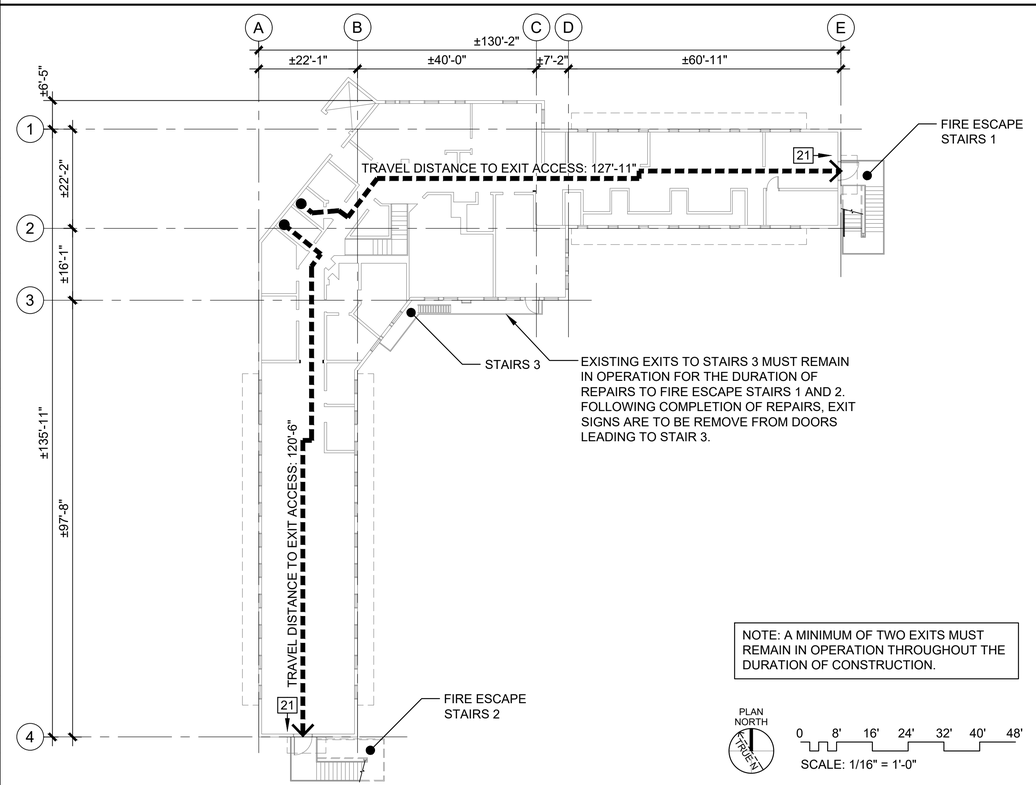
Sheet No.:

G-001

CODE INFORMATION

GENERAL	
PROJECT NAME:	ATHERTON BUILDING FIRE ESCAPE REPAIR
PROJECT ADDRESS:	3675 KILAUEA AVE, HONOLULU, 96816
OWNER'S NAME:	UNIVERSITY OF HAWAII
CODES AND REFERENCES	**DESCRIPTION**
ZONING CODE:	REVISED ORDINANCES OF HONOLULU 1990, CHAPTER 1, LAND USE ORDINANCE
BUILDING CODE:	2018 INTERNATIONAL BUILDING CODE (IBC) WITH STATE AMENDMENTS
FIRE CODE:	2018 NFPA 1: UNIFORM FIRE CODE (UFC) WITH AMENDMENTS
ELECTRICAL CODE:	2020 NATIONAL ELECTRICAL CODE WITH STATE AND CITY AMENDMENTS ARE PENDING
ACCESSIBILITY:	2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
PARCEL INFORMATION	
PROJECT TMK:	3-2-031:001
PARCEL AREA:	290,196 SF (6.66 ACRES)
OHANA ZONING DESIGNATION:	N/A
FEMA FLOOD DESIGNATION:	ZONE X
TSUNAMI EVACUATION ZONE:	SAFE ZONE
DEVELOPMENT PLAN AREAS:	PRIMARY URBAN CENTER
SMA:	OUTSIDE SMA
SPECIAL DISTRICT:	DIAMOND HEAD SPECIAL DISTRICT
STATE LAND USE:	URBAN
DEVELOPMENT STANDARDS	
ZONING DISTRICT:	R-5
USE:	HOSPITAL
MINIMUM LOT AREA:	5,000 SF
MINIMUM LOT WIDTH AND DEPTH:	50 FEET
YARD - FRONT:	30 FEET
YARD - SIDE/REAR:	15 FEET
MAXIMUM HEIGHT:	25-30 FEET
BUILDING CODE	
NATURE OF WORK:	REPAIR
GENERAL DESCRIPTION OF WORK:	FIRE ESCAPE REPAIR
OCCUPANCY CLASSIFICATION:	B BUSINESS
OCCUPANT LOAD:	1ST-3RD FLOOR: 6,246 SF/ 150 GROSS = 42
BUILDING HEIGHT (STORIES):	4
ALLOWABLE BLDG HEIGHT:	55' (NO CHANGE)
PROVIDED AREA PER STORY:	BASEMENT: 3,250 SF 1ST-3RD FLOOR: 6,246 SF TOTAL: 21,988 SF
ALLOWABLE BLDG AREA:	23,000 SF
TYPE OF CONSTRUCTION:	IIB
AUTOMATIC FIRE SPRINKLERS:	NO
NUMBER OF EXITS :	3 EXITS PROVIDED FOR USE DURING OPERATION (2 REQUIRED)
EGRESS WIDTH:	3'
EXIT ACCESS TRAVEL DISTANCE:	200 FEET MAX
COMMON PATH OF EGRESS TRAVEL:	75 FEET MAX

THIRD FLOOR EXITING PLAN

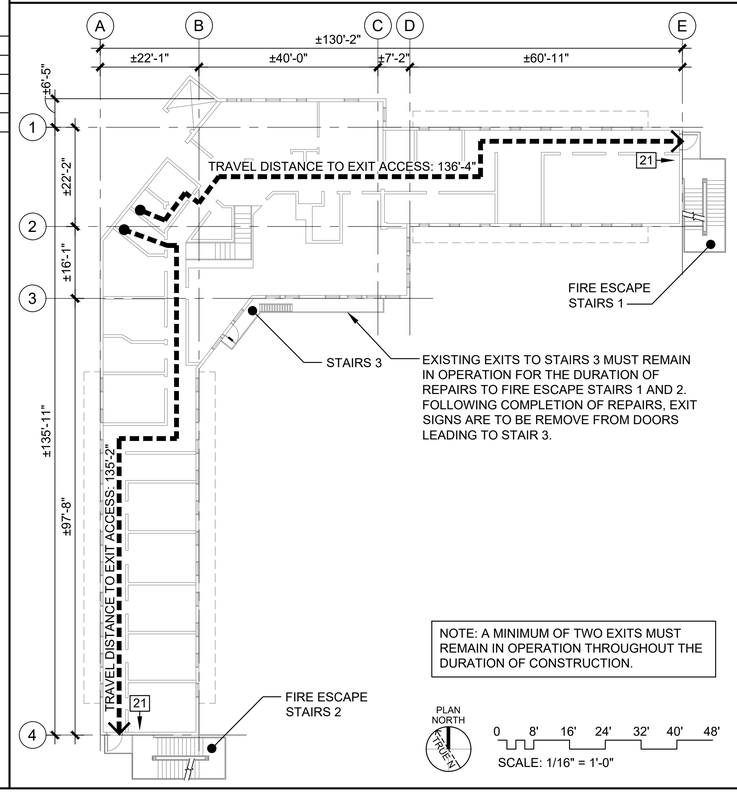


LEGEND

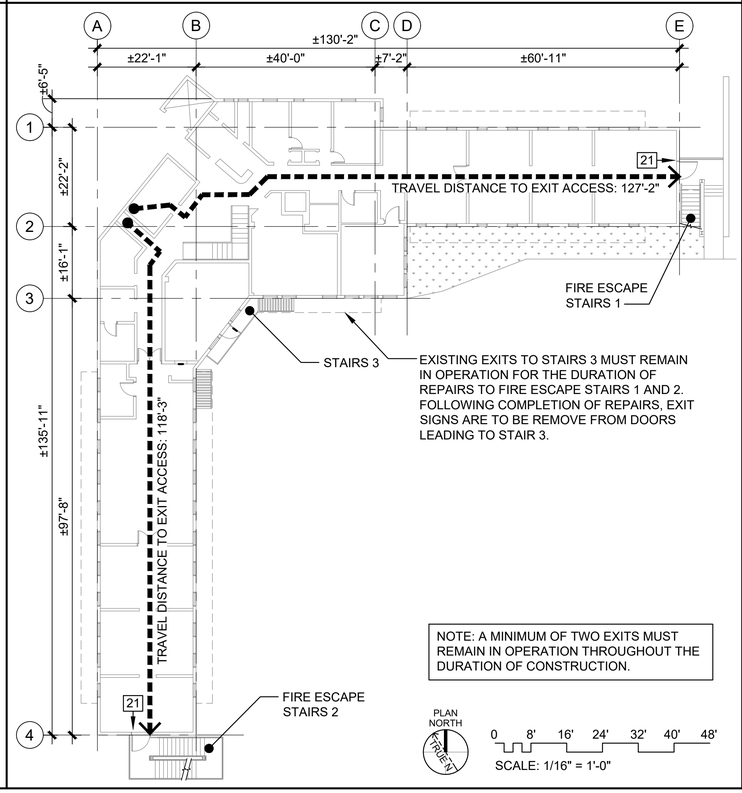
EXIT TRAVEL DIRECTION

TOTAL OCCUPANT LOAD EXITING

SECOND FLOOR EXITING PLAN



FIRST FLOOR EXITING PLAN



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CODE INFORMATION AND EXITING PLANS

Project Phase:

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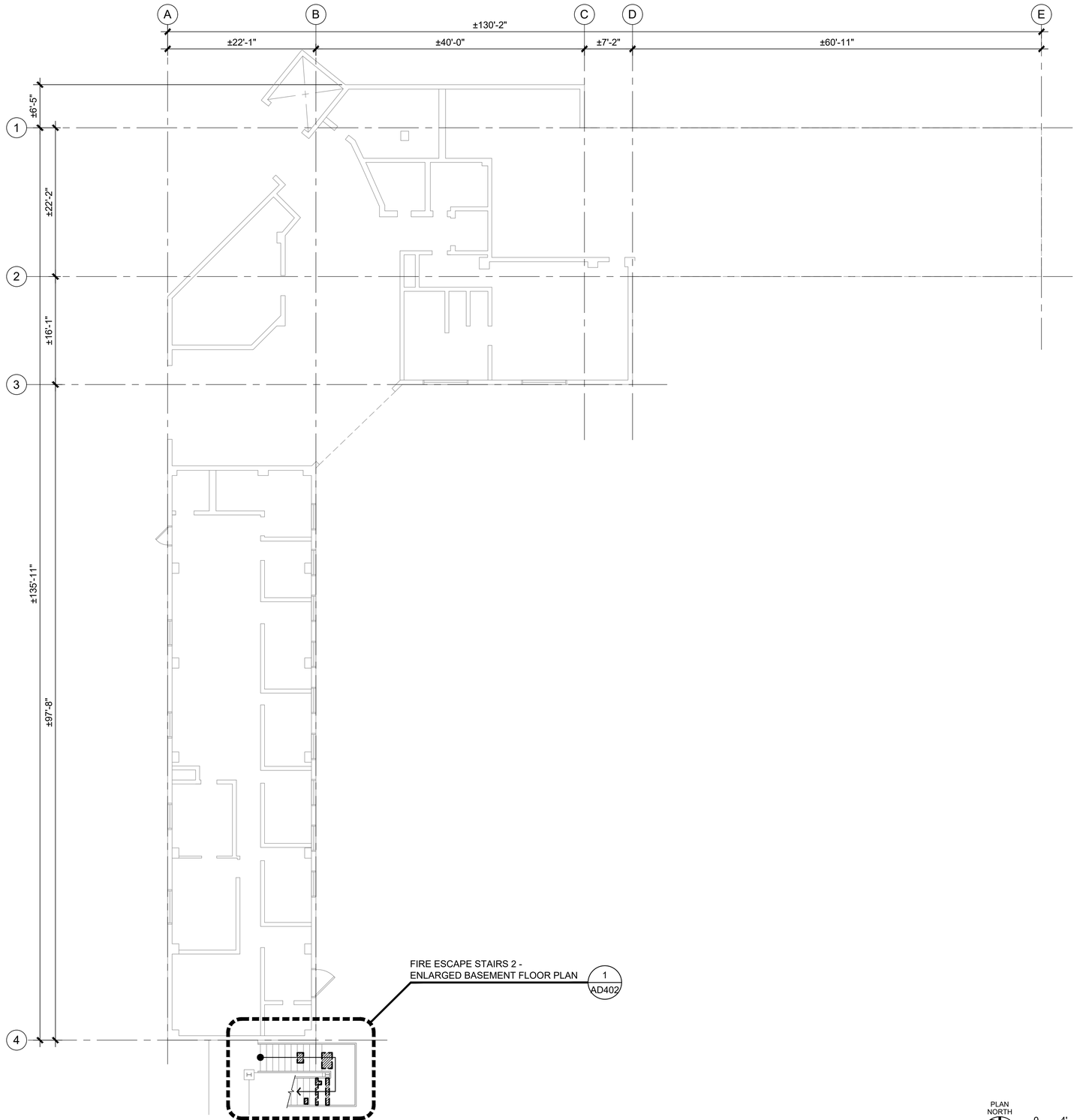
Date:

APRIL 2026

Sheet No.:

G-002



1 AD101 OVERALL DEMOLITION BASEMENT FLOOR PLAN

SCALE: 1/8" = 1'-0"

LEGEND

- EXISTING WALL TO REMAIN
- ITEM TO BE DEMOLISHED
- REMOVE EXISTING RUST

PLAN NORTH (TRUE N)

0 4' 8' 12' 16' 20' 24'

SCALE: 1/8"=1'-0"

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OVERALL DEMOLITION BASEMENT FLOOR PLAN

Project Phase:

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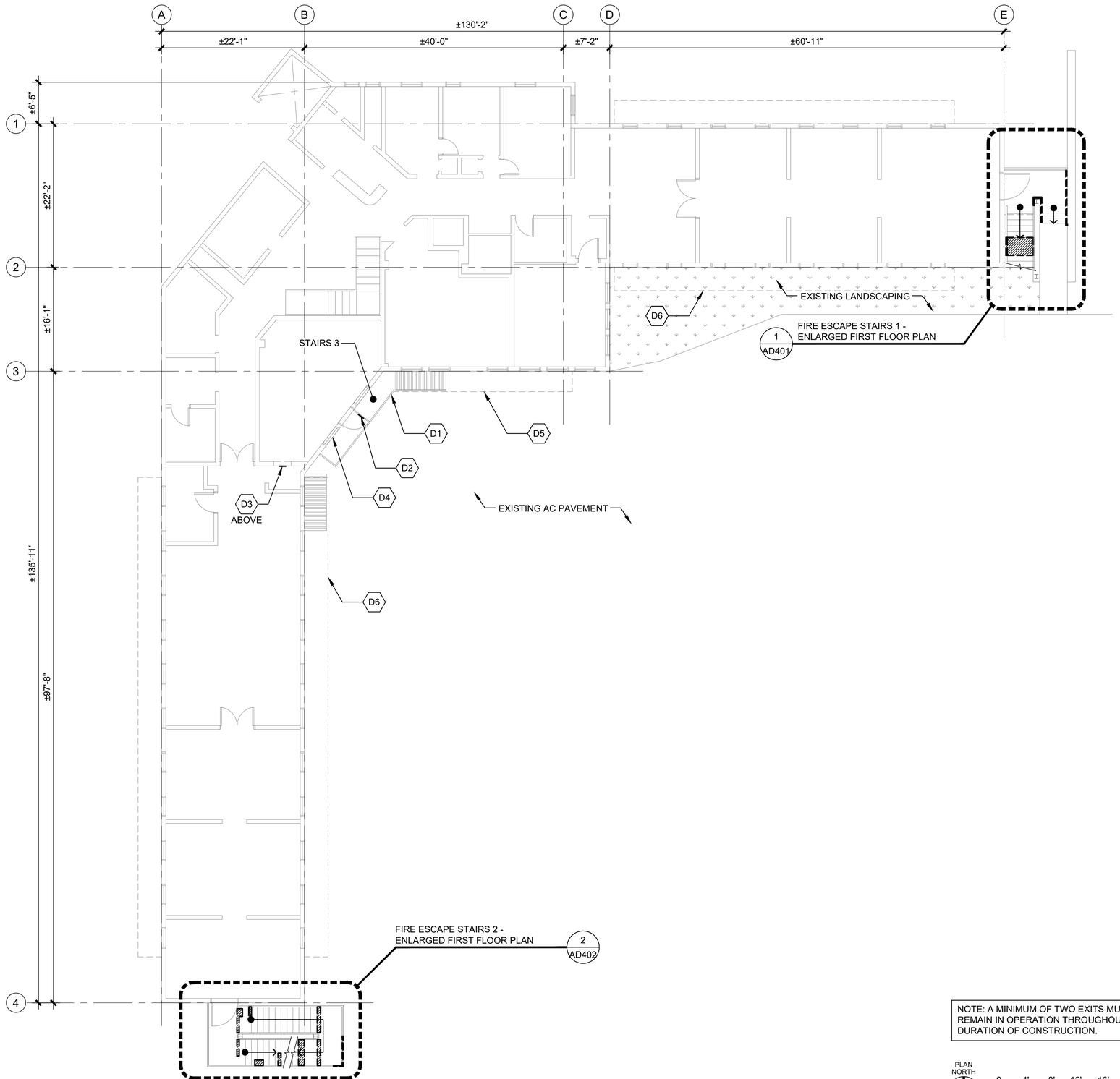
Sheet No.:

AD101



1 AD102 OVERALL DEMOLITION FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

NOTE: A MINIMUM OF TWO EXITS MUST REMAIN IN OPERATION THROUGHOUT THE DURATION OF CONSTRUCTION.

PLAN NORTH

0 4' 8' 12' 16' 20' 24'

SCALE: 1/8"=1'-0"

SHEET KEYNOTES (FOR THIS SHT ONLY)

D1. EXISTING SHIP LADDER FIRE ESCAPE TO REMAIN, SEE GENERAL SHEET NOTE A

D2. REMOVE NON-POWERED FIRE EXIT SIGNAGE ON EXISTING DOOR, EXISTING DOOR TO REMAIN, SEE GENERAL SHEET NOTE B

D3. DEMOLISH AND REMOVE EXISTING ELECTRIFIED EXIT SIGNAGE,

D4. EXISTING WINDOW TO REMAIN, TYP

D5. EXISTING SHIP LADDER FIRE ESCAPE ABOVE, SHOWN DASHED

D6. EXISTING AWNING ROOF LINE SHOWN DASHED TO REMAIN, TYP

GENERAL SHEET NOTES

A. EXISTING EXITS TO STAIRS 3 MUST REMAIN IN OPERATION FOR THE DURATION OF REPAIRS TO FIRE ESCAPE STAIRS 1 AND 2.

B. DO NOT REMOVE EXIT SIGN UNTIL REPAIR OF FIRE ESCAPE STAIRS 1 AND 2 ARE COMPLETED AND ARE IN OPERATION.

LEGEND

EXISTING WALL TO REMAIN

ITEM TO BE DEMOLISHED

REMOVE EXISTING RUST

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OVERALL DEMOLITION FIRST FLOOR PLAN

Project Phase:

FINAL

Date:

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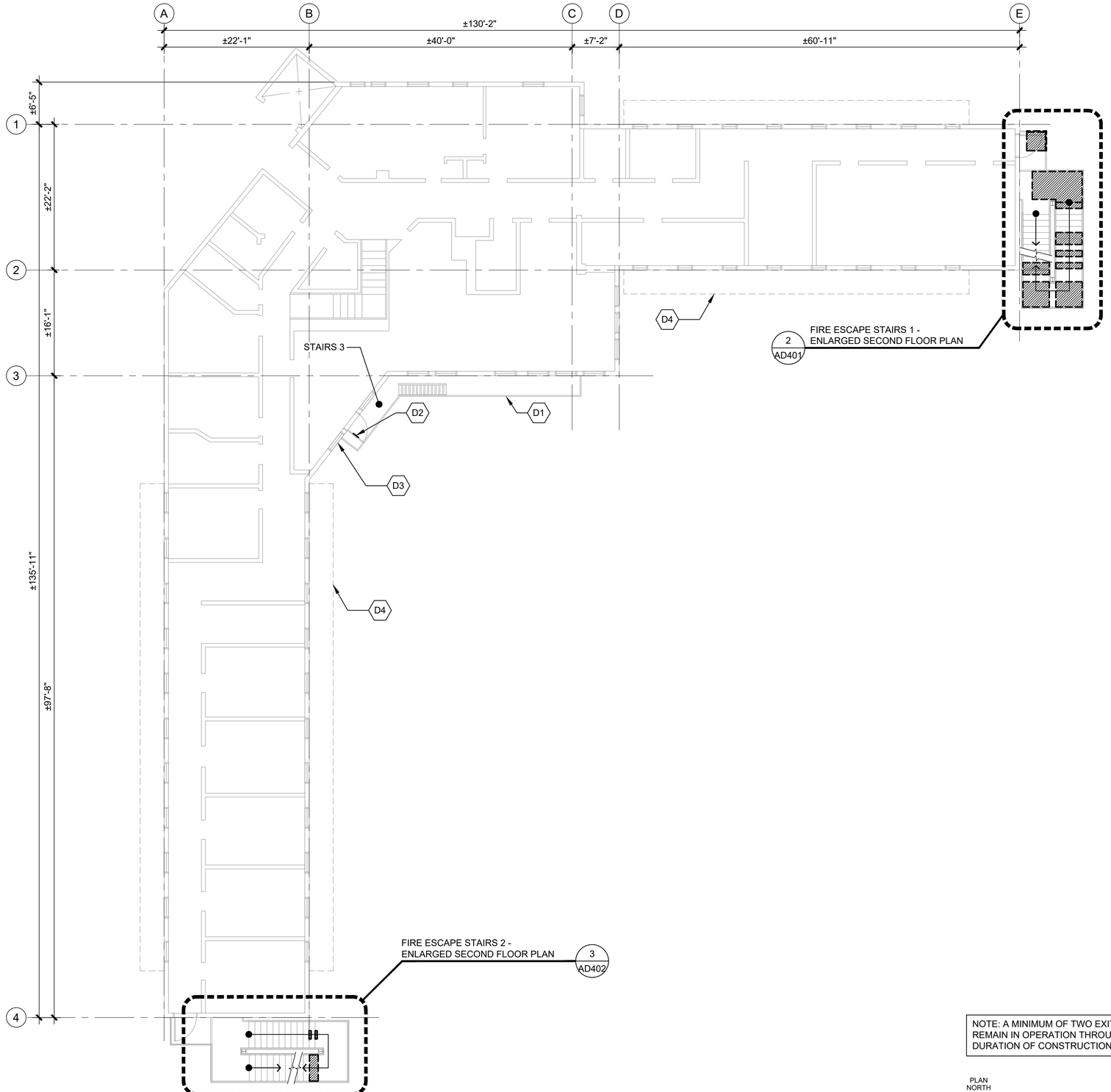
Sheet No.:

AD102



1 AD103 OVERALL DEMOLITION SECOND FLOOR PLAN

SCALE: 1/8" = 1'-0"

SHEET KEYNOTES (FOR THIS SHT ONLY)

D1. EXISTING SHIP LADDER FIRE ESCAPE TO REMAIN, SEE GENERAL SHEET NOTE A

D2. REMOVE NON-POWERED FIRE EXIT SIGNAGE ON EXISTING DOOR, EXISTING DOOR TO REMAIN, SEE GENERAL SHEET NOTE B

D3. EXISTING WINDOW TO REMAIN, TYP

D4. EXISTING AWNING ROOF LINE SHOWN DASHED TO REMAIN, TYP

GENERAL SHEET NOTES

A. EXISTING EXITS TO STAIRS 3 MUST REMAIN IN OPERATION FOR THE DURATION OF REPAIRS TO FIRE ESCAPE STAIRS 1 AND 2.

B. DO NOT REMOVE EXIT SIGN UNTIL REPAIR OF FIRE ESCAPE STAIRS 1 AND 2 ARE COMPLETED AND ARE IN OPERATION.

LEGEND

EXISTING WALL TO REMAIN

ITEM TO BE DEMOLISHED

REMOVE EXISTING RUST

NOTE: A MINIMUM OF TWO EXITS MUST REMAIN IN OPERATION THROUGHOUT THE DURATION OF CONSTRUCTION.

PLAN NORTH (TRUE N)

0 4' 8' 12' 16' 20' 24'

SCALE: 1/8"=1'-0"

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OVERALL DEMOLITION SECOND FLOOR PLAN

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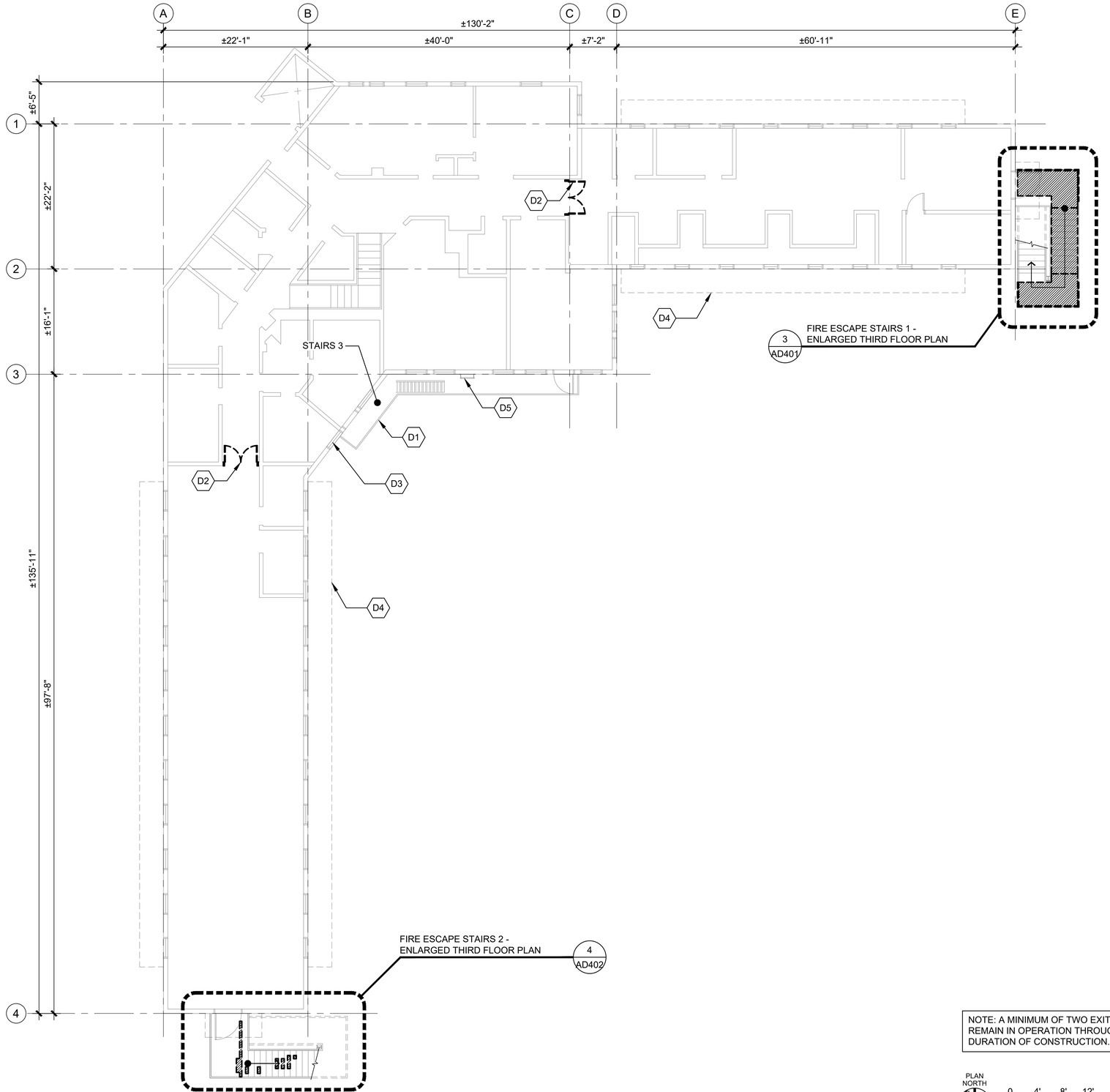
Sheet No.:

AD103



1 AD104 OVERALL DEMOLITION THIRD FLOOR PLAN

SCALE: 1/8" = 1'-0"

SHEET KEYNOTES (FOR THIS SHT ONLY)

D1. EXISTING SHIP LADDER FIRE ESCAPE TO REMAIN, SEE GENERAL SHEET NOTE A

D2. DEMOLISH AND REMOVE EXISTING DOOR, FRAME AND HARDWARE, COMPLETE. DEMOLISH PORTION OF EXISTING ADJACENT WALL TO FACILITATE CASED OPENING INSTALLATION, SEE DETAIL 6/A-601 AND 7/A-601 FOR ADDITIONAL INFORMATION

D3. EXISTING WINDOW TO REMAIN, TYP

D4. EXISTING AWNING ROOF LINE SHOWN DASHED TO REMAIN, TYP

D5. ROOF ACCESS LADDER TO REMAIN

GENERAL SHEET NOTES

A. EXISTING EXITS TO STAIRS 3 MUST REMAIN IN OPERATION FOR THE DURATION OF REPAIRS TO FIRE ESCAPE STAIRS 1 AND 2.

LEGEND

EXISTING WALL TO REMAIN

ITEM TO BE DEMOLISHED

REMOVE EXISTING RUST

NOTE: A MINIMUM OF TWO EXITS MUST REMAIN IN OPERATION THROUGHOUT THE DURATION OF CONSTRUCTION.

PLAN NORTH (TRUE N)

0 4' 8' 12' 16' 20' 24'

SCALE: 1/8"=1'-0"

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OVERALL DEMOLITION THIRD FLOOR PLAN

Project Phase:

FINAL

Date:

APRIL 2026

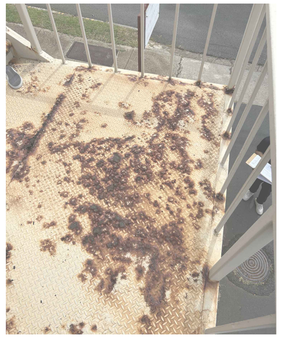
Sheet No.:

AD104

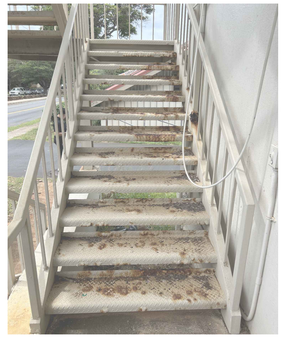
J FIRE ESCAPE 1 - THIRD FLOOR

H FIRE ESCAPE 1 - THIRD FLOOR

F FIRE ESCAPE 1 - SECOND FLOOR



D FIRE ESCAPE 1 - SECOND FLOOR



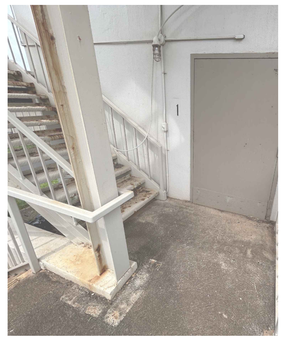
B FIRE ESCAPE 1 - FIRST FLOOR

I FIRE ESCAPE 1 - THIRD FLOOR

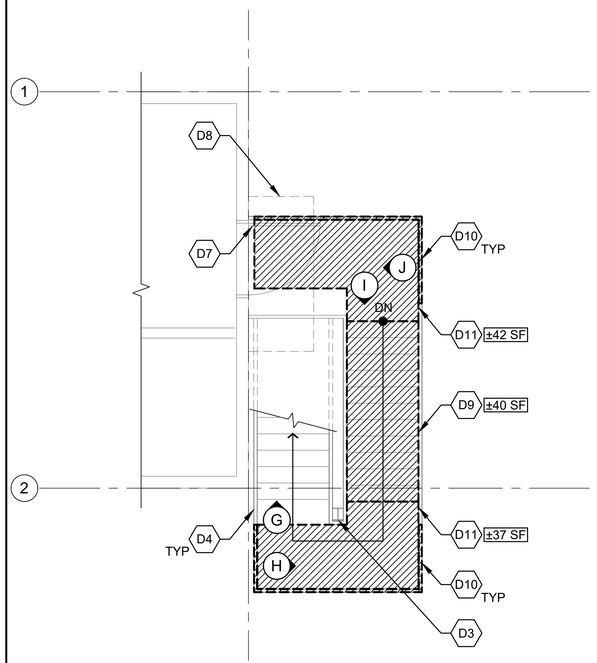
G FIRE ESCAPE 1 - THIRD FLOOR

E FIRE ESCAPE 1 - SECOND FLOOR

C FIRE ESCAPE 1 - SECOND FLOOR

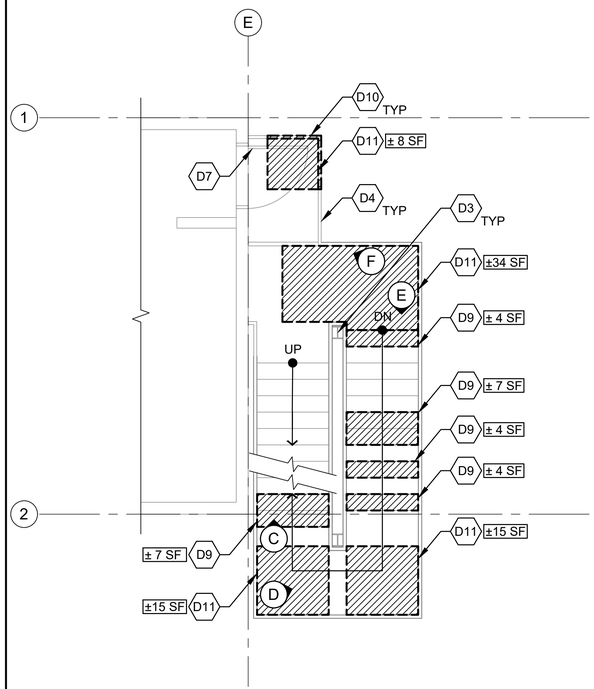


A FIRE ESCAPE 1 - FIRST FLOOR



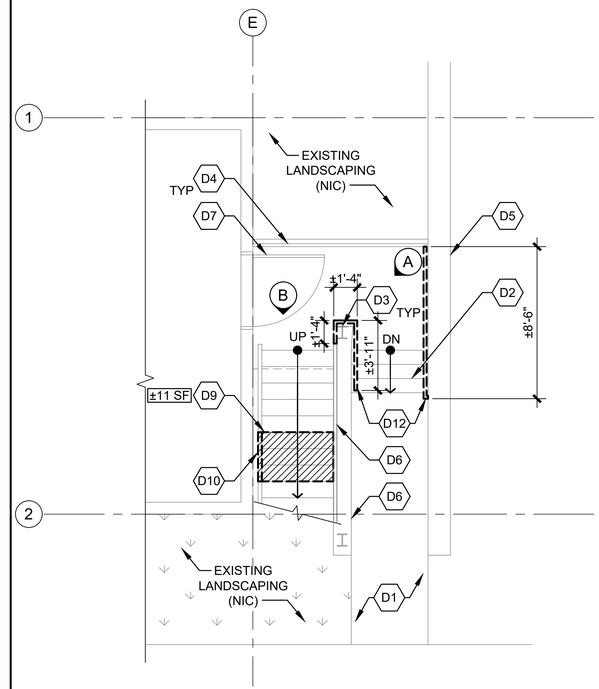
FIRE ESCAPE1 - ENLARGED DEMOLITION THIRD FLOOR PLAN

3 AD401 SCALE: 1/4" = 1'-0"



FIRE ESCAPE 1 - ENLARGED DEMOLITION SECOND FLOOR PLAN

2 AD401 SCALE: 1/4" = 1'-0"



FIRE ESCAPE 1 - ENLARGED DEMOLITION FIRST FLOOR PLAN

1 AD401 SCALE: 1/4" = 1'-0"

GENERAL SHEET NOTES

A. CONTRACTOR SHALL REMOVE ALL EXISTING SURFACE RUST ON METAL STAIRS, LANDING AND RAILING, WERE OCCURS. REMOVE CORROSION PRODUCTS TO WHITE STEEL AND MEASURE AREA AND THICKNESS OF REMAINING STEEL, SEE GENERAL NOTES, SHEET A-401 FOR REPAIR INFORMATION.

B. THE AREA OF DEMOLITION WORK INDICATED ON THIS SHEET IS APPROXIMATE. CONTRACTOR SHALL VERIFY EXTENTS OF STEEL CORROSION IN FIELD.

SHEET KEYNOTES (FOR THIS SHT ONLY)

D1. EXISTING CONCRETE SIDEWALK TO REMAIN

D2. EXISTING CONCRETE STAIRS TO REMAIN

D3. EXISTING STEEL COLUMN TO REMAIN

D4. EXISTING METAL HANDRAIL TO REMAIN

D5. EXISTING ROCK WALL TO REMAIN

D6. EXISTING CONCRETE PONY WALL TO REMAIN

D7. EXISTING DOOR TO REMAIN

D8. EXISTING AWNING ABOVE SHOWN DASHED TO REMAIN

D9. REMOVE EXISTING PAINT AND RUST ON EXISTING METAL STAIR TREAD, SEE GENERAL NOTE A FOR ADDITIONAL INFO

D10. REMOVE EXISTING PAINT AND RUST ON EXISTING METAL RAILING, SEE GENERAL NOTE A FOR ADDITIONAL INFO

D11. REMOVE EXISTING PAINT AND RUST ON EXISTING METAL LANDING, SEE GENERAL NOTE A FOR ADDITIONAL INFO

D12. DEMOLISH AND REMOVE PORTION OF EXISTING HANDRAIL, PICKET AND POSTS

LEGEND

(#) PHOTO REFERENCE IDENTIFICATION, SEE SYMBOLS, G-001 FOR ADDITIONAL INFO

REMOVE EXISTING RUST

PLAN NORTH

0 4' 8' 12'

SCALE: 1/4"=1'-0"

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Revisions:

No.	Description	Date

Project Title:

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FIRE ESCAPE STAIRS 1 - ENLARGED DEMOLITION FLOOR PLANS

Project Phase:

FINAL

Date:

APRIL 2026

Sheet No.:

AD401

G FIRE ESCAPE 2 - THIRD FLOOR

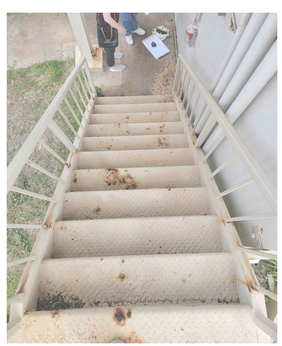
H FIRE ESCAPE 2 - THIRD FLOOR

E FIRE ESCAPE 2 - SECOND FLOOR

F FIRE ESCAPE 2 - SECOND FLOOR

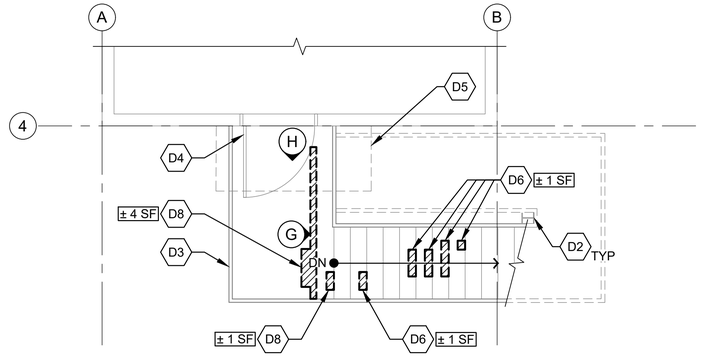
C FIRE ESCAPE 2 - FIRST FLOOR

D FIRE ESCAPE 2 - FIRST FLOOR



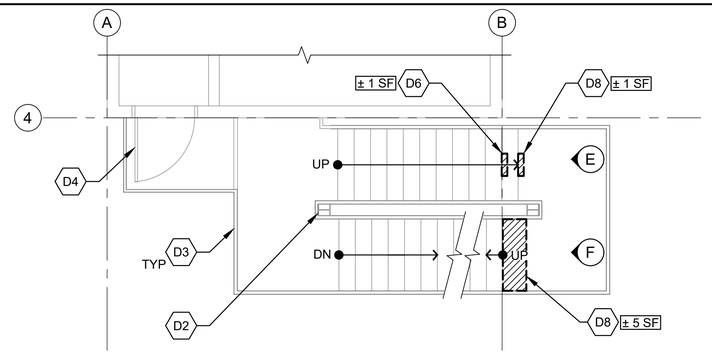
A FIRE ESCAPE 2 - BASEMENT

B FIRE ESCAPE 2 - BASEMENT



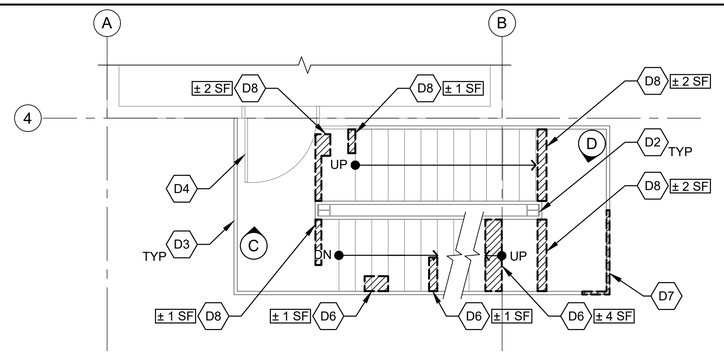
4 AD402 FIRE ESCAPE 2 - ENLARGED DEMOLITION THIRD FLOOR PLAN

SCALE: 1/4" = 1'-0"



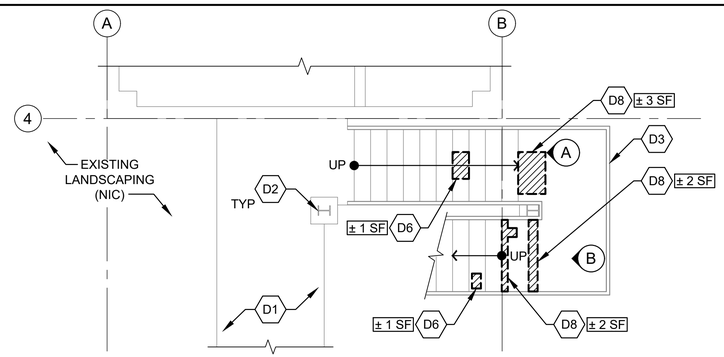
3 AD402 FIRE ESCAPE 2 - ENLARGED DEMOLITION SECOND FLOOR PLAN

SCALE: 1/4" = 1'-0"



2 AD402 FIRE ESCAPE 2 - ENLARGED DEMOLITION FIRST FLOOR PLAN

SCALE: 1/4" = 1'-0"



1 AD402 FIRE ESCAPE 2 - ENLARGED DEMOLITION BASEMENT FLOOR PLAN

SCALE: 1/4" = 1'-0"

GENERAL SHEET NOTES

A. CONTRACTOR SHALL REMOVE ALL EXISTING SURFACE RUST ON METAL STAIRS, LANDING AND RAILING, WERE OCCURS. REMOVE CORROSION PRODUCTS TO WHITE STEEL AND MEASURE AREA AND THICKNESS OF REMAINING STEEL, SEE GENERAL NOTES, SHEET A-402 FOR REPAIR INFORMATION.

B. THE AREA OF DEMOLITION WORK INDICATED ON THIS SHEET IS APPROXIMATE. CONTRACTOR SHALL VERIFY EXTENTS OF STEEL CORROSION IN FIELD.

SHEET KEYNOTES (FOR THIS SHT ONLY)

D1. EXISTING CONCRETE SIDEWALK TO REMAIN

D2. EXISTING STEEL COLUMN TO REMAIN

D3. EXISTING METAL HANDRAIL TO REMAIN

D4. EXISTING DOOR TO REMAIN

D5. EXISTING AWNING ABOVE SHOWN DASHED TO REMAIN

D6. REMOVE EXISTING PAINT AND RUST ON EXISTING METAL STAIR TREAD, SEE GENERAL NOTE A FOR ADDITIONAL INFO

D7. REMOVE EXISTING PAINT AND RUST ON EXISTING METAL RAILING, SEE GENERAL NOTE A FOR ADDITIONAL INFO

D8. REMOVE EXISTING PAINT AND RUST ON EXISTING METAL LANDING, SEE GENERAL NOTE A FOR ADDITIONAL INFO

LEGEND

(#) PHOTO REFERENCE IDENTIFICATION, SEE SYMBOLS, G-001 FOR ADDITIONAL INFO

REMOVE EXISTING RUST

PLAN NORTH

0 4' 8' 12'

SCALE: 1/4"=1'-0"

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EXP. DATE: 04/30/26

Sheet Title:

FIRE ESCAPE STAIRS 2 - ENLARGED DEMOLITION FLOOR PLANS

Project Phase:

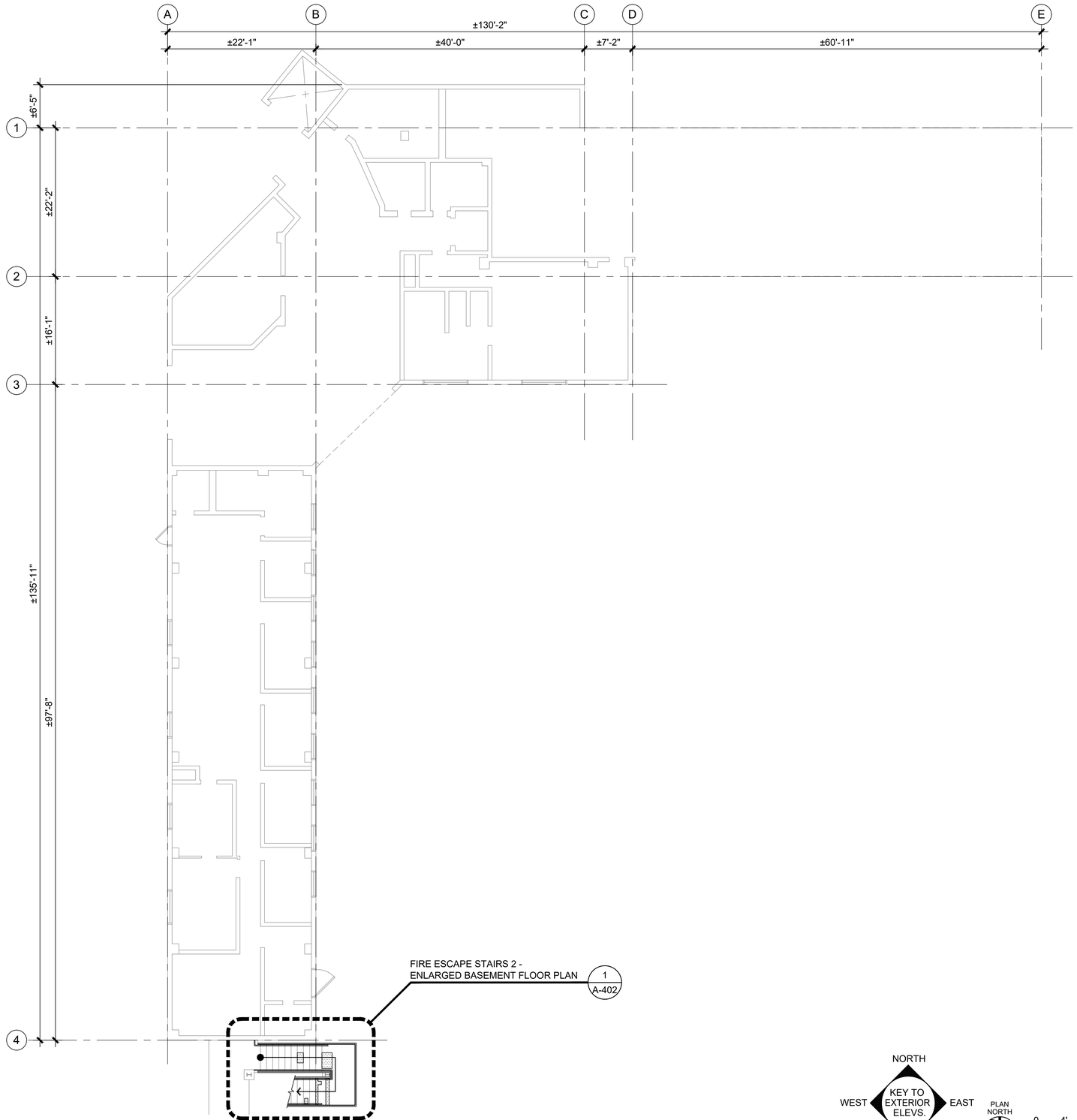
FINAL

Date:

APRIL 2026

Sheet No.:

AD402



1 A-101 OVERALL BASEMENT FLOOR PLAN

SCALE: 1/8" = 1'-0"

LEGEND

EXISTING WALL

APPROXIMATE AREA OF STEEL REPAIR, SEE STRUCTURAL STEEL NOTES, A-601 FOR MORE INFORMATION

NORTH
WEST KEY TO EXTERIOR ELEVS. EAST
SOUTH

PLAN NORTH (TRUE N)

0 4' 8' 12' 16' 20' 24'

SCALE: 1/8"=1'-0"

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OVERALL BASEMENT FLOOR PLAN

Project Phase:

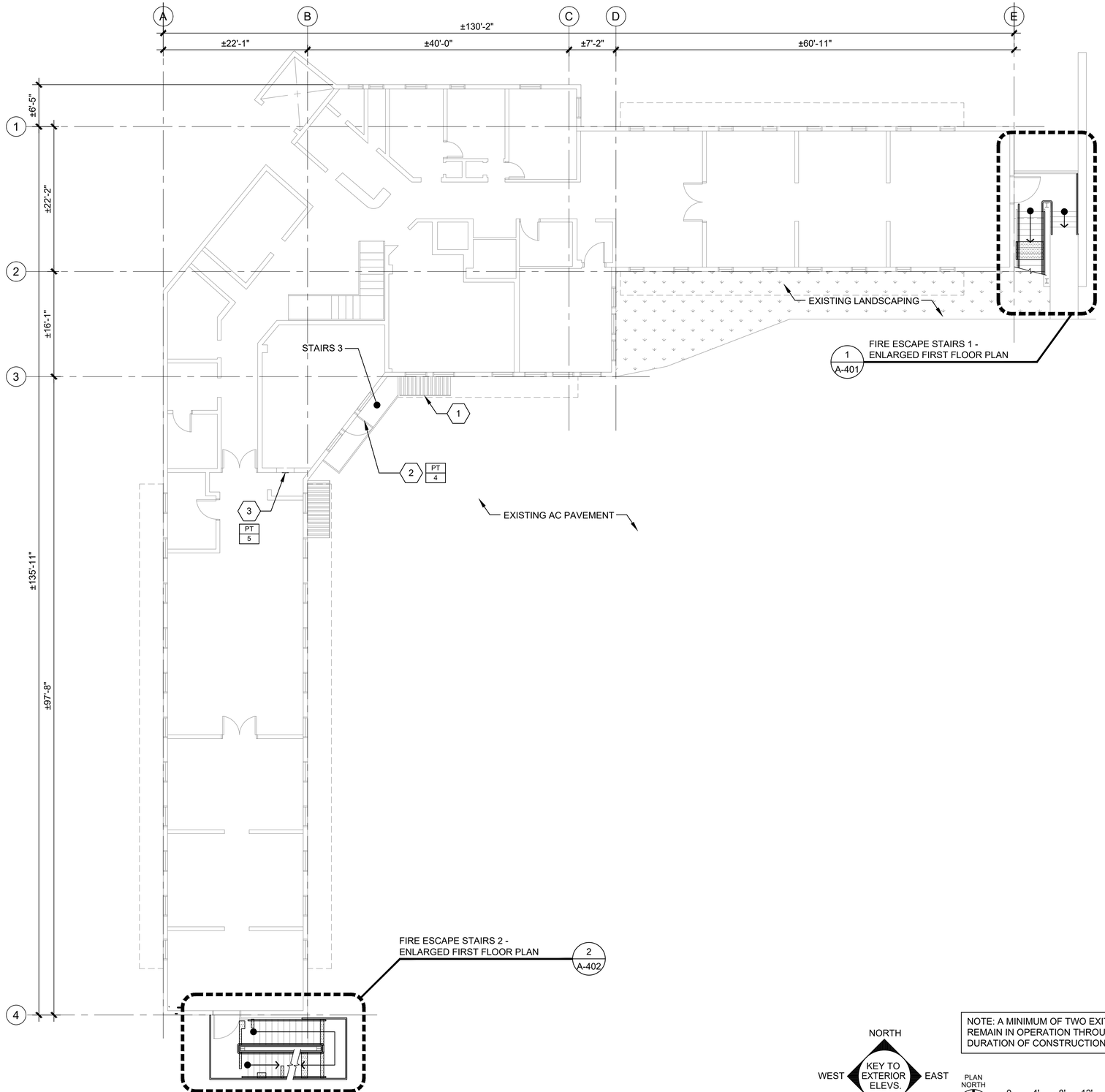
FINAL

Date:

APRIL 2026

Sheet No.:

A-101



1 A-102 OVERALL FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

NORTH
WEST KEY TO EXTERIOR ELEVS. EAST
SOUTH

NOTE: A MINIMUM OF TWO EXITS MUST REMAIN IN OPERATION THROUGHOUT THE DURATION OF CONSTRUCTION.

PLAN NORTH

0 4' 8' 12' 16' 20' 24'

SCALE: 1/8"=1'-0"

SHEET KEYNOTES (FOR THIS SHT ONLY)

1. EXISTING SHIP LADDER FIRE ESCAPE, SEE GENERAL SHEET NOTE A
2. PATCH AND PAINT EXISTING DOOR AS REQUIRED WHERE SIGNAGE HAS BEEN REMOVED
3. PATCH AND PAINT EXISTING WALL AS REQUIRED WHERE SIGNAGE HAS BEEN REMOVED

GENERAL SHEET NOTES

A. EXISTING EXITS TO STAIRS 3 MUST REMAIN IN OPERATION FOR THE DURATION OF REPAIRS TO FIRE ESCAPE STAIRS 1 AND 2.

LEGEND

EXISTING WALL

APPROXIMATE AREA OF STEEL REPAIR, SEE STRUCTURAL STEEL NOTES, A-601 FOR MORE INFORMATION

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Sheet Title:

OVERALL FIRST FLOOR PLAN

Project Phase:

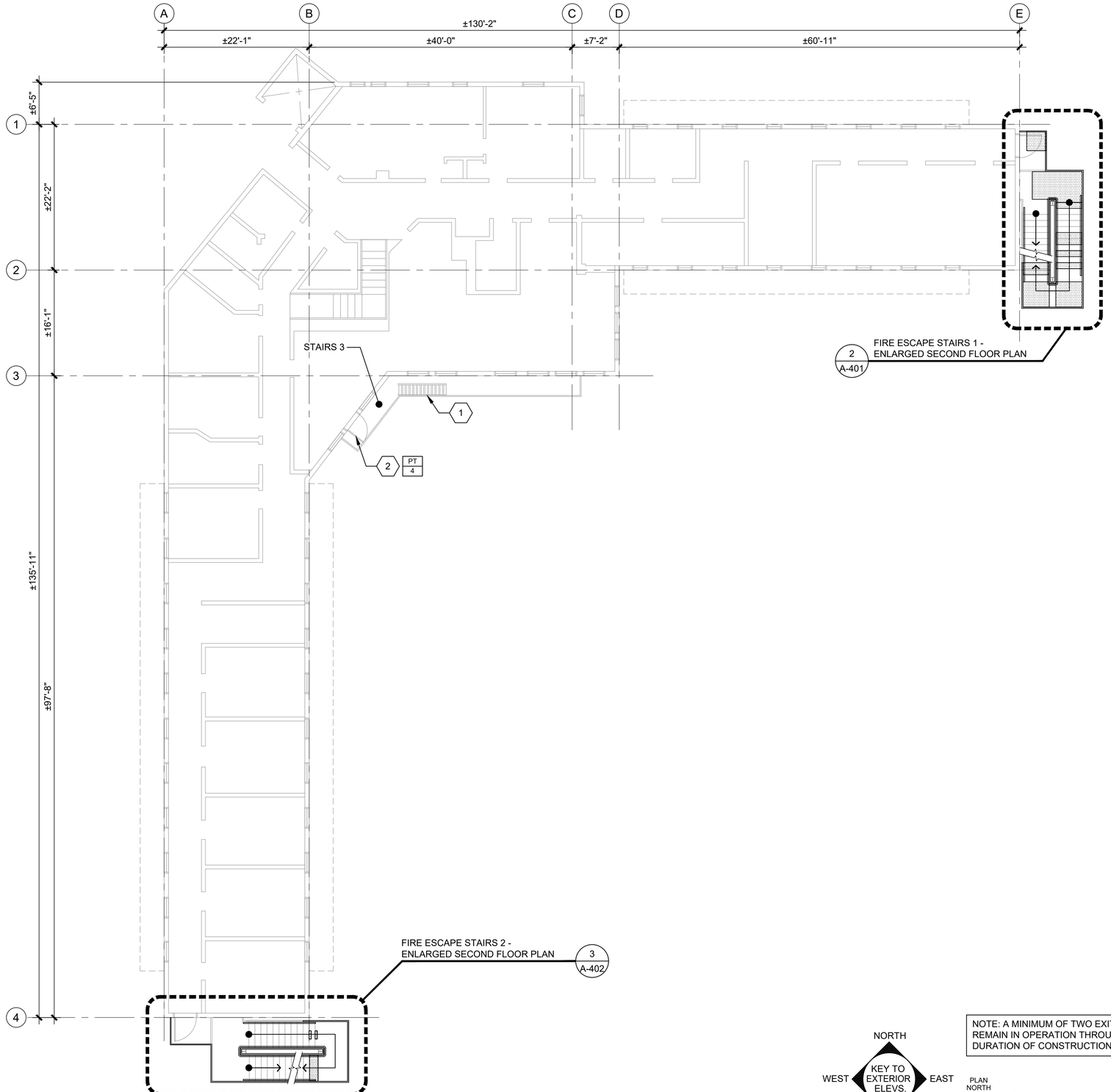
FINAL

Date:

APRIL 2026

Sheet No.:

A-102



1 A-103 OVERALL SECOND FLOOR PLAN

SCALE: 1/8" = 1'-0"

SHEET KEYNOTES (FOR THIS SHT ONLY)

1. EXISTING SHIP LADDER FIRE ESCAPE, SEE GENERAL SHEET NOTE A
2. PATCH AND PAINT EXISTING DOOR AS REQUIRED WHERE SIGNAGE HAS BEEN REMOVED

GENERAL SHEET NOTES

A. EXISTING EXITS TO STAIRS 3 MUST REMAIN IN OPERATION FOR THE DURATION OF REPAIRS TO FIRE ESCAPE STAIRS 1 AND 2.

LEGEND

EXISTING WALL

APPROXIMATE AREA OF STEEL REPAIR, SEE STRUCTURAL STEEL NOTES, A-601 FOR MORE INFORMATION

NORTH / WEST / EAST / SOUTH — KEY TO EXTERIOR ELEVS.

NOTE: A MINIMUM OF TWO EXITS MUST REMAIN IN OPERATION THROUGHOUT THE DURATION OF CONSTRUCTION.

PLAN NORTH (TRUE N)

0 4' 8' 12' 16' 20' 24'

SCALE: 1/8"=1'-0"

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OVERALL SECOND FLOOR PLAN

Project Phase:

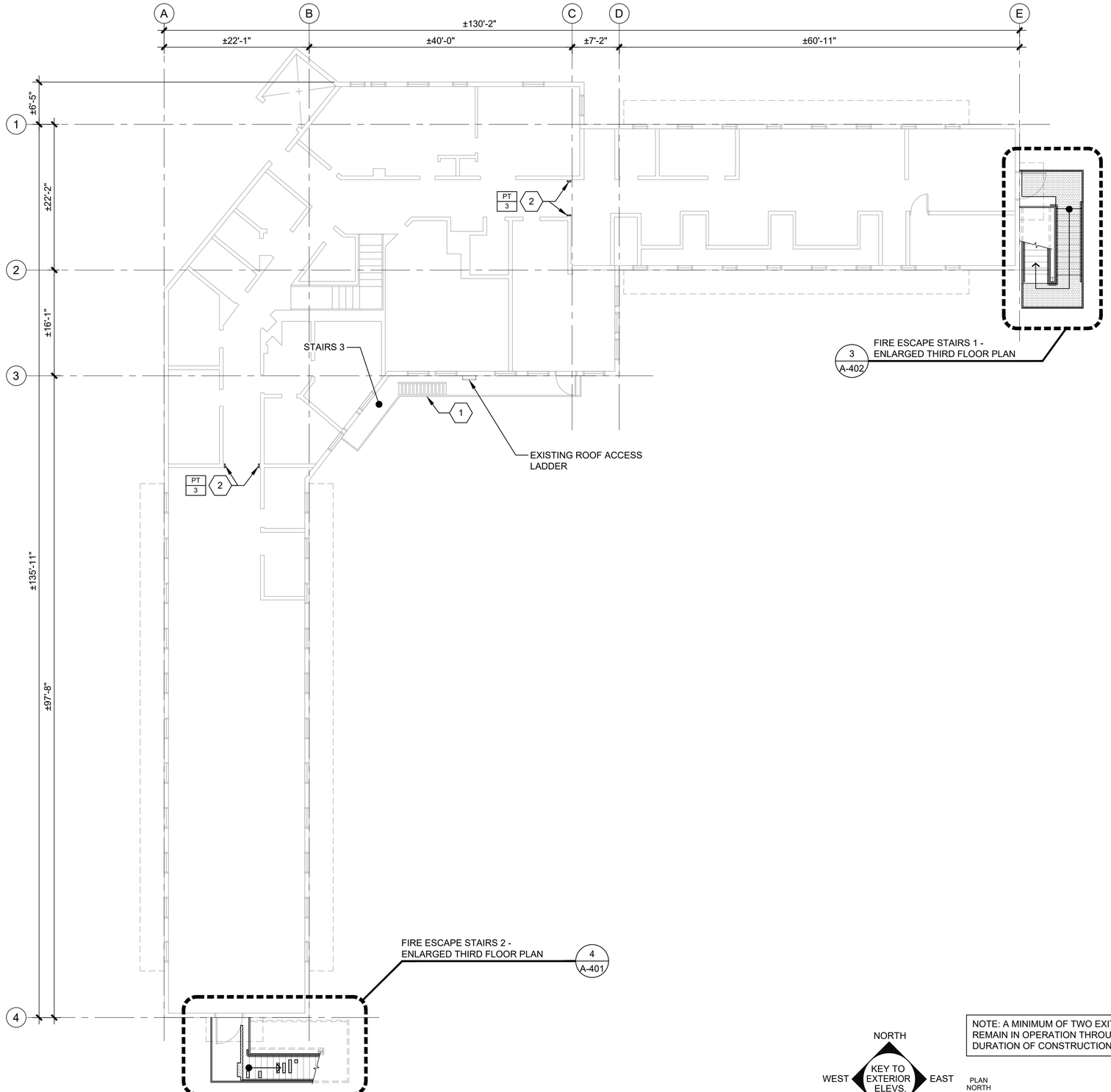
FINAL

Date:

APRIL 2026

Sheet No.:

A-103



1 A-104 OVERALL THIRD FLOOR PLAN

SCALE: 1/8" = 1'-0"

SHEET KEYNOTES (FOR THIS SHT ONLY)

1. EXISTING SHIP LADDER FIRE ESCAPE, SEE GENERAL SHEET NOTE A
2. CASED OPENING, SEE DETAIL 6/A-601 AND 7/A-601 FOR ADDITIONAL INFORMATION

GENERAL SHEET NOTES

A. EXISTING EXITS TO STAIRS 3 MUST REMAIN IN OPERATION FOR THE DURATION OF REPAIRS TO FIRE ESCAPE STAIRS 1 AND 2.

LEGEND

EXISTING WALL

APPROXIMATE AREA OF STEEL REPAIR, SEE STRUCTURAL STEEL NOTES, A-601 FOR MORE INFORMATION

NOTE: A MINIMUM OF TWO EXITS MUST REMAIN IN OPERATION THROUGHOUT THE DURATION OF CONSTRUCTION.

NORTH
WEST KEY TO EXTERIOR ELEVS. EAST
SOUTH

PLAN NORTH (TRUE N)

0 4' 8' 12' 16' 20' 24'

SCALE: 1/8"=1'-0"

INK ARCHITECTS

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OVERALL THIRD FLOOR PLAN

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FINAL

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APRIL 2026

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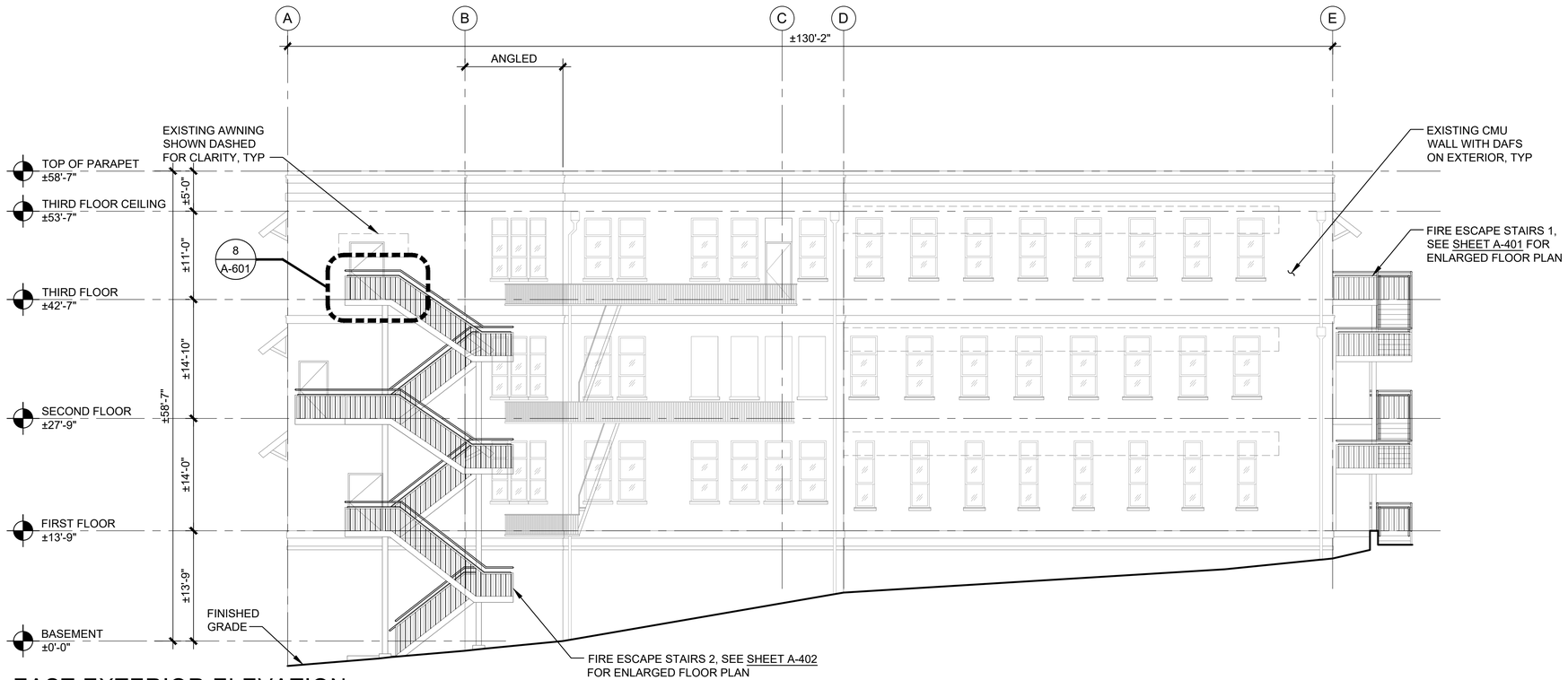
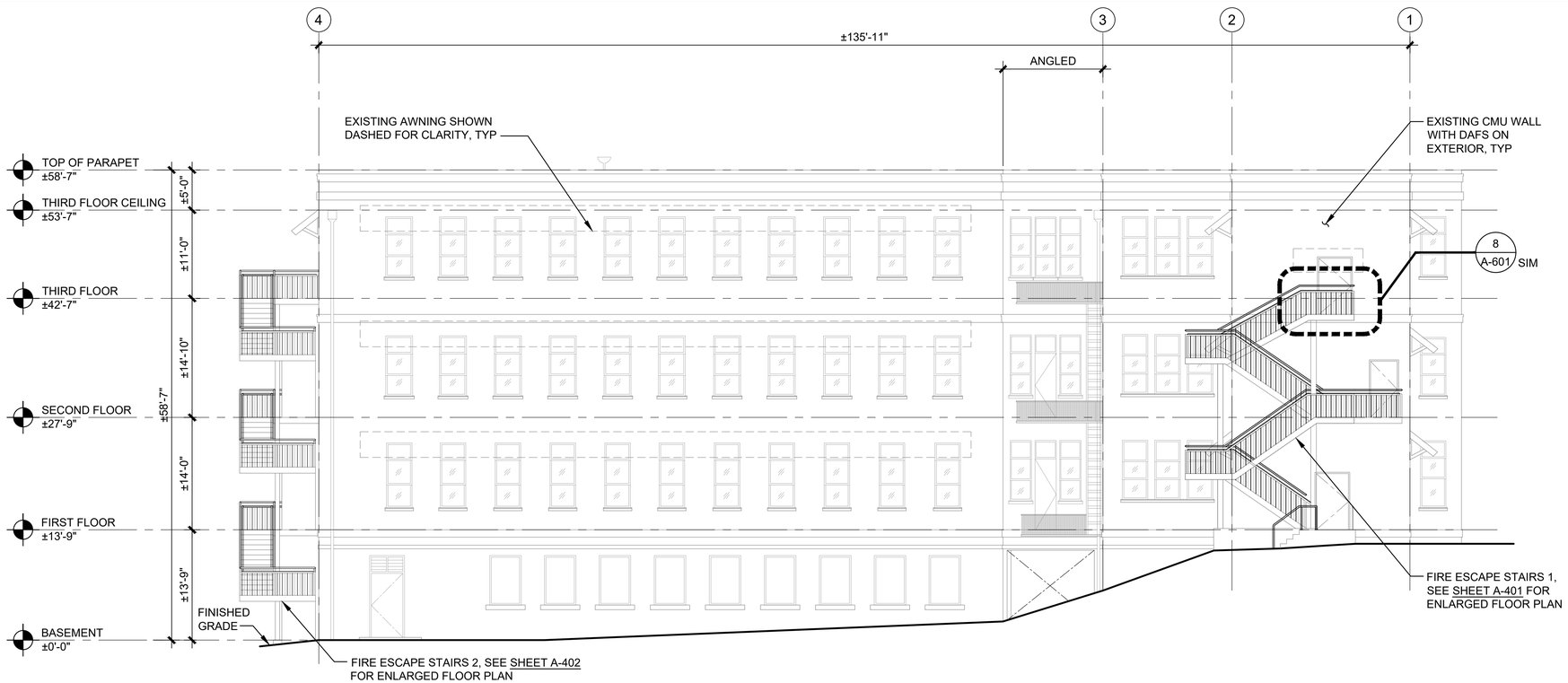
A-104



1 A-201 EAST EXTERIOR ELEVATION

SCALE: 1/8" = 1'-0"



1 A-201 SOUTH EXTERIOR ELEVATION

SCALE: 1/8" = 1'-0"

GENERAL SHEET NOTES

A. ENTIRE STAIR ASSEMBLY, FOR ALL FIRE ESCAPE STAIRS, INCLUDING RAILINGS, LANDINGS, TREADS, STRUCTURAL SUPPORTS AND REPAIRS/ MODIFICATIONS TO BE PAINTED AS SCHEDULED

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EXTERIOR ELEVATIONS

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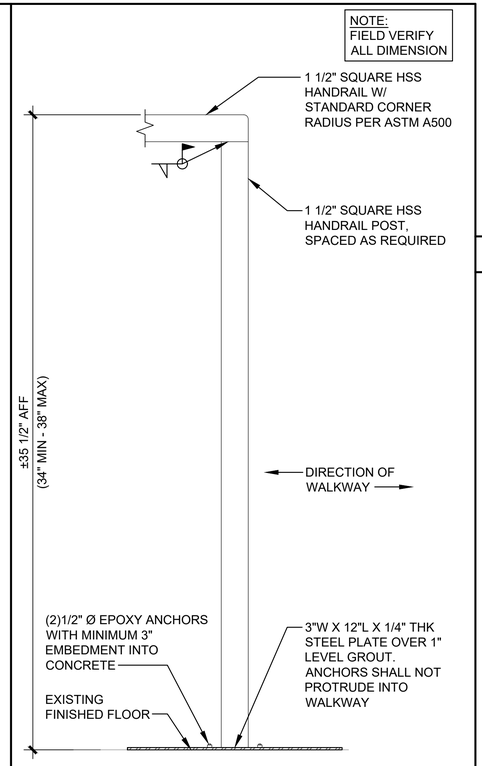
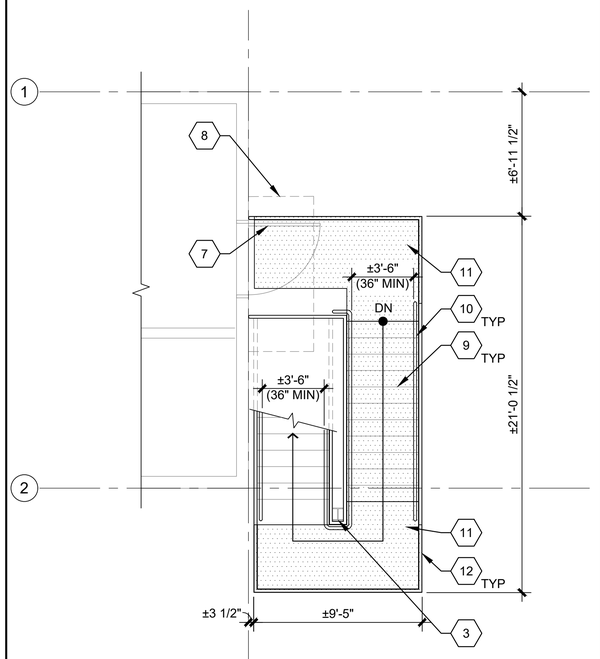
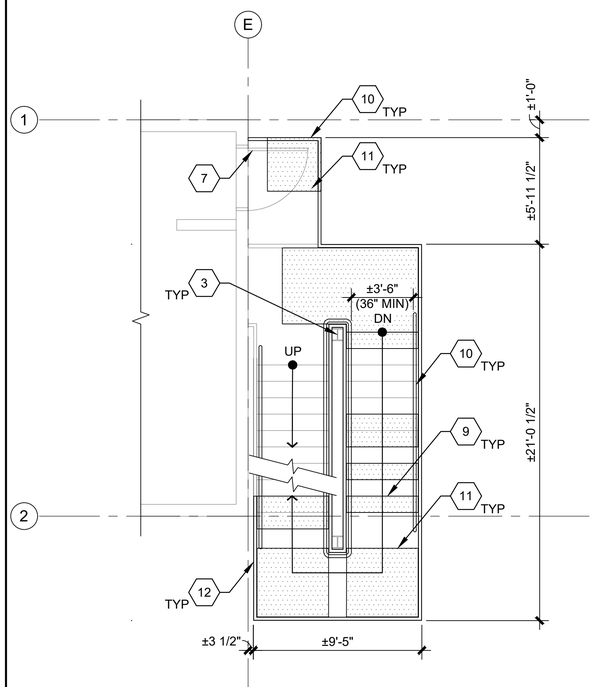
A-201



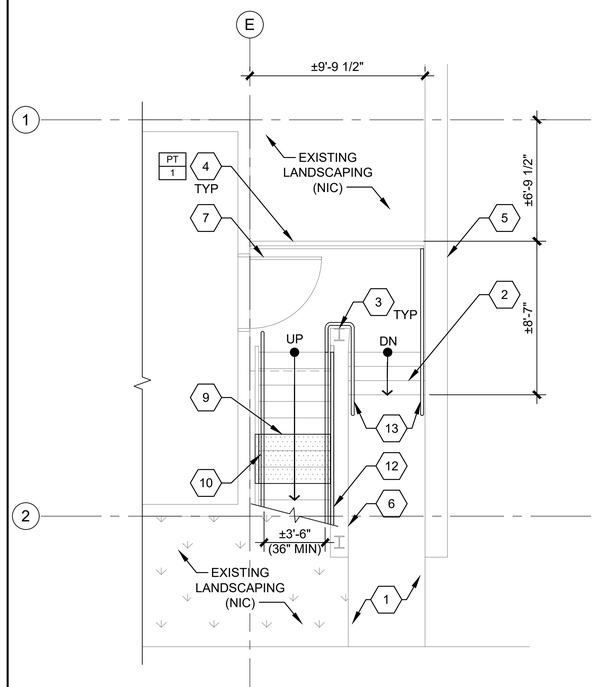
4 A-401 HANDRAIL EXTENSION
SCALE: 3" = 1'-0"



3 A-401 FIRE ESCAPE 1 - ENLARGED THIRD FLOOR PLAN
SCALE: 1/4" = 1'-0"



2 A-401 FIRE ESCAPE 1 - ENLARGED SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"



1 A-401 FIRE ESCAPE 1 - ENLARGED FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"

GENERAL SHEET NOTES

A. STEEL TREAD REPAIR
- A.1. IF REMAINING STEEL THICKNESS IS BETWEEN 1/8" AND 1/4", AND DAMAGED AREA IS LESS THAN 50% OF THE TOTAL AREA (ALLOWING UP TO 1" DAMAGE AT EACH VERTICAL FLANGE): CLEAN AND PAINT DAMAGED AREA WITH ZINC-RICH PRIMER AND TOP COAT. VERIFY THAT REMAINING CHECKER PLATE PROVIDES ADEQUATE NON-SLIP SURFACE.
- A.2. IF REMAINING STEEL THICKNESS IS BETWEEN 0" AND 1/8", AND DAMAGED AREA IS LESS THAN 50% OF THE TOTAL AREA (ALLOWING UP TO 1" DAMAGE AT EACH VERTICAL FLANGE): CUT OUT DAMAGED AREAS AND REPLACE WITH 1/4" THICK STEEL CHECKER PLATE, WELD AT PERIMETER. GRIND WELDS SMOOTH. PLATES SHALL BE RECTANGULAR AND NOT IRREGULAR SHAPES. CHECKER PLATE PATTERN SHALL MATCH THE EXISTING. PAINT DAMAGED AREA WITH ZINC RICH PAINT AND TOP COAT.
- A.3. STEEL TREADS WITH DAMAGED AREAS EXCEEDING THAT NOTED IN ITEMS A.1. AND A.2. SHALL BE REMOVED AND REPLACED WITH NEW STEEL TREADS TO MATCH EXISTING.

B. STEEL LANDING REPAIR
- B.1. IF REMAINING STEEL THICKNESS IS BETWEEN 1/8" AND 1/4", AND DAMAGED AREA IS LESS THAN 50% OF THE TOTAL AREA OF EACH SPAN: CLEAN AND PAINT DAMAGED AREA WITH ZINC-RICH PRIMER AND TOP COAT. VERIFY THAT REMAINING CHECKER PLATE PROVIDES ADEQUATE NON-SLIP SURFACE.
- B.2. IF REMAINING STEEL THICKNESS IS BETWEEN 0" AND 1/8", AND DAMAGED AREA IS LESS THAN 50% OF THE TOTAL AREA OF EACH SPAN:CUT OUT DAMAGED AREAS AND REPLACE WITH 1/4" THICK STEEL CHECKER PLATE, WELD AT PERIMETER. GRIND WELDS SMOOTH. PLATES SHALL BE RECTANGULAR AND NOT IRREGULAR SHAPES. CHECKER PLATE PATTERN SHALL MATCH THE EXISTING. PAINT DAMAGED AREA WITH ZINC RICH PAINT AND TOP COAT.
- B.3. STEEL LANDINGS WITH DAMAGED AREAS EXCEEDING THAT NOTED IN ITEMS B.1. AND B.2. SHALL BE REMOVED AND REPLACED WITH NEW STEEL TREADS TO MATCH EXISTING.

C. THE AREA OF REPAIR WORK INDICATED ON THIS SHEET IS APPROXIMATE. CONTRACTOR SHALL VERIFY EXTENTS IN FIELD.

D. ENTIRE STAIR ASSEMBLY, INCLUDING RAILINGS AND STRUCTURAL SUPPORTS TO BE PAINTED AS SCHEDULED

SHEET KEYNOTES (FOR THIS SHT ONLY)

1. EXISTING CONCRETE SIDEWALK
2. EXISTING CONCRETE STAIRS
3. EXISTING STEEL COLUMN
4. EXISTING METAL HANDRAIL
5. EXISTING ROCK WALL
6. EXISTING CONCRETE PONY WALL
7. EXISTING DOOR
8. EXISTING AWNING ABOVE SHOWN DASHED
9. STEEL STAIR TREAD REPAIR, SEE GENERAL NOTE A
10. HANDRAIL ATTACHMENT, SEE DETAIL 1/A-601
11. STEEL LANDING REPAIR, SEE GENERAL NOTE B
12. GUARDRAIL ATTACHMENT, SEE DETAIL 1/A-601
13. HANDRAIL EXTENSION, SEE DETAIL 4/A-401

LEGEND

APPROXIMATE AREA OF STEEL REPAIR, SEE STRUCTURAL STEEL NOTES, A-601 FOR MORE INFORMATION

PLAN NORTH

0 4' 8' 12'
SCALE: 1/4"=1'-0"

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Honolulu, Hawaii 96817
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E-mail: ink@inkarch.com

Revisions:

No.	Description	Date

Project Title:

LEAHI HOSPITAL

ATHERTON BUILDING FIRE ESCAPE REPAIR

3675 KILAUEA AVE
HONOLULU, HI 96816

SCOTT R.J. HARADA
LICENSED PROFESSIONAL ARCHITECT
No. 14637
HAWAII, U.S.A.

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SIGNATURE
EXP. DATE: 04/30/26

Sheet Title:

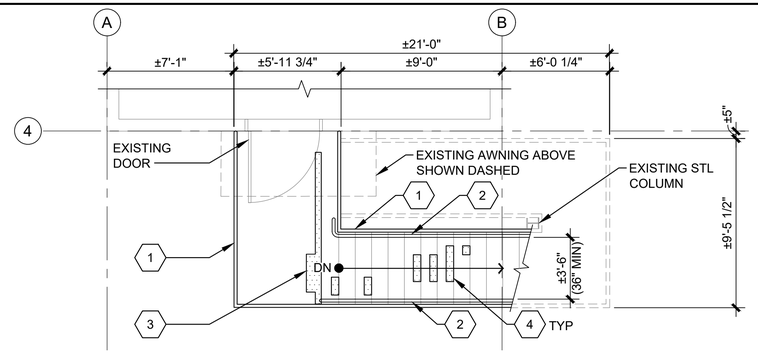
FIRE ESCAPE STAIRS 1 - ENLARGED FLOOR PLANS

Project Phase:
FINAL

Date:
APRIL 2026

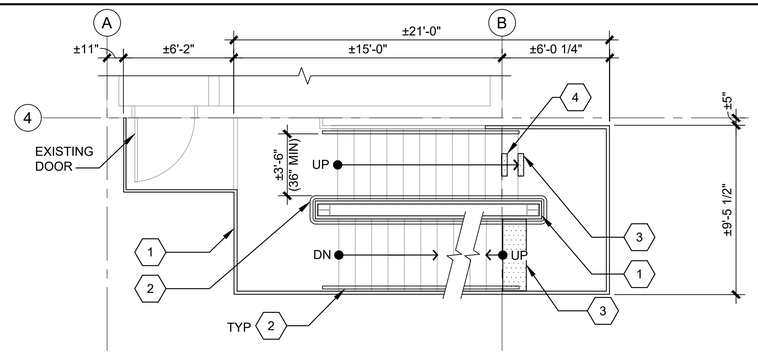
Sheet No.:

A-401



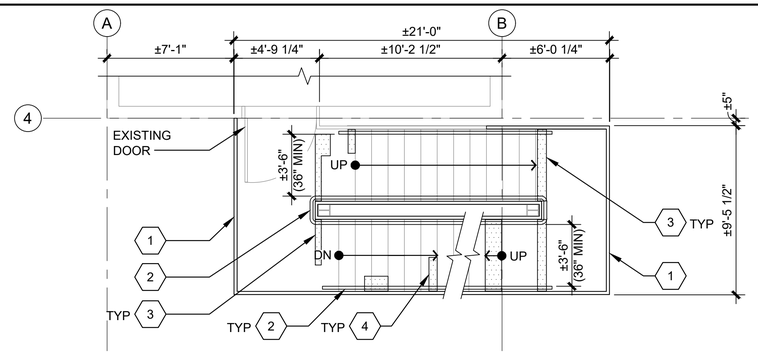
4 A-402 FIRE ESCAPE 2 - ENLARGED THIRD FLOOR PLAN

SCALE: 1/4" = 1'-0"



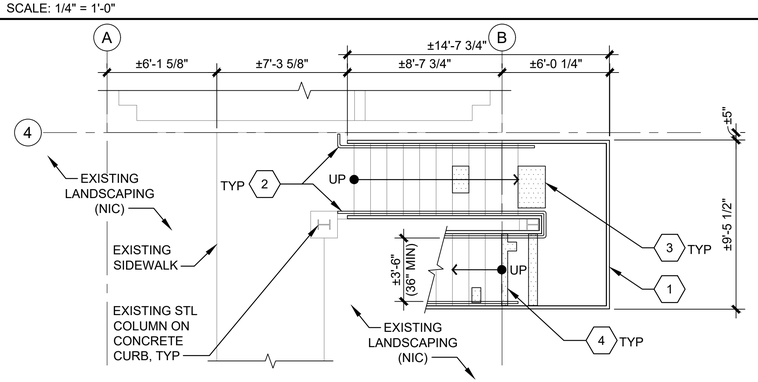
3 A-402 FIRE ESCAPE 2 - ENLARGED SECOND FLOOR PLAN

SCALE: 1/4" = 1'-0"



2 A-402 FIRE ESCAPE 2 - ENLARGED FIRST FLOOR PLAN

SCALE: 1/4" = 1'-0"



1 A-402 FIRE ESCAPE 2 - ENLARGED BASEMENT FLOOR PLAN

SCALE: 1/4" = 1'-0"

GENERAL SHEET NOTES

A. STEEL TREAD REPAIR

A.1. IF REMAINING STEEL THICKNESS IS BETWEEN 1/8" AND 1/4", AND DAMAGED AREA IS LESS THAN 50% OF THE TOTAL AREA (ALLOWING UP TO 1" DAMAGE AT EACH VERTICAL FLANGE): CLEAN AND PAINT DAMAGED AREA WITH ZINC-RICH PRIMER AND TOP COAT. VERIFY THAT REMAINING CHECKER PLATE PROVIDES ADEQUATE NON-SLIP SURFACE.

A.2. IF REMAINING STEEL THICKNESS IS BETWEEN 0" AND 1/8", AND DAMAGED AREA IS LESS THAN 50% OF THE TOTAL AREA (ALLOWING UP TO 1" DAMAGE AT EACH VERTICAL FLANGE): CUT OUT DAMAGED AREAS AND REPLACE WITH 1/4" THICK STEEL CHECKER PLATE, WELD AT PERIMETER. GRIND WELDS SMOOTH. PLATES SHALL BE RECTANGULAR AND NOT IRREGULAR SHAPES. CHECKER PLATE PATTERN SHALL MATCH THE EXISTING. PAINT DAMAGED AREA WITH ZINC RICH PAINT AND TOP COAT.

A.3. STEEL TREADS WITH DAMAGED AREAS EXCEEDING THAT NOTED IN ITEMS A.1. AND A.2. SHALL BE REMOVED AND REPLACED WITH NEW STEEL TREADS TO MATCH EXISTING.

B. STEEL LANDING REPAIR

B.1. IF REMAINING STEEL THICKNESS IS BETWEEN 1/8" AND 1/4", AND DAMAGED AREA IS LESS THAN 50% OF THE TOTAL AREA OF EACH SPAN: CLEAN AND PAINT DAMAGED AREA WITH ZINC-RICH PRIMER AND TOP COAT. VERIFY THAT REMAINING CHECKER PLATE PROVIDES ADEQUATE NON-SLIP SURFACE.

B.2. IF REMAINING STEEL THICKNESS IS BETWEEN 0" AND 1/8", AND DAMAGED AREA IS LESS THAN 50% OF THE TOTAL AREA OF EACH SPAN:CUT OUT DAMAGED AREAS AND REPLACE WITH 1/4" THICK STEEL CHECKER PLATE, WELD AT PERIMETER. GRIND WELDS SMOOTH. PLATES SHALL BE RECTANGULAR AND NOT IRREGULAR SHAPES. CHECKER PLATE PATTERN SHALL MATCH THE EXISTING. PAINT DAMAGED AREA WITH ZINC RICH PAINT AND TOP COAT.

B.3. STEEL LANDINGS WITH DAMAGED AREAS EXCEEDING THAT NOTED IN ITEMS B.1. AND B.2. SHALL BE REMOVED AND REPLACED WITH NEW STEEL TREADS TO MATCH EXISTING.

C. THE AREA OF REPAIR WORK INDICATED ON THIS SHEET IS APPROXIMATE. CONTRACTOR SHALL VERIFY EXTENTS IN FIELD.

D. ENTIRE STAIR ASSEMBLY, INCLUDING RAILINGS AND STRUCTURAL SUPPORTS TO BE PAINTED AS SCHEDULED

SHEET KEYNOTES (FOR THIS SHT ONLY)

1. GUARDRAIL ATTACHMENT, SEE DETAIL 1/A-601
2. HANDRAIL ATTACHMENT, SEE DETAIL 1/A-601
3. STEEL LANDING REPAIR, SEE GENERAL NOTE B
4. STEEL STAIR TREAD REPAIR, SEE GENERAL NOTE A

LEGEND

APPROXIMATE AREA OF STEEL REPAIR, SEE STRUCTURAL STEEL NOTES, A-601 FOR MORE INFORMATION

PLAN NORTH

0 4' 8' 12'

SCALE: 1/4"=1'-0"

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SIGNATURE
EXP. DATE: 04/30/26

Sheet Title:

FIRE ESCAPE STAIRS 2 - ENLARGED FLOOR PLANS

Project Phase:
FINAL

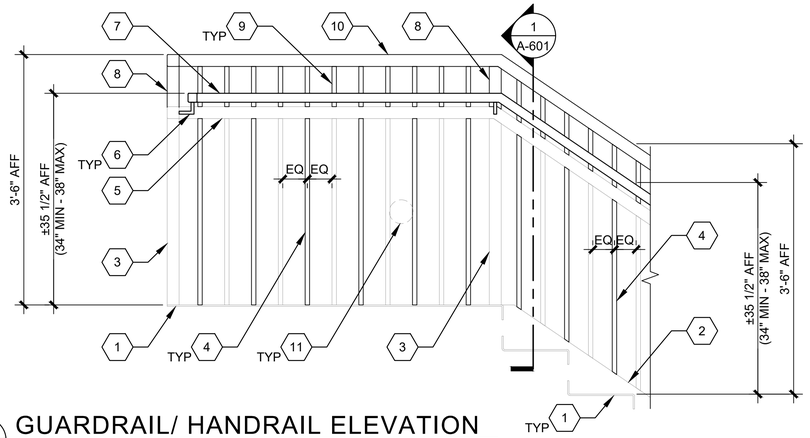
Date:
APRIL 2026

Sheet No.:

A-402

MATERIAL FINISH SCHEDULE

CODE	MATERIAL	MANUFACTURER	MODEL/SIZE	COLOR	OPTIONS	LOCATIONS	REMARKS
PT-1	EXTERIOR PAINT	SHERWIN WILLIAMS	SEE SPECS	MATCH EXISTING	SEMI GLOSS	EXISTING EXTERIOR FIRE ESCAPE STAIRS	-
PT-2	EXTERIOR PAINT	SHERWIN WILLIAMS	SEE SPECS	MATCH EXISTING	SEMI GLOSS	GALVANIZED STEEL	SEE STRUCTURAL STEEL NOTES FOR ADDITIONAL INFORMATION
PT-3	INTERIOR PAINT	SHERWIN WILLIAMS	SEE SPECS	MATCH EXISTING	SEMI GLOSS	CASED OPENING	-
PT-4	INTERIOR PAINT	SHERWIN WILLIAMS	SEE SPECS	MATCH EXISTING	SEMI GLOSS	EXIT DOORS	-
PT-5	INTERIOR PAINT	SHERWIN WILLIAMS	SEE SPECS	MATCH EXISTING	SEMI GLOSS	EXISTING WALL	-
WB-1	RESILIENT WALL BASE	SEE SPECS	SEE SPECS	MATCH EXISTING	MATCH EXISTING	CASED OPENING	-



8 A-601 GUARDRAIL/ HANDRAIL ELEVATION

SCALE: 1" = 1'-0"

STRUCTURAL STEEL NOTES

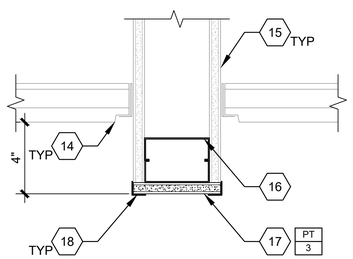
1. ALL STEEL DIAMOND PLATE SHALL BE HOT DIP GALVANIZED AND CONFORM TO ASTM A786 Fy=33000 PSI. FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE A.I.S.C. SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS, LATEST EDITION. SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION.
2. WELDING: ALL WELDING IS TO COMPLY WITH A.W.S. SPECIFICATIONS AND IS TO BE DONE BY CERTIFIED WELDERS. ALL WELDING IS TO BE DONE BY ELECTRIC ARC PROCESS AND SHALL BE PERFORMED WITH APPROVED ELECTRODES AS REQUIRED BY I.B.C. WELDS ARE DESIGNED AT FULL STRESS.
3. ALL WELDS NOT SHOWN SHALL BE FULL PENETRATION WELDS CAPABLE OF DEVELOPING THE FULL STRENGTH OF THE CONNECTING MEMBERS
4. THE CONTRACTOR SHALL DETAIL ALL MEMBER AND CONNECTIONS NOT SHOWN AND SHALL SUBMIT THEM TO THE ENGINEER FOR REVIEW AND APPROVAL. COST OF THESE MEMBERS AND CONNECTIONS SHALL BE INCLUDED IN THE CONTRACTORS BID PRICE.
5. GALVANIZE ALL STRUCTURAL STEEL SHAPES, PLATES, BOLTS AND ACCESSORIES
6. ONCE FIELD WELDING IS COMPLETE. TOUCH UP HOT DIP GALVANIZED STEEL AT WELDED AREAS WITH ZINC RICH PAINT AND TOP COAT.

GENERAL SHEET NOTES

A. ENTIRE STAIR ASSEMBLY, FOR ALL FIRE ESCAPE STAIRS, INCLUDING RAILINGS, LANDINGS, TREADS, STRUCTURAL SUPPORTS AND REPAIRS/ MODIFICATIONS TO BE PAINTED AS SCHEDULED

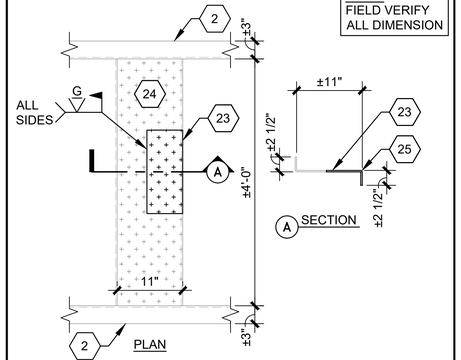
SHEET KEYNOTES (FOR THIS SHT ONLY)

1. EXISTING METAL STAIR TREAD/ LANDING
2. EXISTING STEEL C-CHANNEL STAIR STRINGER
3. EXISTING 2" SQUARE HSS GUARDRAIL POST
4. 3/4" STEEL PICKETS INSTALLED BETWEEN EXISTING PICKETS
5. EXISTING 2" SQUARE HSS GUARDRAIL
6. 1/2" Ø HANDRAIL BRACKET @ 48" OC MAX, FULLY WELDED TO EXISTING 2" SQUARE HSS GUARDRAIL, WHERE OCCURS
7. 1 1/2" SQUARE HSS HANDRAIL W/ STANDARD CORNER RADIUS PER ASTM A500, WHERE OCCURS
8. 2" SQUARE HSS GUARDRAIL POST
9. 3/4" STEEL PICKETS @ 4" OC MAX
10. 2" SQUARE HSS GUARDRAIL W/ STANDARD CORNER RADIUS PER ASTM A500
11. 4" Ø SPHERE SHALL NOT BE ABLE TO PASS THROUGH ANY OPENING OF THE GUARDRAIL FROM WALKING SURFACE TO REQUIRED HEIGHT
12. WALL BASE AS SCHEDULED
13. EXISTING WALL BASE
14. EXISTING ACT CEILING
15. EXISTING METAL STUD WALL
16. METAL STUD AS REQUIRED FOR CASED OPENING
17. 5/8" THK TYPE "R" GYP BD, AS SPECIFIED
18. CORNER BEAD, PER MFR RECOMMENDATION
19. NOT USED
20. HOT DIP GALVANIZED STEEL DIAMOND PLATE TREAD
21. EXISTING STEEL DIAMOND PLATE, FIELD VERIFY THICKNESS
22. EXISTING STEEL BEAM BELOW
23. HOT DIP GALVANIZED STEEL DIAMOND PLATE, THICKNESS TO MATCH EXISTING THICKNESS
24. EXISTING STEEL DIAMOND PLATE TREAD
25. MATCH EXISTING BEND RADIUS



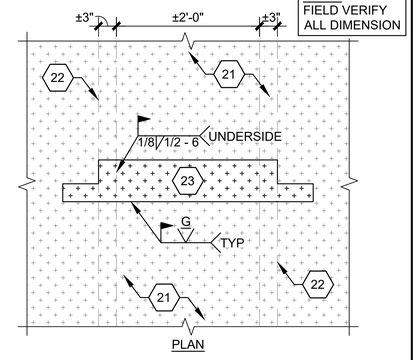
7 A-601 CASED OPENING HEADER

SCALE: 3" = 1'-0"



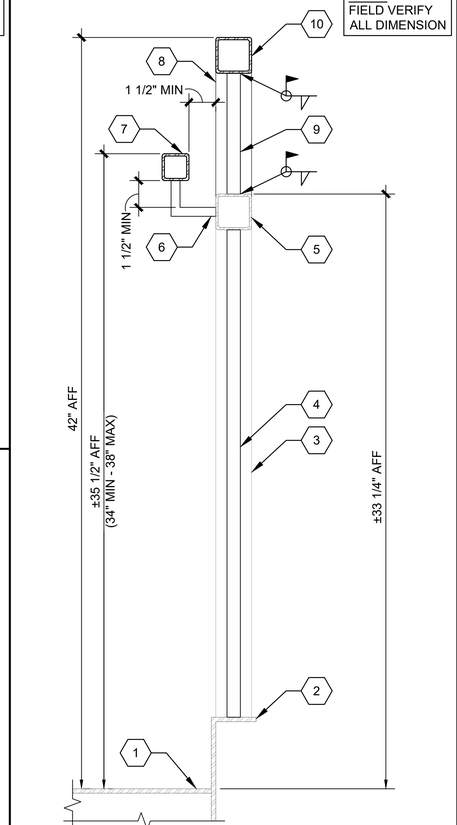
5 A-601 TREAD STEEL PLATE REPLACEMENT

SCALE: 1" = 1'-0"



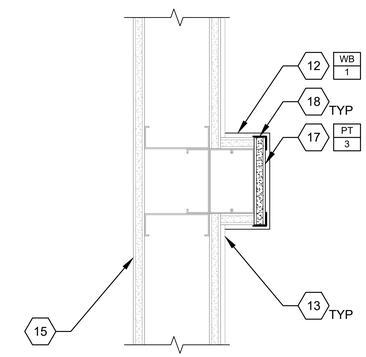
3 A-601 LANDING STEEL PLATE REPLACEMENT

SCALE: 1" = 1'-0"



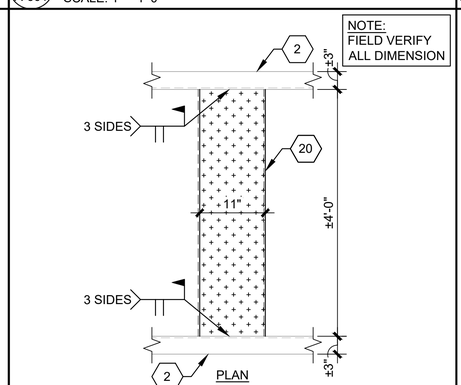
1 A-601 GUARDRAIL/ HANDRAIL ATTACHMENT

SCALE: 3" = 1'-0"



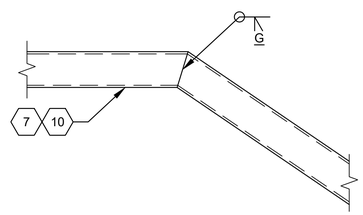
6 A-601 CASED OPENING JAMB

SCALE: 3" = 1'-0"



4 A-601 NEW TREAD REPLACMENT

SCALE: 1" = 1'-0"



2 A-601 GUARDRAIL/ HANDRAIL FABRICATION

SCALE: 3" = 1'-0"

0 1' 2' 3'

SCALE: 1"=1'-0"

0 3" 6" 9" 1'

SCALE: 3"=1'-0"

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Revisions:

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EXP. DATE: 04/30/26

Sheet Title:

MATERIAL FINISH SCHEDULE AND MISCELLANEOUS DETAILS

Project Phase:

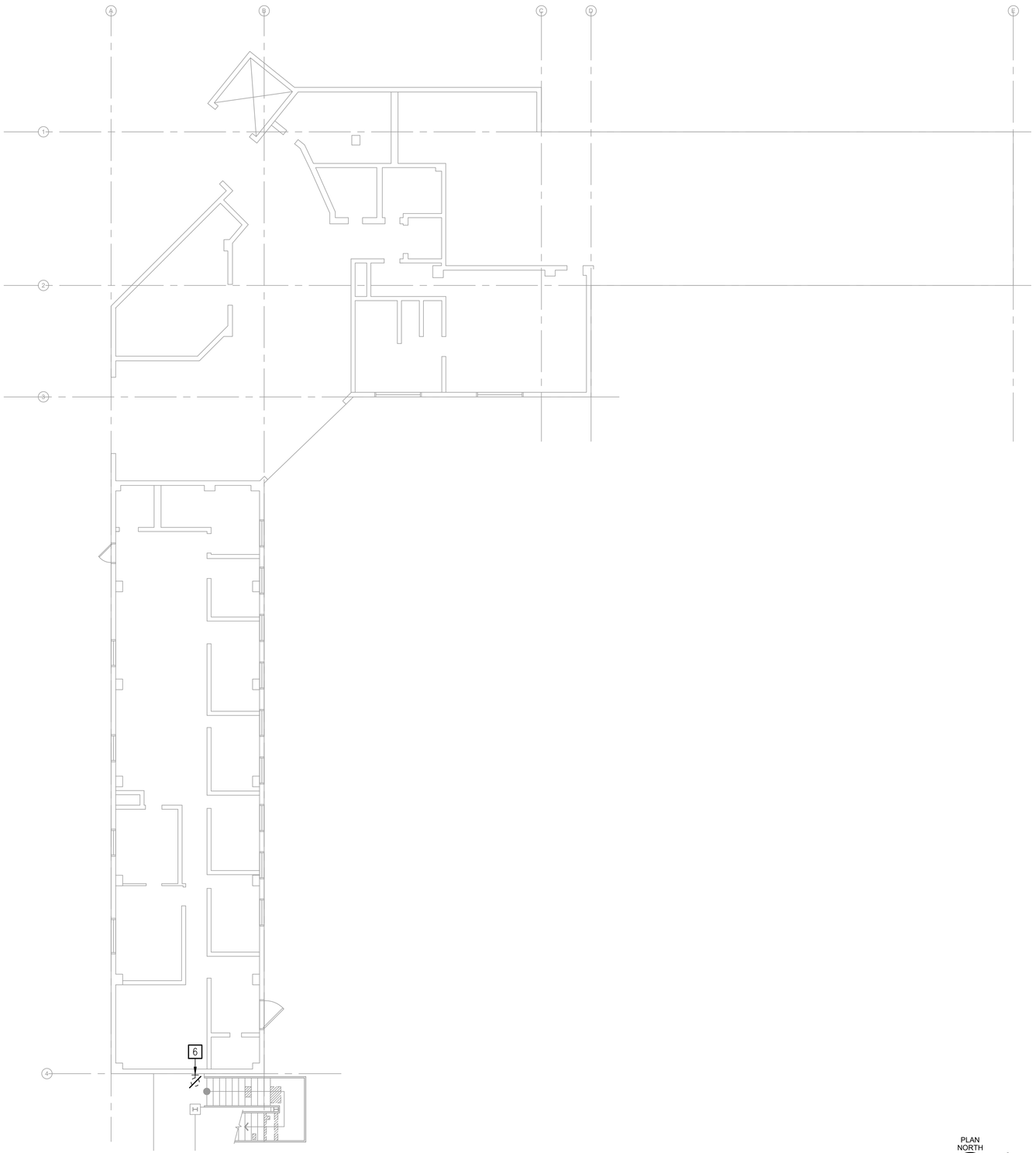
FINAL

Date:

APRIL 2026

Sheet No.:

A-601



1 OVERALL BASEMENT LIGHTING DEMOLITION PLAN
ED101 SCALE: 1/8" = 1'-0"

DEMOLITION NOTES:

1. EXISTING PLANS DO NOT INDICATE COMPLETE EXISTING WIRING CONDITIONS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO START OF WORK.
2. BEFORE ANY WIRING IS CUT, CONTRACTOR SHALL VERIFY USAGE OF WIRING TO BE CUT TO ASSURE THAT SERVICES REQUIRED ARE NOT DISCONNECTED.
3. REMOVE ALL EXISTING WIRING NOT TO REMAIN IN SERVICE.
4. REMOVE ALL CONDUITS NO LONGER REQUIRED
5. PHASE WORK TO ASSURE CONTINUITY OF ELECTRICAL, TELEPHONE AND SIGNAL SERVICES TO PARTS OF BUILDING THAT WILL REMAIN IN USE.
6. REMOVE EXISTING LIGHT FIXTURE FOR REPLACEMENT.

REMOVE	NEW	DESCRIPTION
		WALL LUMINAIRE
		EXIT LIGHT, CEILING, BLACKENED SEGMENT INDICATES ILLUMINATED SIDES AND ARROWS INDICATE DIRECTIONAL ARROWS

NOTES:

1. ANY CIRCUIT WITH NO FURTHER DESIGNATION INDICATES A TWO WIRE CIRCUIT. CIRCUITS WITH ADDITIONAL WIRES ARE INDICATED AS FOLLOWS —//—; 3 WIRES: —///—, 4 WIRES, ETC.
2. —G— INDICATES GROUNDING CONDUCTOR SIZED PER NATIONAL ELECTRICAL CODE ARTICLE 250.122. PROVIDE GROUNDING CONDUCTOR IN ALL RACEWAYS.

CITY AND COUNTY OF HONOLULU
REVISED ORDINANCES OF HONOLULU 2021
CHAPTER 16B

To the best of my knowledge, this project's design substantially conforms to the Building Energy Conservation Code for:

_____Building Component Systems
__X__Electrical Component Systems
_____Mechanical Component Systems

Signature: _____ Date: 9/18/2025
Name: ALBERT RICHARD CHONG
Title: PRESIDENT
License No.: 6183-E

PLAN NORTH

0 4' 8' 12' 16' 20' 24'
SCALE: 1/8"=1'-0"

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OVERALL BASEMENT LIGHTING DEMOLITION PLAN

Project Phase:

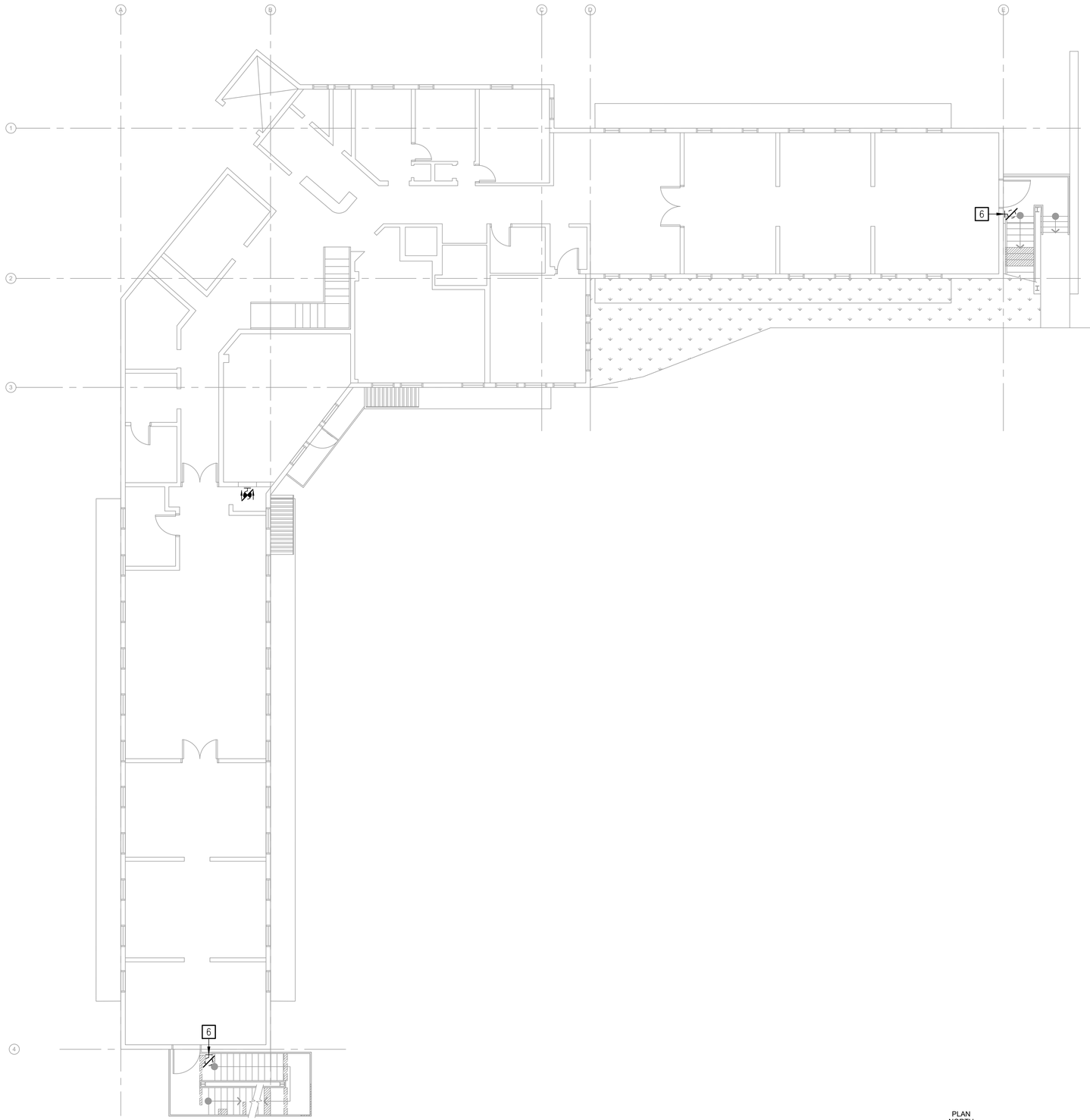
FINAL

Date:

APRIL 2026

Sheet No.:

ED101



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5. PHASE WORK TO ASSURE CONTINUITY OF ELECTRICAL, TELEPHONE AND SIGNAL SERVICES TO PARTS OF BUILDING THAT WILL REMAIN IN USE.
6. REMOVE EXISTING LIGHT FIXTURE FOR REPLACEMENT.

1 ED102 OVERALL FIRST FLOOR LIGHTING DEMOLITION PLAN

SCALE: 1/8" = 1'-0"

PLAN NORTH

0 4' 8' 12' 16' 20' 24'

SCALE: 1/8"=1'-0"

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OVERALL FIRST FLOOR LIGHTING DEMOLITION PLAN

Project Phase:

FINAL

Date:

APRIL 2026

Sheet No.:

ED102

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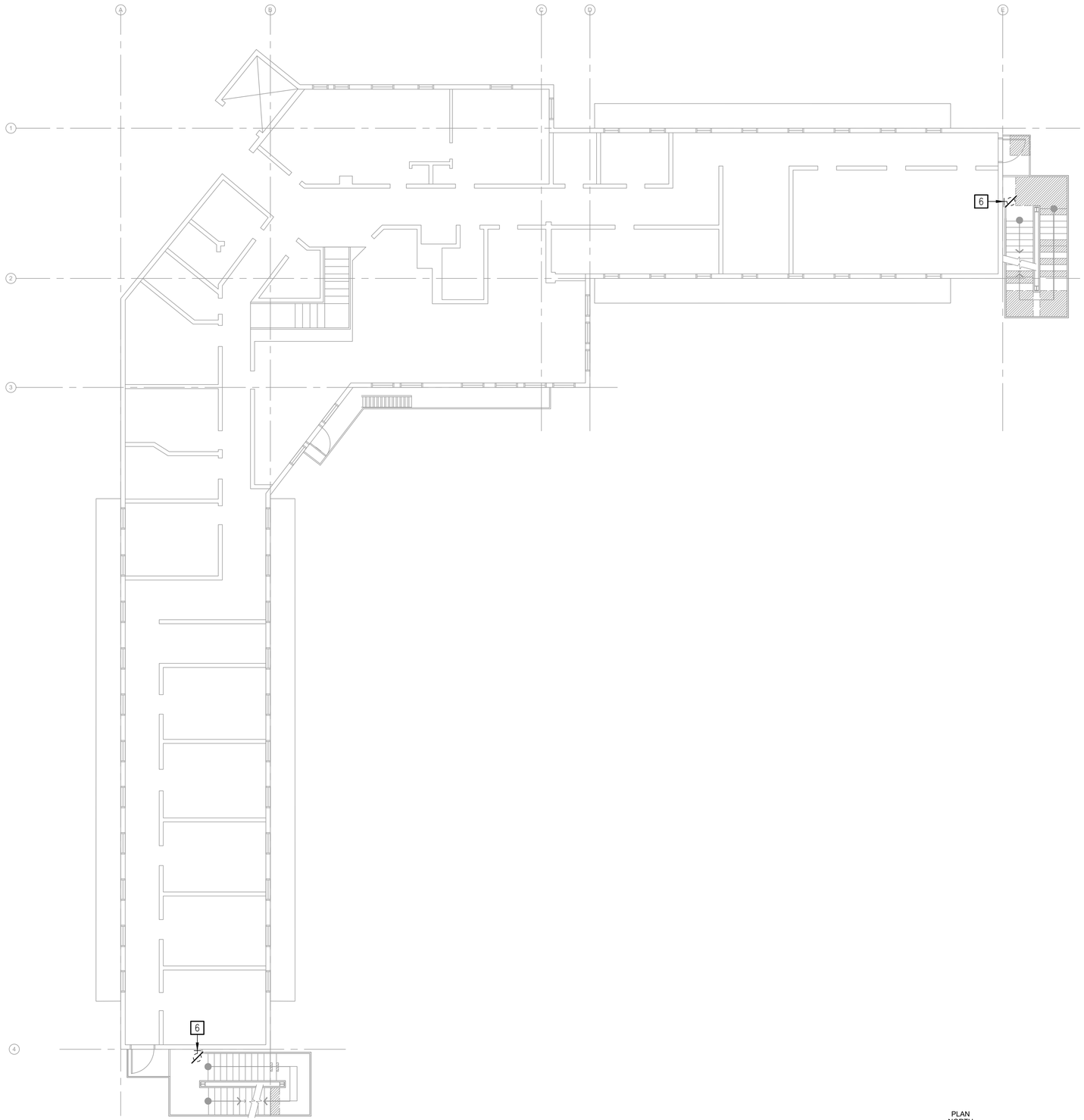

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6. REMOVE EXISTING LIGHT FIXTURE FOR REPLACEMENT.

1 ED103 OVERALL SECOND FLOOR LIGHTING DEMOLITION PLAN

SCALE: 1/8" = 1'-0"

PLAN NORTH

0 4' 8' 12' 16' 20' 24'

SCALE: 1/8"=1'-0"

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Sheet Title:

OVERALL SECOND FLOOR LIGHTING DEMOLITION PLAN

Project Phase:
FINAL

Date:
APRIL 2026

Sheet No.:

ED103

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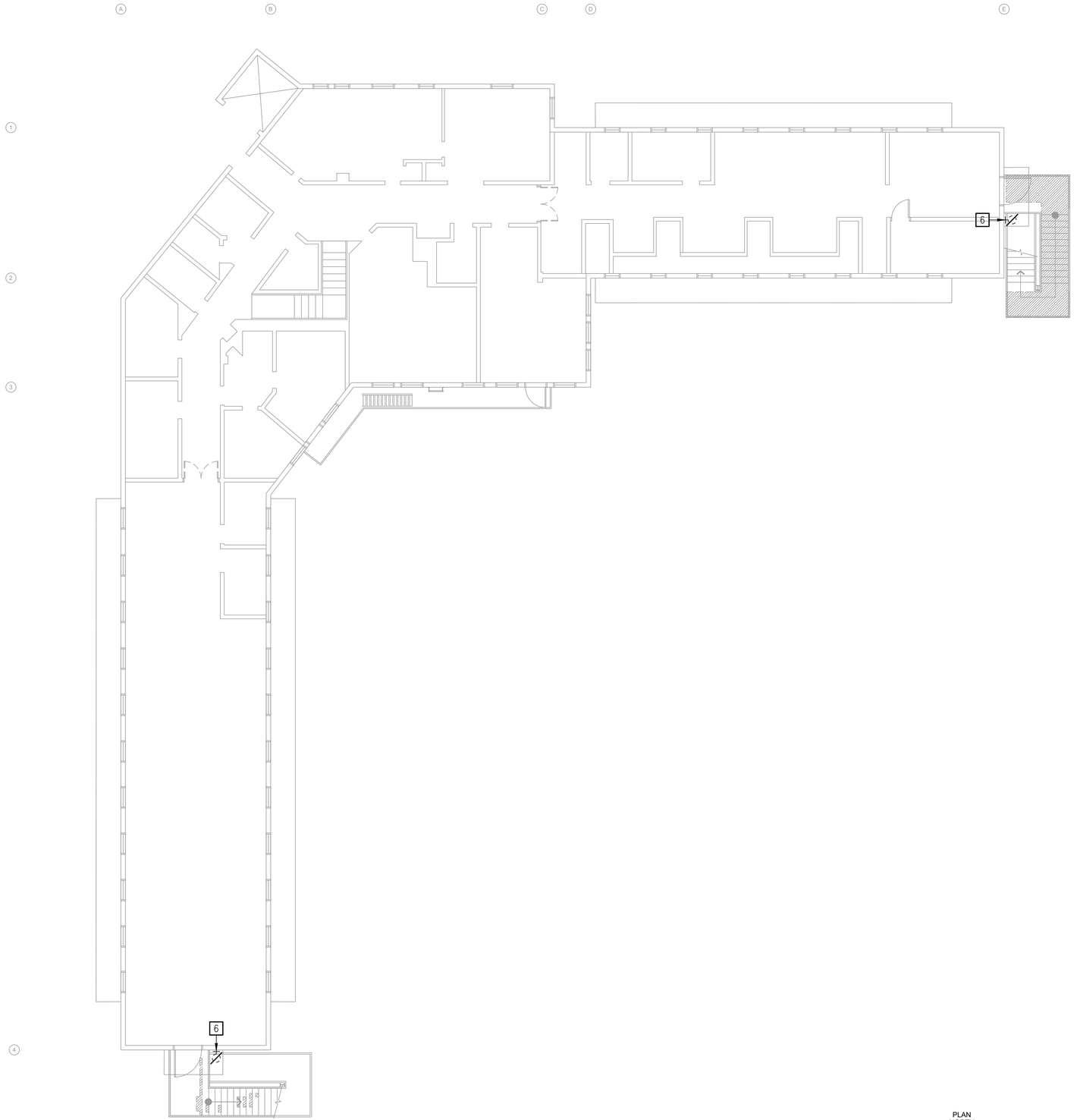

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6. REMOVE EXISTING LIGHT FIXTURE FOR REPLACEMENT.

1 ED104 OVERALL THIRD FLOOR LIGHTING DEMOLITION PLAN

SCALE: 1/8" = 1'-0"

PLAN NORTH

0 4' 8' 12' 16' 20' 24'

SCALE: 1/8"=1'-0"

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LEAHI HOSPITAL

ATHERTON BUILDING FIRE ESCAPE REPAIR

3675 KILAUEA AVE
HONOLULU, HI 96816

ALBERT RICHARD CHONG
LICENSED PROFESSIONAL ENGINEER
No. 6183-E
HAWAII, U.S.A.

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

SIGNATURE
EXP. DATE: 04/30/26

Sheet Title:

OVERALL THIRD FLOOR LIGHTING DEMOLITION PLAN

Project Phase:

FINAL

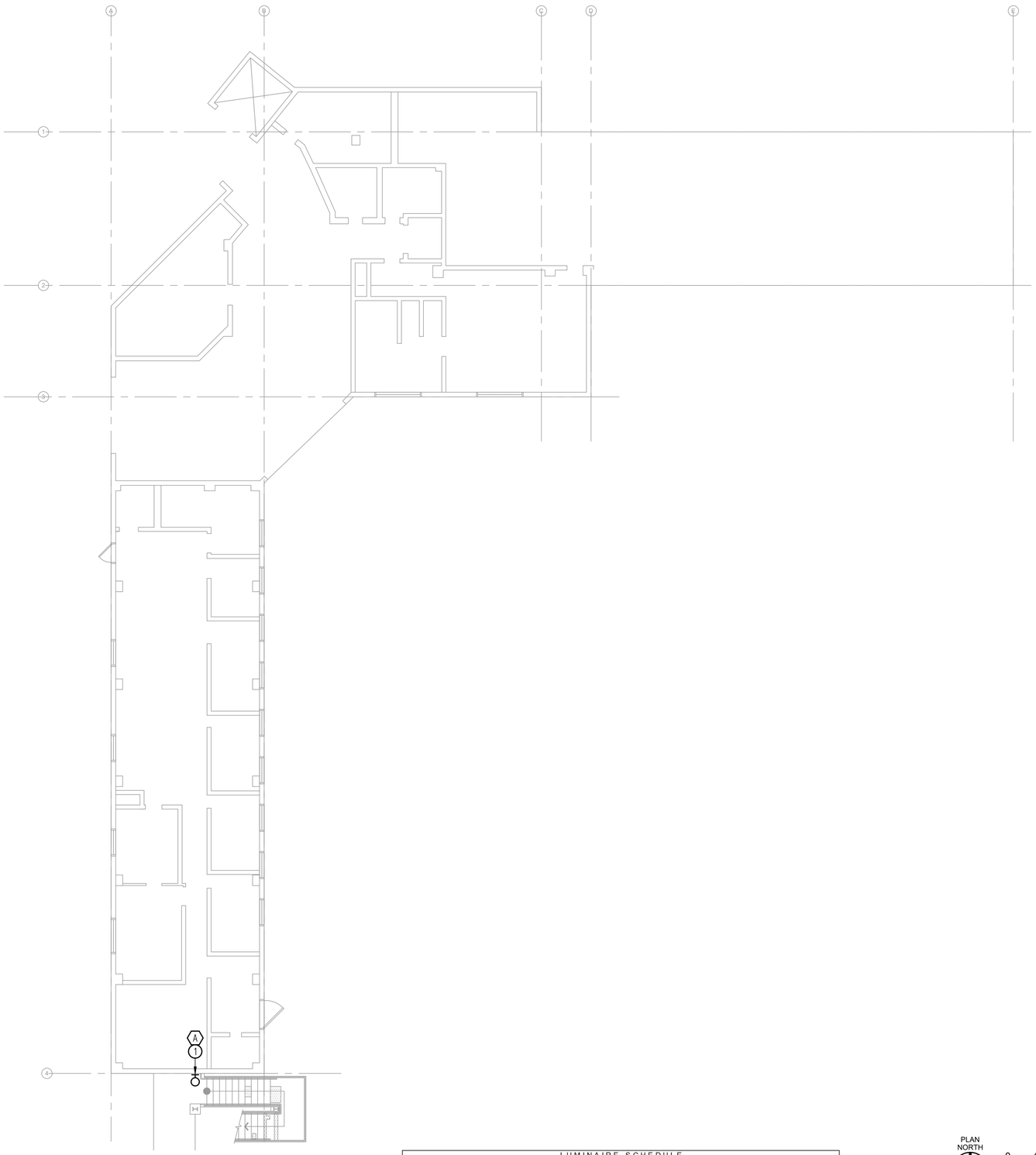
Date:

APRIL 2026

Sheet No.:

ED104

Albert Chong Associates Inc.
Consulting Electrical Engineers and Lighting Designers
1117 Kapahulu Avenue
Honolulu, Hawaii 96816
Telephone (808) 738-5355



NEW LIGHTING NOTE:

(1) NEW LIGHT FIXTURE TO REPLACE EXIST.

1 / E101 OVERALL BASEMENT NEW LIGHTING PLAN

SCALE: 1/8" = 1'-0"

LUMINAIRE SCHEDULE		
TYPE	LAMP	DESCRIPTION
A	35K/20W	FAIL-SAFE TRE11-LD4-20W-35-CL-WH-UNV-EDC1-PB120V/CSTG-EL5W/CSTG

PLAN NORTH (TRUE)

0 4' 8' 12' 16' 20' 24'

SCALE: 1/8"=1'-0"

INK ARCHITECTS

INK ARCH LLC
650 Iwilei Road, Suite 288
Honolulu, Hawaii 96817
Phone: 808.536.1174
Fax: 808.536.1559
E-mail: ink@inkarch.com

Revisions:

No. Description Date

Project Title:

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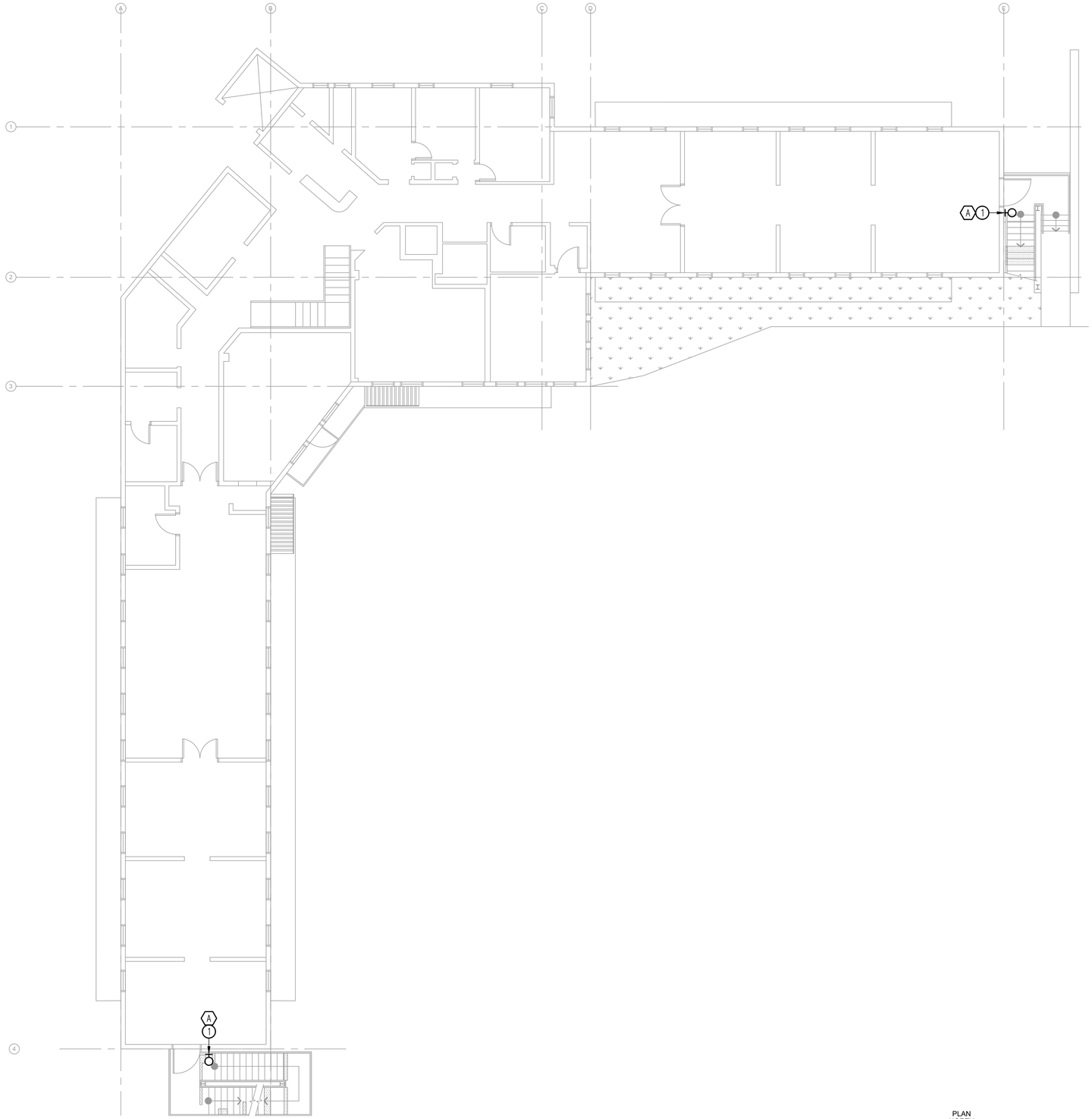

NEW LIGHTING NOTE:

(1) NEW LIGHT FIXTURE TO REPLACE EXIST.

1 E102 OVERALL FIRST FLOOR NEW LIGHTING PLAN

SCALE: 1/8" = 1'-0"

PLAN NORTH

0 4' 8' 12' 16' 20' 24'

SCALE: 1/8"=1'-0"

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OVERALL FIRST FLOOR NEW LIGHTING PLAN

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Sheet No.:

E102

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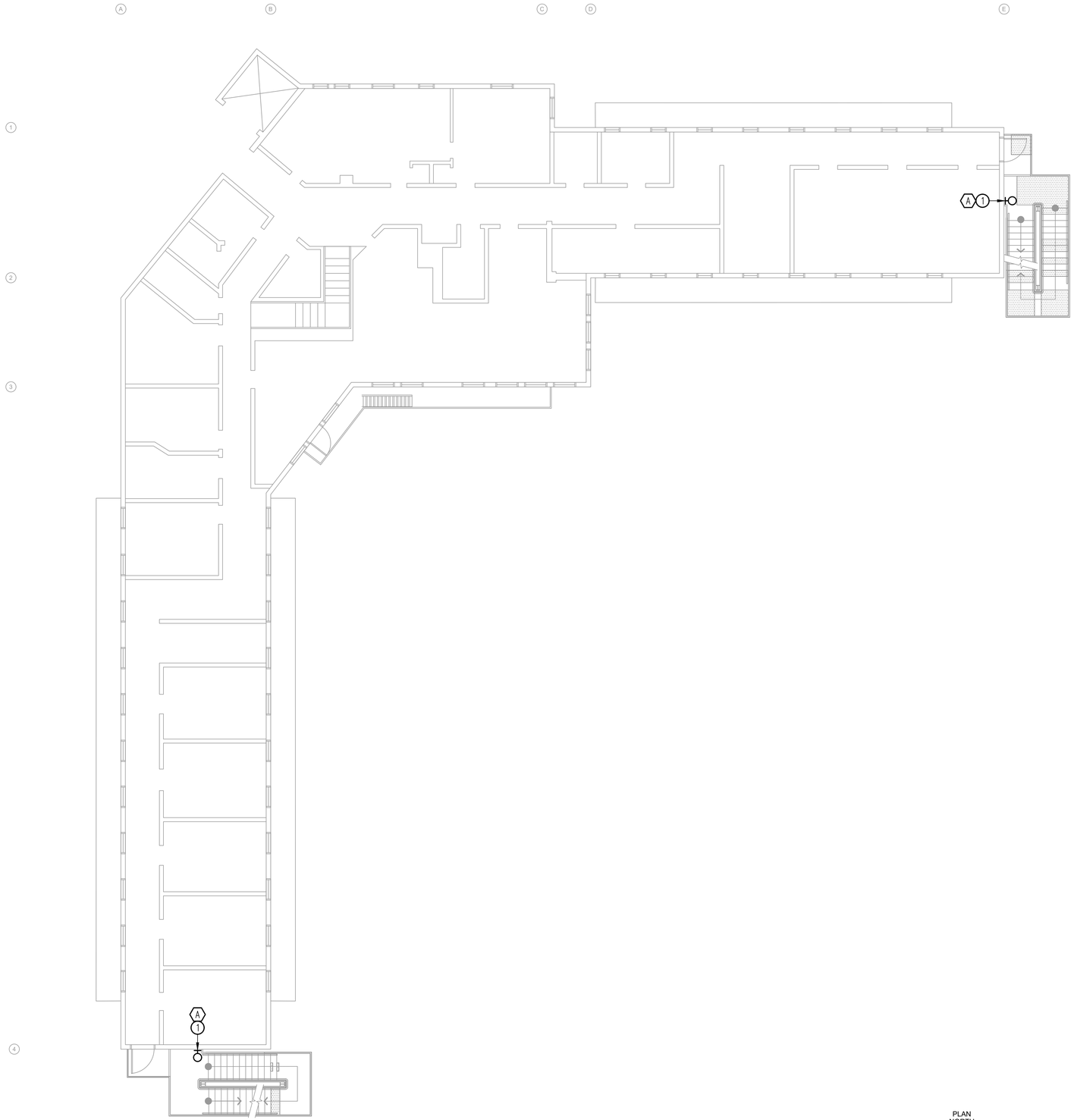
NEW LIGHTING NOTE:

(1) NEW LIGHT FIXTURE TO REPLACE EXIST.



1 E103 OVERALL SECOND FLOOR NEW LIGHTING PLAN

SCALE: 1/8" = 1'-0"

PLAN NORTH

0 4' 8' 12' 16' 20' 24'

SCALE: 1/8"=1'-0"

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OVERALL SECOND FLOOR NEW LIGHTING PLAN

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Date:

APRIL 2026

Sheet No.:

E103

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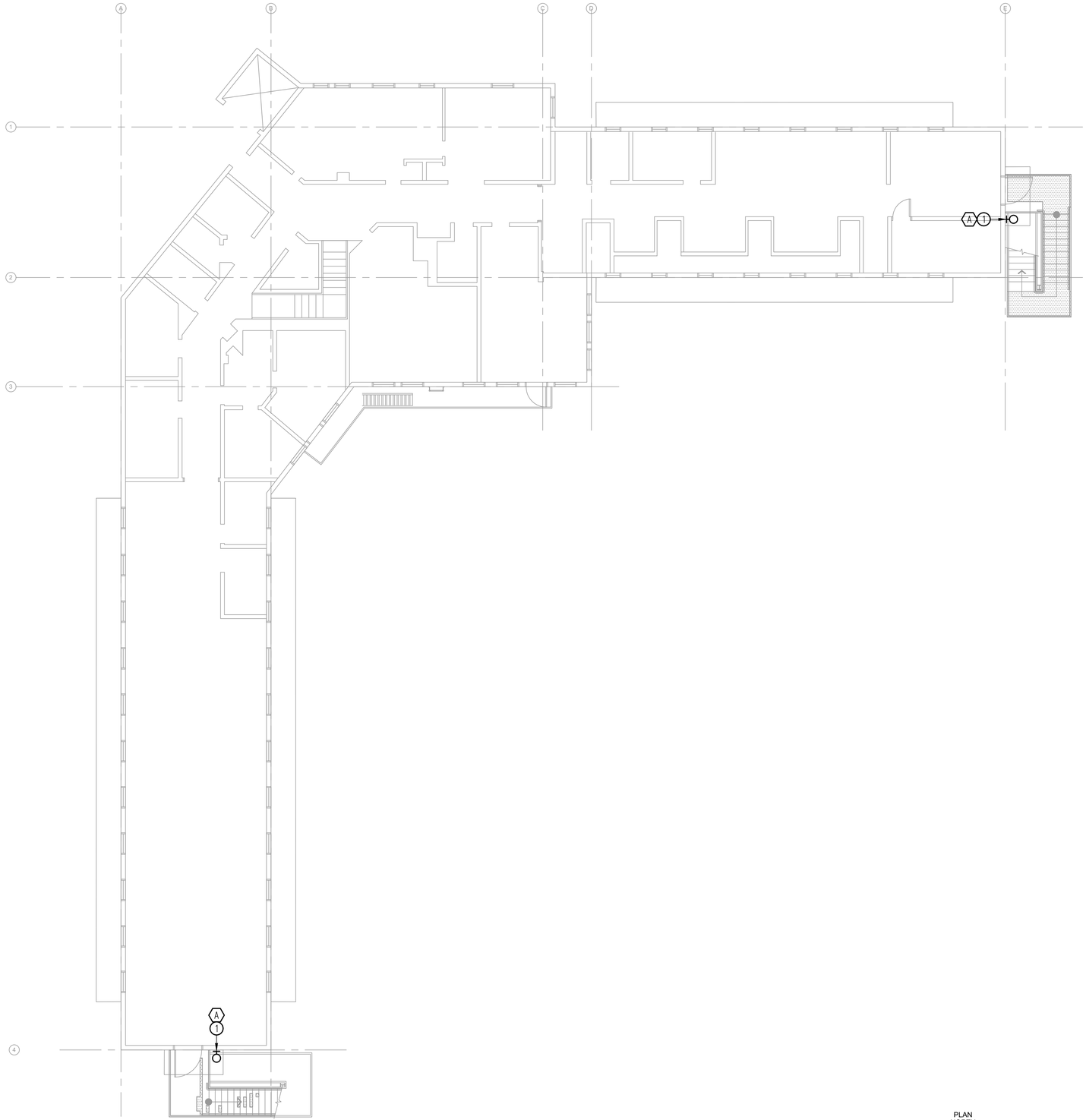

NEW LIGHTING NOTE:

(1) NEW LIGHT FIXTURE TO REPLACE EXIST.

1 E104 OVERALL THIRD FLOOR NEW LIGHTING PLAN

SCALE: 1/8" = 1'-0"

PLAN NORTH (TRUE N)

0 4' 8' 12' 16' 20' 24'

SCALE: 1/8"=1'-0"

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