

**PERFORMANCE WORK STATEMENT
FOR FIBER OPTIC CABLE INSTALLATION FROM TRIPLER ARMY MEDICAL CENTER (TAMC) E-
WING TO SWITCH ROOM**

1.0 Description of Services

This PWS defines the effort required to install, terminate, and test single mode fiber optic cable infrastructure and equipment in the TAMC E-Wing. The Government requires 12 pairs of 24 strand single mode fiber that run from the TAMC E-Wing (3rd floor room 3-C108D) to the TAMC switch room (room G1C102). The fiber is required to support additional circuit installations from various vendors.

2.0 Applicable Documents

2.1 Order of Precedence

In the event of a conflict between the text of this PWS and the applicable documents cited herein, the text of the PWS shall take precedence. Nothing in the PWS, however, shall supersede applicable laws and regulations unless a specific exemption has been obtained.

2.2 Government/Industry Standards

- 2.2.1 OSHA 2206 Occupational Safety and Health Administration General Industry Standards
- 2.2.2 ANSI C2 National Electrical Safety Code
- 2.2.3 NFPA 70 National Electric Code 2005
- 2.2.4 Telecommunications Industry Association TIA/EIA Telecommunications Building Wiring Standards
- 2.2.5 ANSI/TIA /EIA-526-14, Measurement of Optical Power Loss of Installed Multimode Fiber Cable Plant
- 2.2.6 ANSI/TIA/EIA-569A, Commercial Building Standard for Telecommunications Building Wiring Standards
- 2.2.7 ANSI/TIA/EIA-568B.1, Commercial Building Telecommunications Cabling Standards
- 2.2.8 Manufacturer Requirements for Cable Installation to preserve the installed cable warranty of performance.
- 2.2.9 NSI/TIA/EIA-568-B.3, Optical Fiber Cabling Components Standard
- 2.2.10 NSTISSAM TEMPEST2/95 with Amendment of 3 February 2000
- 2.2.11 EIA/TIA-606 - Administration Standard for Commercial Telecommunications Infrastructure

2.3 VA Documents

- 2.3.1 VA Construction Facilities Maintenance (CFM) Master Construction Specifications. Access files at: <https://www.cfm.va.gov/til/spec.asp>

3.0 Requirements

- 3.1 The contractor shall install 24 strand single mode fiber (12 pairs) drops in the E-Wing. The contractor shall install and provide two (2) 6-port duplex SC adapter panels, (5) each of 5-meter, 10-meter, and 15-meter single mode SC-LC jumper cable AND single mode SC-SC jumper cable and associated material, conduits, cable

APPENDIX 1 – SEED PROJECT

raceway, pull boxes, termination boxes, fiber optic cables and connectors, etc. The installation must meet the specifications of government and industry standards listed in paragraph 2.2.

- 3.2 The contractor shall repair damage to the existing facility caused by the moving or staging of equipment, or any part of the installation effort. Repairs shall be completed prior to job completion and check out for this project.
- 3.3 The contractor shall perform daily work area clean up so that the workspaces are left in a presentable manner.
- 3.4 The contractor shall take precautionary measures against hazardous materials such as lead paint and asbestos during the installation.
- 3.5 The contractor may be required to core through floors and walls. If required, the contractor may need to image test the floors and walls prior to coring. The coring will require water and dust control.
- 3.6 The contractor shall provide a hazardous material and structural survey prior to installation, if required.
- 3.7 The contractor shall return all unused material to the government that was purchased by this project.
- 3.8 The contractor shall install and utilize appropriate cable management in the cabinet and equipment safe.
- 3.9 All fiber optic cables shall be installed and tested to meet appropriate EIA/TIA standards and installed per manufacturers recommended specifications.
- 3.10 The contractor shall follow the National Electric Code (NEC) standard.
- 3.11 The contractor shall label all fiber optic cables IAW VA labeling standards (EIA/TIA-606).
- 3.12 The contractor shall provide a copy of test results to the Government representative upon completion of this project. The tests will be conducted to industry standards.
- 3.13 The contractor shall provide final as-built drawings in AutoCAD 2004 (or later version). The AutoCAD drawings will include at a minimum the following drawings:
 - 1) Floorplan to include: cable route with cable numbers, location of equipment and IOB boxes with drop IDs shown, and wall and floor penetrations.
 - 2) Rackface Elevation to include: layout of equipment in racks, safes, and cabinets, nomenclature of equipment, dimension showing the RU spacing on the racks, and serial numbers of equipment installed in the racks with labeling.
 - 3) Cabling/wiring, to include: block wiring showing all cabling installed with cable numbers shown and port numbers used on the switch, and patch panel.
 - 4) Patch panel layout in Excel spreadsheet format showing switch port location in the rows and switch port—room/drop ID—locks installed on the column side of the spreadsheet. These drawings are to have contractor title/signature block and surrounded with a drawing frame. These drawings shall be checked by the contractor for accuracy and completeness with signature, prior to delivery to the government. The contractor shall provide two hard copies and a soft copy to the government.

4.0 Project Installation. The contractor shall install 24 strand single mode fiber (12 pairs) drops in TAMC E-Wing to TAMC Switch Room. There is existing fiber that runs from E-Wing to TAMC switch room (2 pairs of 24 strand SM fibers). The existing fiber is Adventum OFNP Type (Berk-TEK LTP012 Adventum Type OFNP (ETL) OFN-FT6). The exact route of the existing run is unknown. Therefore, vendors are highly encouraged to attend a site visit (See FAR 52.237-1). The approximate path and floor plan of the E-Wing 3d floor is located in Figure 1 provided on the last pages of this PWS for reference.

A portion of the work requires running cable in a confined space. Contractors shall adhere to OSHA 29 CFR 1910.146 when working in confined space. Contractors are responsible for any training and/or certifications for working in confined spaces.

5.0 Fiber Optic Cable Installation

- 5.1 The contractor shall install single mode fiber optic cables from the existing IT rack (3rd floor) to the TAMC switch room.
- 5.2 The contractor shall terminate the user end of the (24) zip cord signals with SC connectors in the end user termination box.
- 5.3 The contractor shall terminate the switch end of the (24) zip cord signals with SC connectors onto the back of the patch panel in the switch room.
- 5.4 The contractor shall patch the 24 ports on the User patch panel (SC connector) to the LC ports using a hybrid (SC-LC) patch cords.
- 5.5 All fiber optic cables shall be installed and tested to meet appropriate EIA/TIA standards and installed per manufacturers recommended specifications.
- 5.6 The contractor shall label all fiber optic cables IAW VA labeling standards (EIA/TIA-606).
- 5.7 The contractor shall use Berk-Tek single mode fiber or equivalent.

6.0 Service Performance Summary

The contractor requirements are summarized into performance objectives that relate directly to mission essential items. The performance threshold briefly describes the minimum acceptable levels of services required. These thresholds are critical to mission success.

| Performance Objective | PWS Paragraph | Performance Threshold |
|-------------------------------------|---------------|---|
| Daily Clean Up | 3.3 | Not to exceed 1 valid customer complaint |
| Install and test fiber optic cables | 5.5 | Must meet or exceed EIA/TIA standards |
| Provide AutoCAD drawings | 3.13 | Drawings must be an accurate representation of the actual installation. |

7.0 Special Provisions

7.1 Quality Assurance

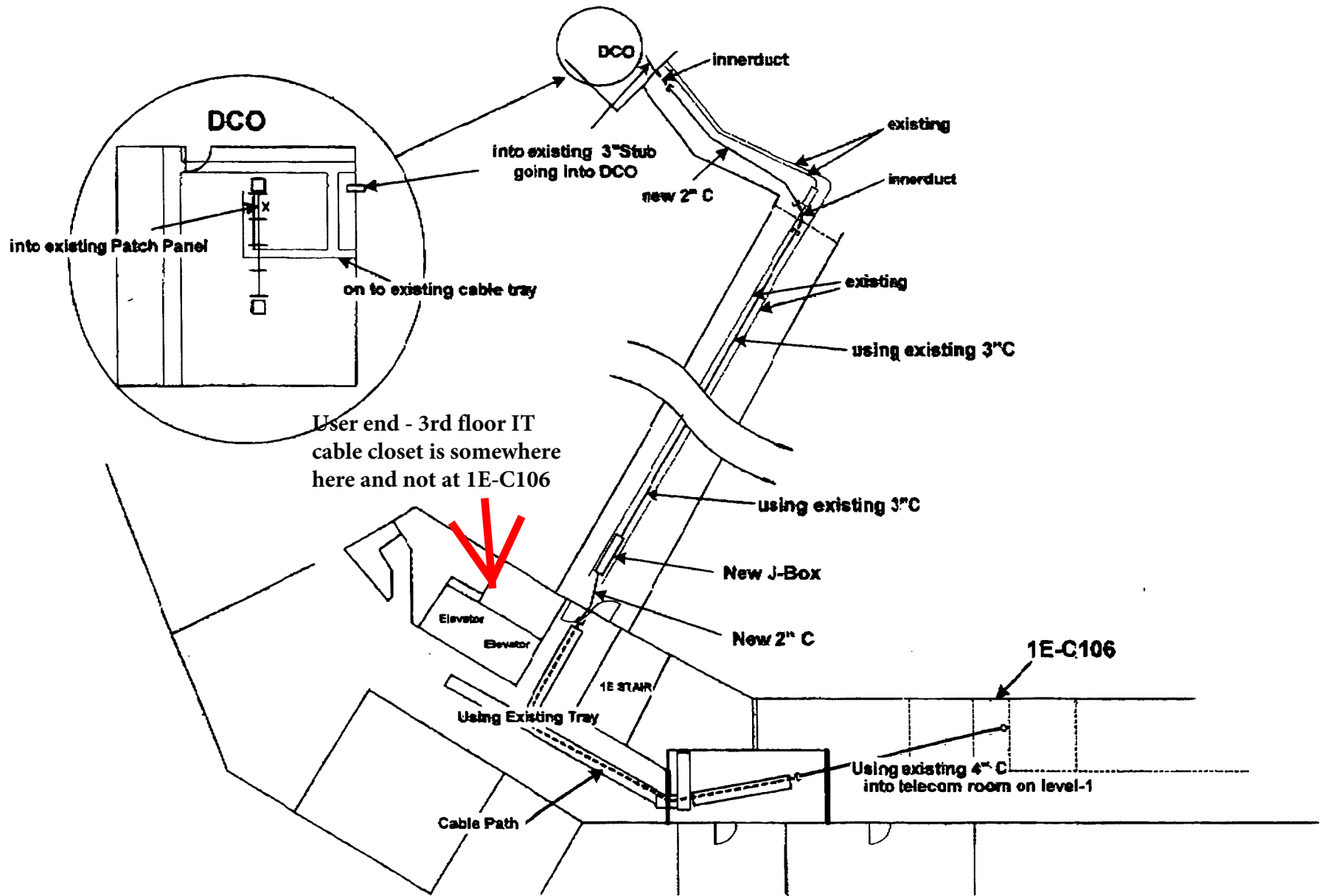
The performance of the contractor and the quality of work delivered shall be subject to in-process review and inspection. Inspections shall be accomplished by on-site government representatives who shall be permitted to observe work or conduct inspections at all

APPENDIX 1 – SEED PROJECT

reasonable hours. Inspections by the government of services rendered do not relieve the contractor of any responsibility of failure to meet contract requirement which may be disclosed prior to final acceptance. Final inspection and acceptance of the deliverables shall be performed by the Contracting Officer Representative.

7.2 Period of Performance

The contractor will complete the installation within 30 days after award. The contractor shall notify the government if there will be any delay and if this timeframe cannot be met.



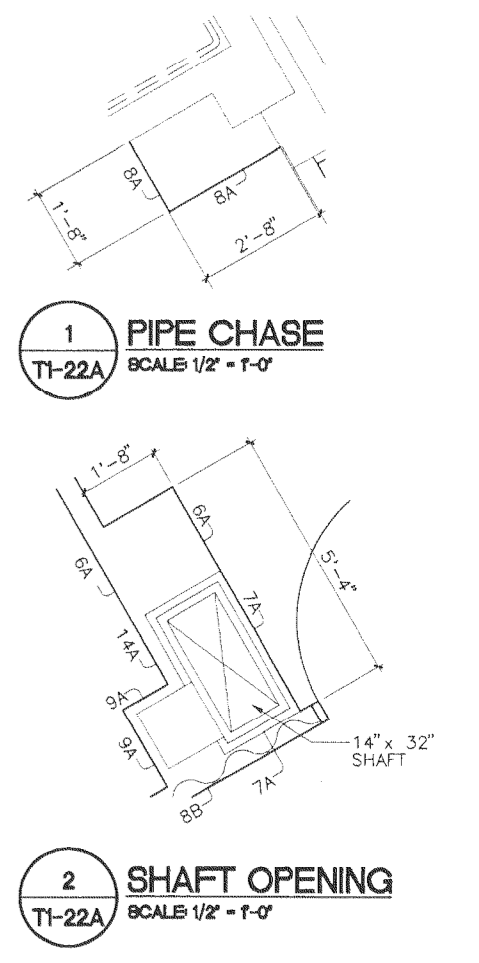
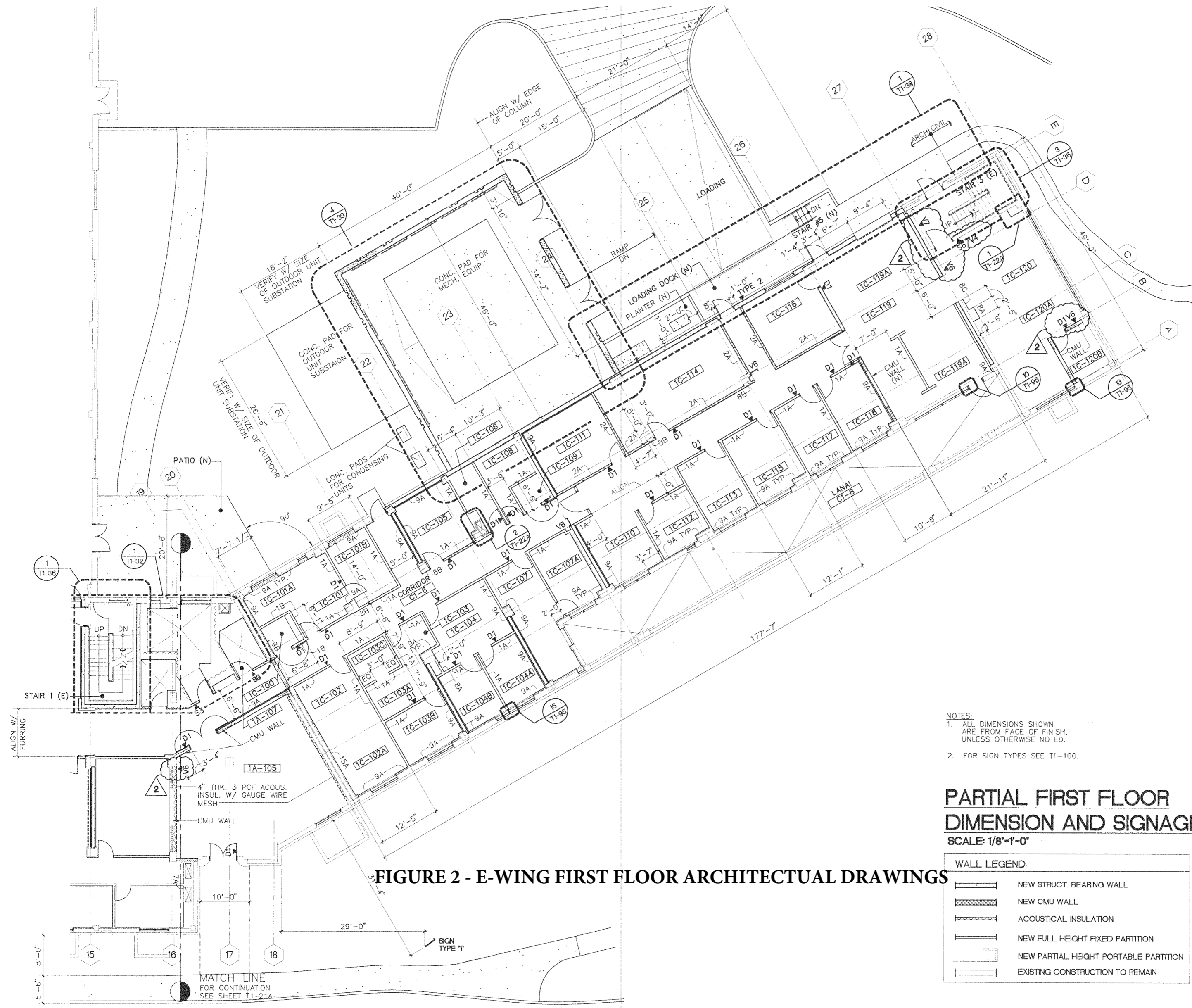
Tripler Army Medical Center

Basic Electrical Materials and Methods

Wing E G-Level

illustration only
2/27/2001

FIGURE 1 - POSSIBLE RUN PATH FROM E-WING TO SWITCHROOM (DCO)



NOTES:
 1. ALL DIMENSIONS SHOWN ARE FROM FACE OF FINISH, UNLESS OTHERWISE NOTED.
 2. FOR SIGN TYPES SEE T1-100.

PARTIAL FIRST FLOOR DIMENSION AND SIGNAGE PLAN
 SCALE: 1/8"=1'-0"

WALL LEGEND:

| | |
|--|---------------------------------------|
| | NEW STRUCT. BEARING WALL |
| | NEW CMU WALL |
| | ACOUSTICAL INSULATION |
| | NEW FULL HEIGHT FIXED PARTITION |
| | NEW PARTIAL HEIGHT PORTABLE PARTITION |
| | EXISTING CONSTRUCTION TO REMAIN |

LEGEND:
 (N) NEW
 (E) EXISTING

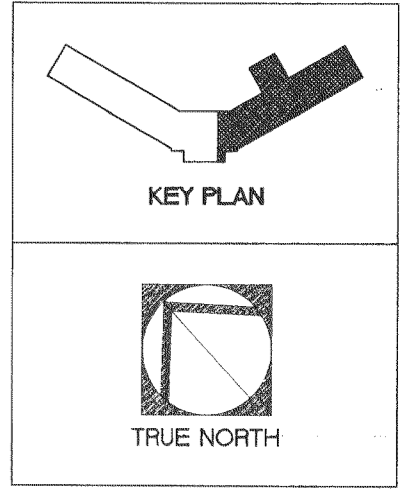
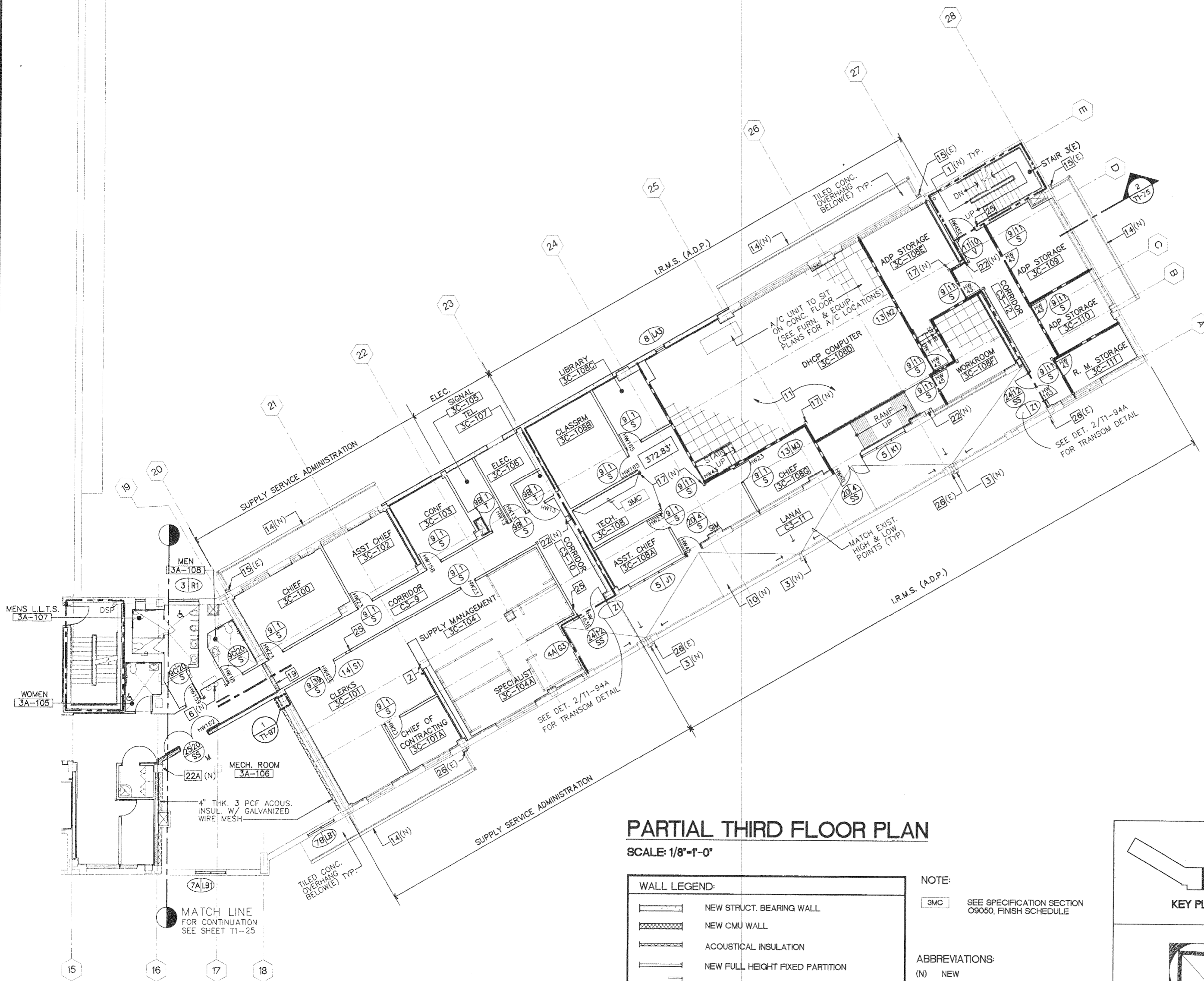


FIGURE 2 - E-WING FIRST FLOOR ARCHITECTURAL DRAWINGS

AMENDMENT DRAWING - AMENDS SHT. T1-22A

| | | | | | | | | | | | | | | | |
|------------------------------------|--|-------------------|--|---|--|---|--|--|--|--|--|--|--|--|--|
| 2 AMENDMENT NO. 2 Date: 4/16/97 | | BID SET DOCUMENTS | | ARCHITECTS HAWAII LIMITED 1001 Bishop Street, Pacific 300, Honolulu, Hawaii 96813 Telephone: (808) 523-9636 FAX: (808) 521-3280 | | Drawing Title: PARTIAL FIRST FLOOR DIMENSION AND SIGNAGE PLAN Approved: Area Project Manager | | Project Title: AMBULATORY CARE CLINIC AND RENOVATE E-WING PHASE II, E-WING RENOVATION Building Number: TI Location: YAMROC, HONOLULU, HAWAII | | Date: MARCH 20, 1997 Project No.: 459-002B Drawing No.: T1-22AR2 Dwg. 23 of 32 | | | | | |
|------------------------------------|--|-------------------|--|---|--|---|--|--|--|--|--|--|--|--|--|

FIGURE 3 - E-WING 3RD FLOOR ARCHITECTURAL DRAWINGS



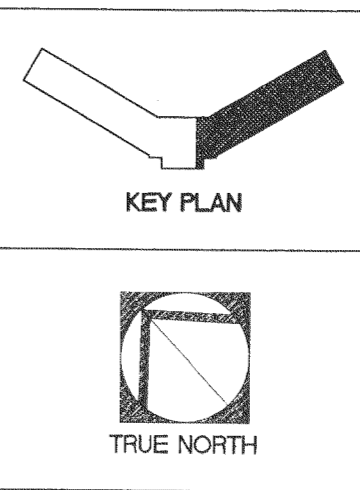
PARTIAL THIRD FLOOR PLAN

SCALE: 1/8"=1'-0"

| | |
|--|---|
| | NEW STRUCT. BEARING WALL |
| | NEW CMU WALL |
| | ACOUSTICAL INSULATION |
| | NEW FULL HEIGHT FIXED PARTITION |
| | NEW PARTIAL HEIGHT PORTABLE PARTITION V V |
| | EXISTING CONSTRUCTION TO REMAIN |

NOTE:
 3MC SEE SPECIFICATION SECTION 09050, FINISH SCHEDULE

ABBREVIATIONS:
 (N) NEW
 (E) EXISTING



- #### KEYNOTES
- METAL PIPE HANDRAIL, DET 8/T1-98, 9/T1-98
 - STEEL CABLES, DET. 5/T1-77
 - ALIGN NEW CONC./CMU WALL TO EDGE OF COLUMN
 - CORE THROUGH CONCRETE FOR NEW PRECAST CONC. SCUPPER, DET. 11/T1-82
 - PLAS. LAM./WOOD WALL CABINET
 - PLAS. LAM COUNTER/WOOD BASE CABINET
 - ELECTRIC WATER COOLER
 - MODULAR FURNITURE/PARTITION
 - WALL MTD. PLAS. LAM./WOOD SHELVING
 - MEMBRANE ROOFING OVER RIGID INSULATION
 - PEDESTRIAN TRAFFIC TOPPING
 - RAISED ACCESSIBLE FLOOR (12")
 - PREFABRICATED ROOF CURB & FLASHING DET. 1/T1-82
 - SCUPPER AT PARAPET, DET. 4/T1-82
 - SHT. MET. GUTTER, DET. 10/T1-82
 - SHT. MET. DOWNSPOUT & LEADER HEAD, DET. 10/SHT. T1-82
 - SHT. MET. FLASHING & REGLET, DET. 9/T1-82
 - CORNER GUARD, DET. 1/T1-98
 - TELEPHONE (CC) DET. 11/T1-89
 - SEISMIC JOINT COVER, DET. 12/T1-98
 - FLOOR SINK (CC)
 - SHELVING, WALL HUNG 2-36"WX12"D X48"H (CC)
 - RECESSED MOUNTED F.E.C., DET. 11/T1-98
 - SURFACE MOUNTED F.E.C.
 - ELASTOMERIC WATER PROOFING
 - NEW ELASTOMERIC WATERPROOF ROOFING OVER NEW CONC. TOPPING.
 - CHAIR RAIL, DET. 17/T1-98
 - ACCESS CARD LOCATION
 - DOWNSPOUT, DET. 10/T1-82
 - CONNECT DOWNSPOUT TO NEW DRAIN LINE
 - SPLASH BLOCK
 - REPAIR/REPLACE DAMAGED WALL AND WALL COMPONENTS.
 - REPAIR AND REPLACE DAMAGED WALL & CAP COMPONENTS TO PREVENT WATER PENETRATION INTO WALL.

- #### GENERAL NOTES
- FILL EXISTING FLOOR OPNGS. DUE TO REMOVAL OF EQUIP., A/C ELEMENTS, PIPES, CONDUITS, & SMALL DUCTS W/ U.L. APPROVED FIRESTOPPING OR CONC. IF AREA WORKED ON IS VISIBLE, PATCH TO MATCH EXISTING ADJACENT FINISH & TEXTURE, SUCH THAT NEW WORK IS NOT NOTICEABLE.
 - CONTRACTOR TO CLEAN EXISTING CONCRETE SURFACE, DUE TO REMOVAL OF SHEET VINYL FLOORING, TO ENSURE THAT SURFACE IS READY TO RECEIVE NEW FLOORING.
 - INTERIOR ELEVATION REFERENCE: SEE EQUIPMENT PLANS ON SHEETS T1-41 THROUGH T1-61, AND INTERIOR ELEVATION SHEETS T1-84 THROUGH T1-89.
 - INTERIOR PARTITION TYPES: FOR PARTITION TYPE DESIGNATIONS, SEE DIMENSION PLANS, AND TOILET DETAIL PLANS. SEE PARTITION TYPES ON SHEET T1-83.
 - DOOR SCHEDULE & DETAILS: SEE SHEETS T1-91, T1-91A, T1-92, T1-93, T1-94 & T1-94A.
 - WINDOW SCHEDULE & DETAILS: SEE SHEETS T1-91, T1-91A, T1-95, T1-96, & T1-97.
 - A COMPLETE SUPERVISED AUTOMATIC SPRINKLER WILL BE PROVIDED THROUGHOUT THE BLDG.
 - RESTROOM TILE PATTERN: SEE SHEET T1-33, T1-33A, T1-33B, & T1-33C.
 - LOBBY TILE PATTERN: SEE SHEET T1-34 & T1-35.
 - REFLECTED CEILING PLANS: SEE SHEETS T1-63 THROUGH T1-71.
 - SEE ARCHITECTURAL DEMOLITION PLANS, SHT. T1-1 THROUGH T1-11, REGARDING INSTALLATION OF NEW CONCRETE TOPPING LOCATIONS.
 - SEE STRUCTURAL PLANS, SHEETS T1-52 THROUGH T1-511, REGARDING EXISTING SLABS TO BE FILLED & NEW OPENINGS IN EXISTING FLOOR SLABS.
 - SEE ARCHITECTURAL PLANS, SHEET T1-97 FOR TYP. EXISTING WINDOW HEAD, JAMB & SILL CONDITIONS.
 - IF EXISTING DOORS, FRAMES, AND ADJACENT WALL CONNECTIONS DO NOT FUNCTION PROPERLY OR MATCH SIMILAR DOORS (NEW & EXISTING CONSTRUCTION), DEMOLISH EXISTING ELEMENTS, REPLACE ELEMENTS AND/OR CORRECT ELEMENTS AS REQUIRED TO MATCH NEW DOOR DETAILS.
 - SEE FURN./EQUIP. PLANS T1-41 THRU T1-62 FOR MORE DATA.

BID SET DOCUMENTS

ARCHITECTS HAWAII LIMITED
 1001 Bishop Street, Pacific 300
 Honolulu, Hawaii 96813
 Telephone: (808) 523-9636
 FAX: (808) 521-3280

This work was prepared by me or under my supervision and construction of this project will be under my supervision.
 Signature: *Walter H. Murooka*
 NOTE: Contractor to check and verify all dimensions of job before proceeding with work.



Drawing Title
PARTIAL THIRD FLOOR PLAN

Project Title
AMBULATORY CARE CLINIC AND RENOVATE E-WING PHASE II, E-WING RENOVATION

Date
MARCH 20, 1997
 Project No.
459-002A
 Drawing No.
T1-26
 Dwg. 72 of 262



FIGURE 4 – EXISTING RACK AND RUNS

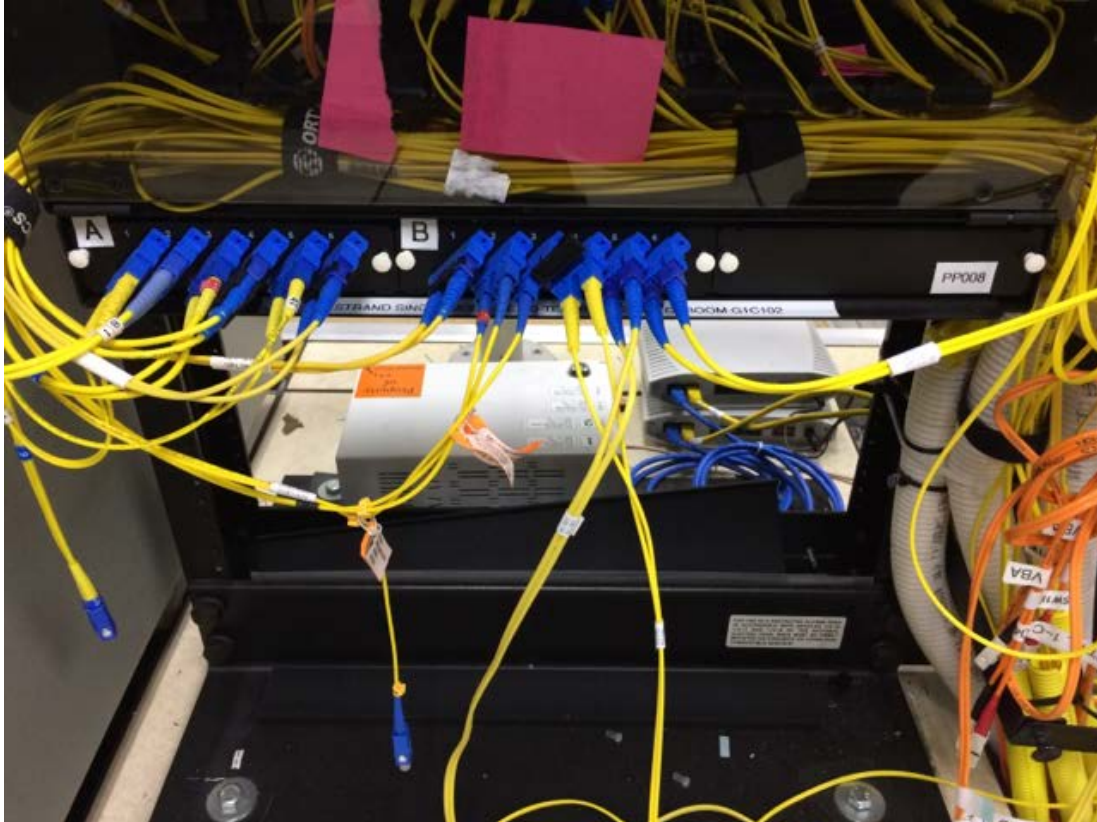


FIGURE 4 – EXISTING RACK AND RUNS

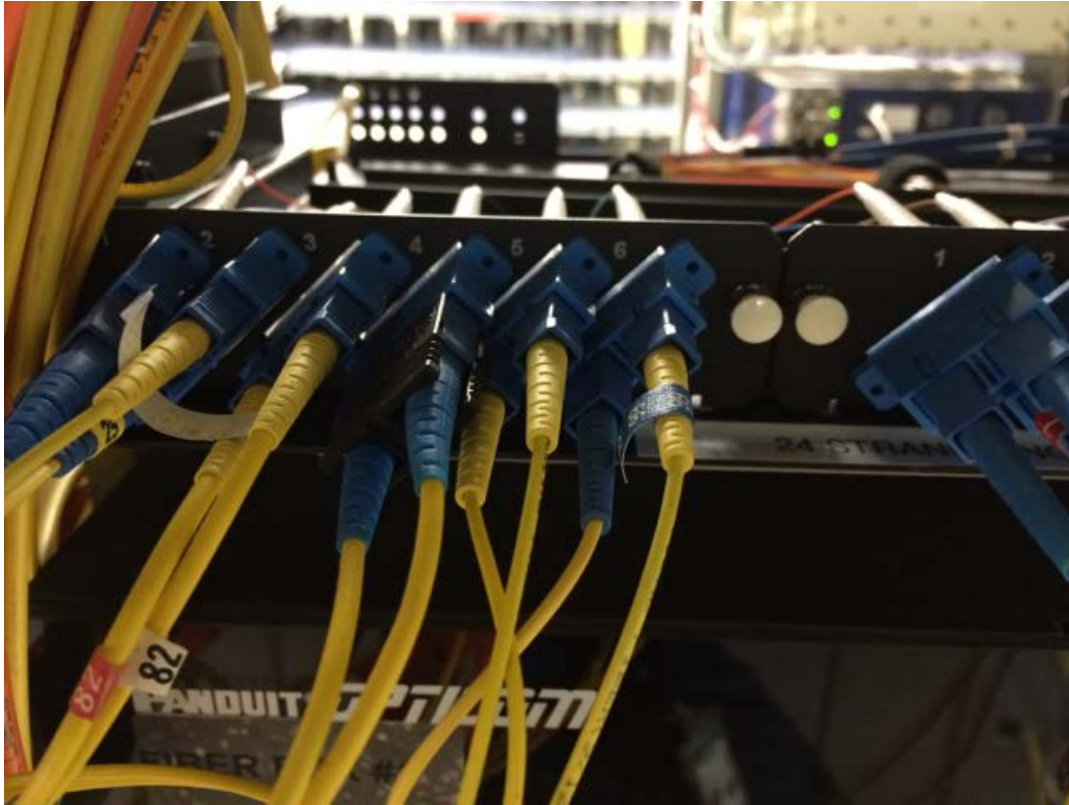
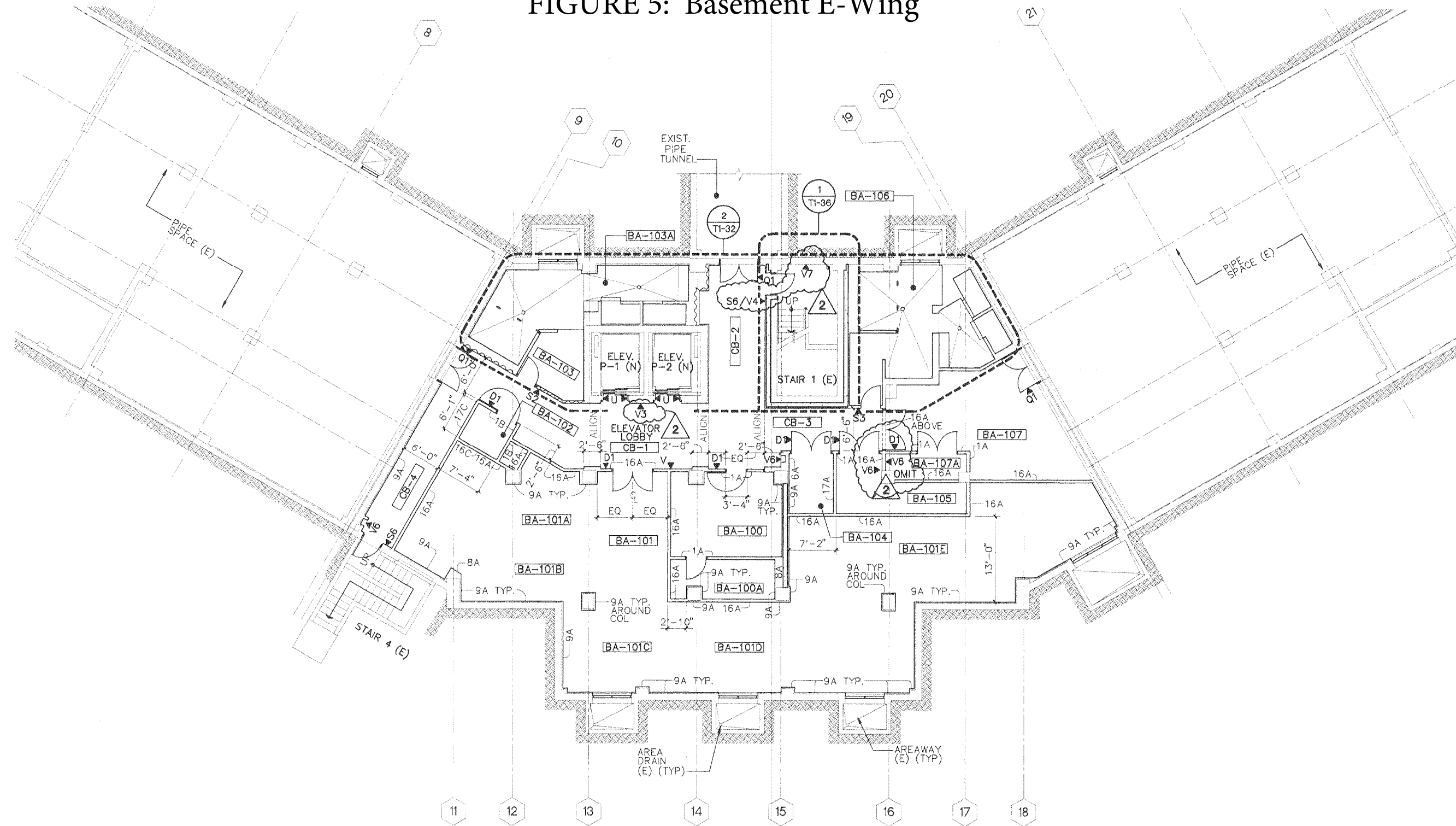


FIGURE 5: Basement E-Wing



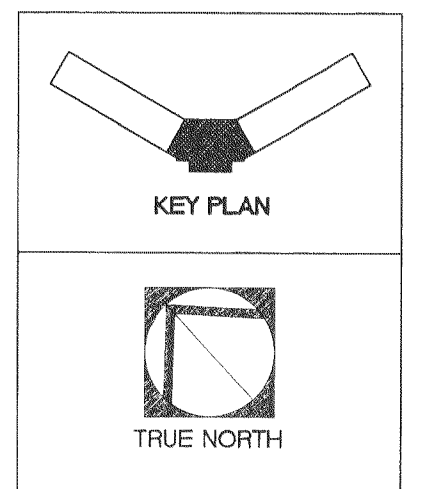
- NOTES:
1. ALL DIMENSIONS SHOWN ARE FROM FACE OF FINISH, UNLESS OTHERWISE NOTED.
 2. FOR SIGN TYPES SEE T1-100.

**PARTIAL BASEMENT
DIMENSION AND SIGNAGE PLAN**

SCALE: 1/8"=1'-0"

| WALL LEGEND: | |
|--------------|---------------------------------------|
| | NEW STRUCT. BEARING WALL |
| | NEW CMU WALL |
| | ACOUSTICAL INSULATION |
| | NEW FULL HEIGHT FIXED PARTITION |
| | NEW PARTIAL HEIGHT PORTABLE PARTITION |
| | EXISTING CONSTRUCTION TO REMAIN |

LEGEND:
(N) NEW
(E) EXISTING



AMENDMENT DRAWING - AMENDS SH.T. T1-20A

| | |
|-----------------|---------|
| AMENDMENT NO. 2 | 4/16/97 |
| Revisions | Date |

BID SET DOCUMENTS

**ARCHITECTS
HAWAII
LIMITED**
1001 Bishop Street, Pacific 300
Honolulu, Hawaii 96813
Telephone: (808) 523-9636
FAX: (808) 521-3280

This work was prepared by me or under my supervision and construction of this project will be under my supervision.
Signature
NOTE: Contractor to check and verify all dimensions at job before proceeding with work.



Drawing Title
**PARTIAL BASEMENT
DIMENSION AND SIGNAGE PLAN**
Approved: Area Project Manager
Signature

Project Title
AMBULATORY CARE CLINIC
AND RENOVATE E-WING
PHASE II, E-WING RENOVATION
Building Number
T1
Checked:
LK
Drawn:
TEAM
Location
YAMROC, HONOLULU, HAWAII

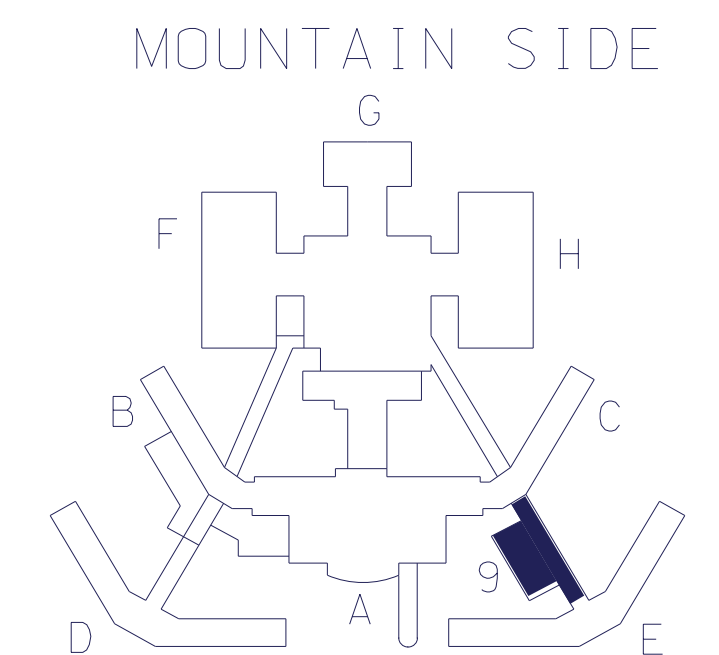
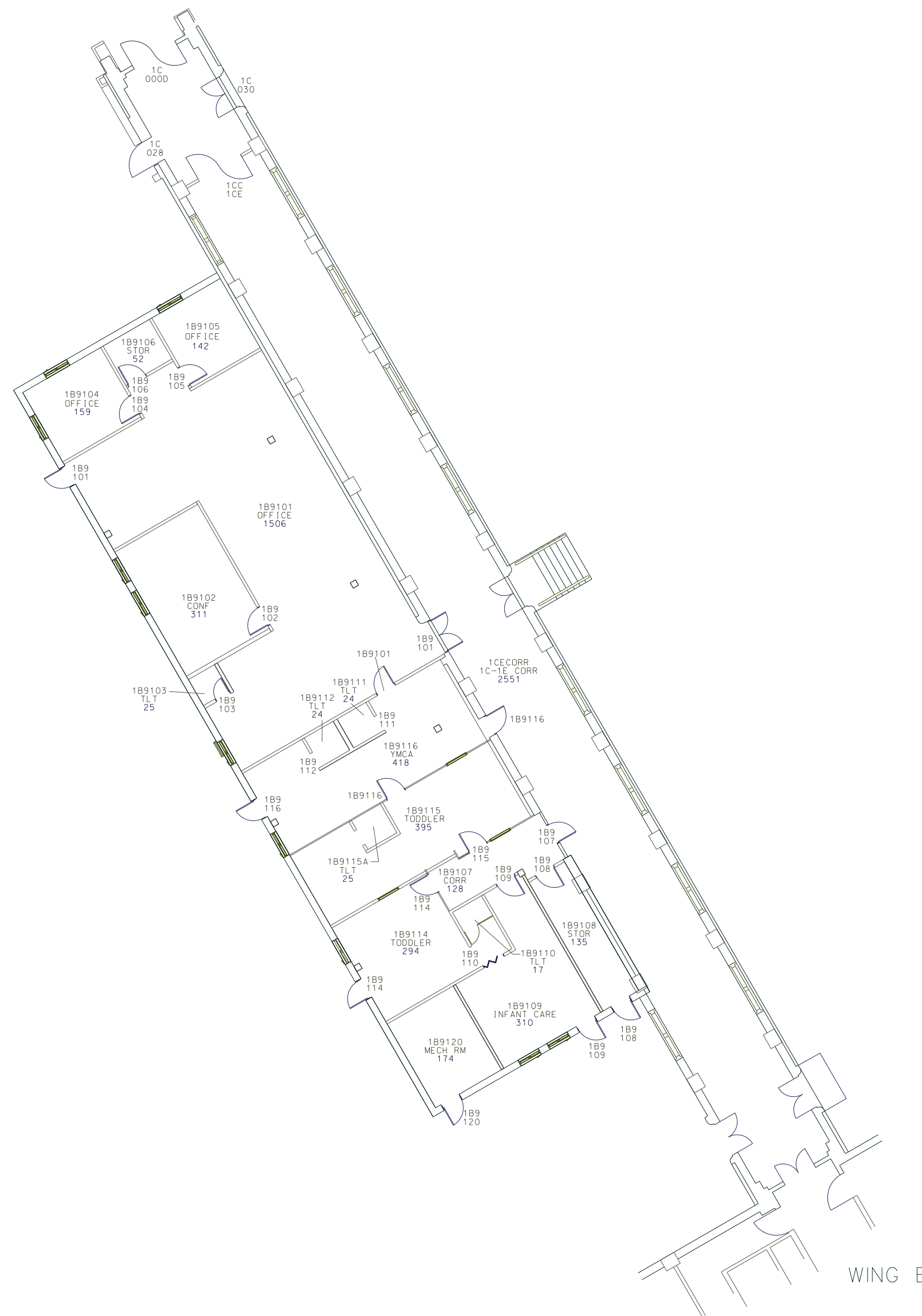
Date
MARCH 20, 1997
Project No.
459-002B
Drawing No.
T1-20AR2
Dwg. 61 of 242



**FIGURE 6 - Pathway E-Wing and C-Wing
Cable runs through crawl space under pathway.**

| REVISIONS | | |
|-----------|------|-----------|
| Date | Room | Proj. No. |
| 8/22/10 | 1B9 | |
| | | |
| | | |
| | | |
| | | |

CONTINUED ON
SHEET A-11
WING C - LEVEL 1



OCEAN SIDE
KEY PLAN

MASTER DRAWING SET

DATE REVISED: 10/8/13

**TRIPLER ARMY MEDICAL CENTER
HONOLULU, O'AHU, HAWAII**

FLOOR PLANS
LEVEL 1 - BUILDING 9

| | |
|-------------------------------------|--------------------|
| DESIGN FILE NO.: A-Floor-1B9.dgn | SHEET NO.: A-10 |
|-------------------------------------|--------------------|

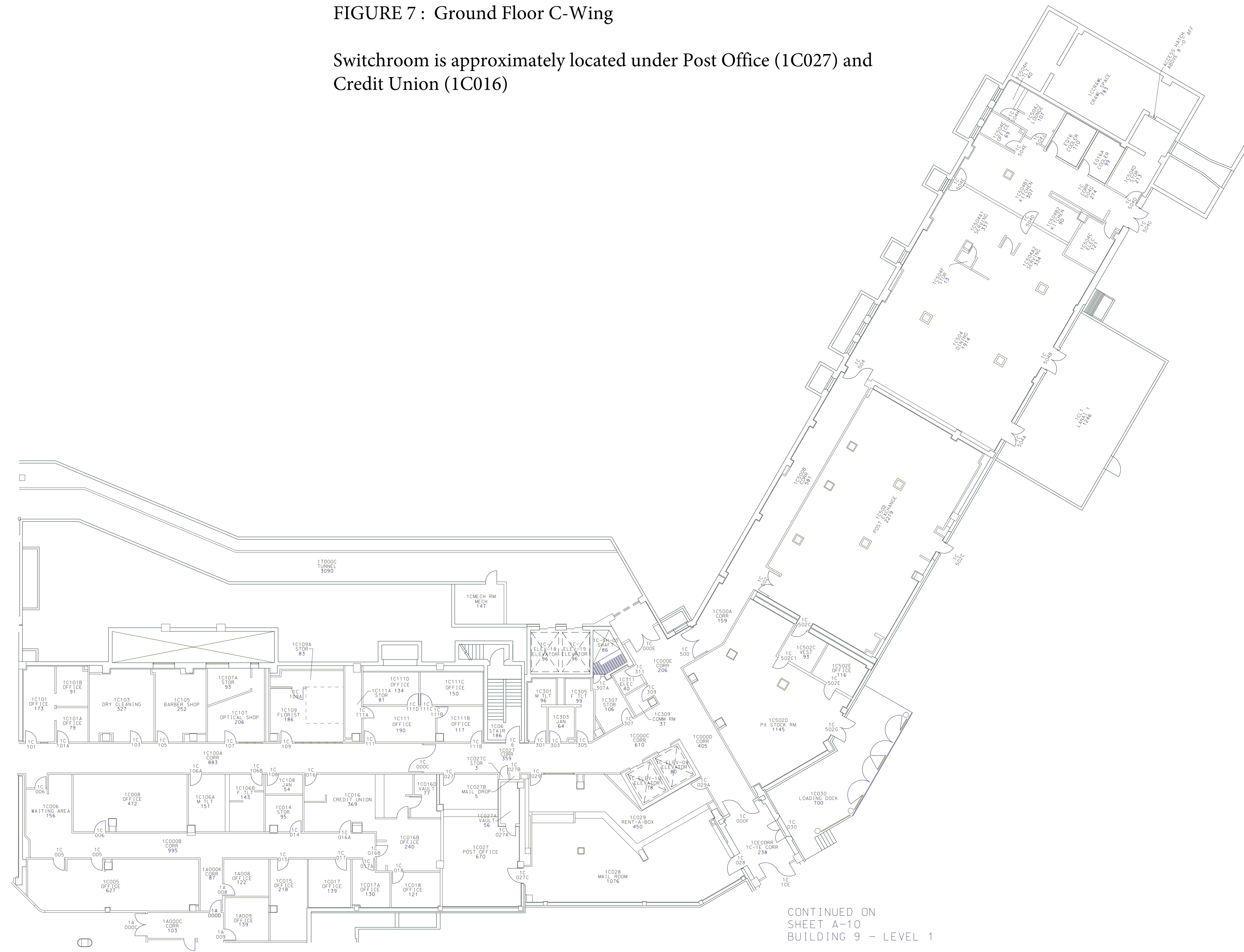
| | |
|------------------------|----------|
| PRINT DATE: APRIL 2017 | RING: 11 |
|------------------------|----------|

LEVEL 1 - BUILDING 9
SCALE: 1/16" = 1' - 0"

| REVISIONS | | |
|-----------|---------------------------------------|-----------|
| Date | Room | Proj. No. |
| 11/28/08 | 1C111A, 1C111, 1C111B | |
| 7/22/10 | 1C504C, 1C504J | |
| 7/22/10 | 1C111A, 1C111, 1C111B, 1C111C, 1C111D | |
| 8/19/10 | 1C103, 1C108 | |
| 2/15/13 | 1C012, 1C013, 1C014 | |
| 3/1/13 | 1C016 | |
| 10/8/13 | 1A009, 1C015, 1C016, 1CXXX, 1CXXX | |

FIGURE 7 : Ground Floor C-Wing

Switchroom is approximately located under Post Office (1C027) and Credit Union (1C016)

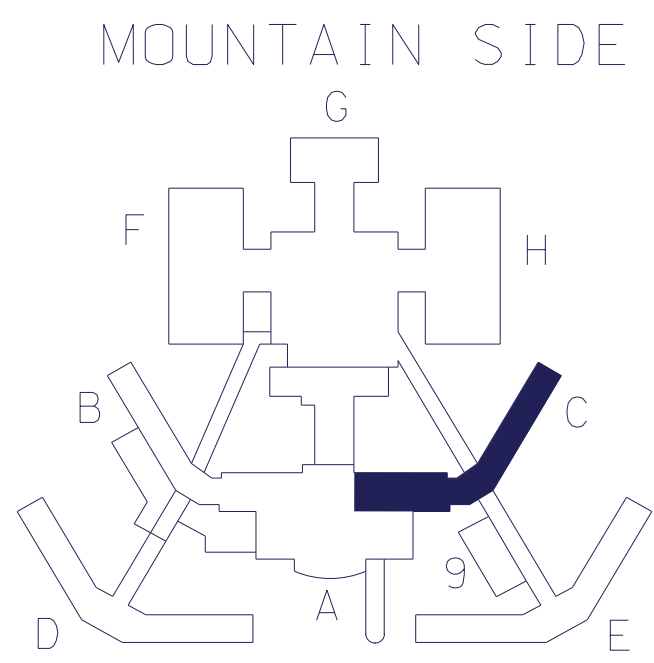


CONTINUED ON SHEET A-7 WING B - LEVEL 1

CONTINUED ON SHEET A-10 BUILDING 9 - LEVEL 1

CONTINUED ON SHEET A-6 WING A - LEVEL 1

LEVEL 1 - WING C
SCALE: 1/16" = 1'-0"



OCEAN SIDE
KEY PLAN

MASTER DRAWING SET

DATE REVISED: 10/8/2013

TRIPLER ARMY MEDICAL CENTER
HONOLULU, O'AHU, HAWAII

FLOOR PLANS
LEVEL 1 - WING C

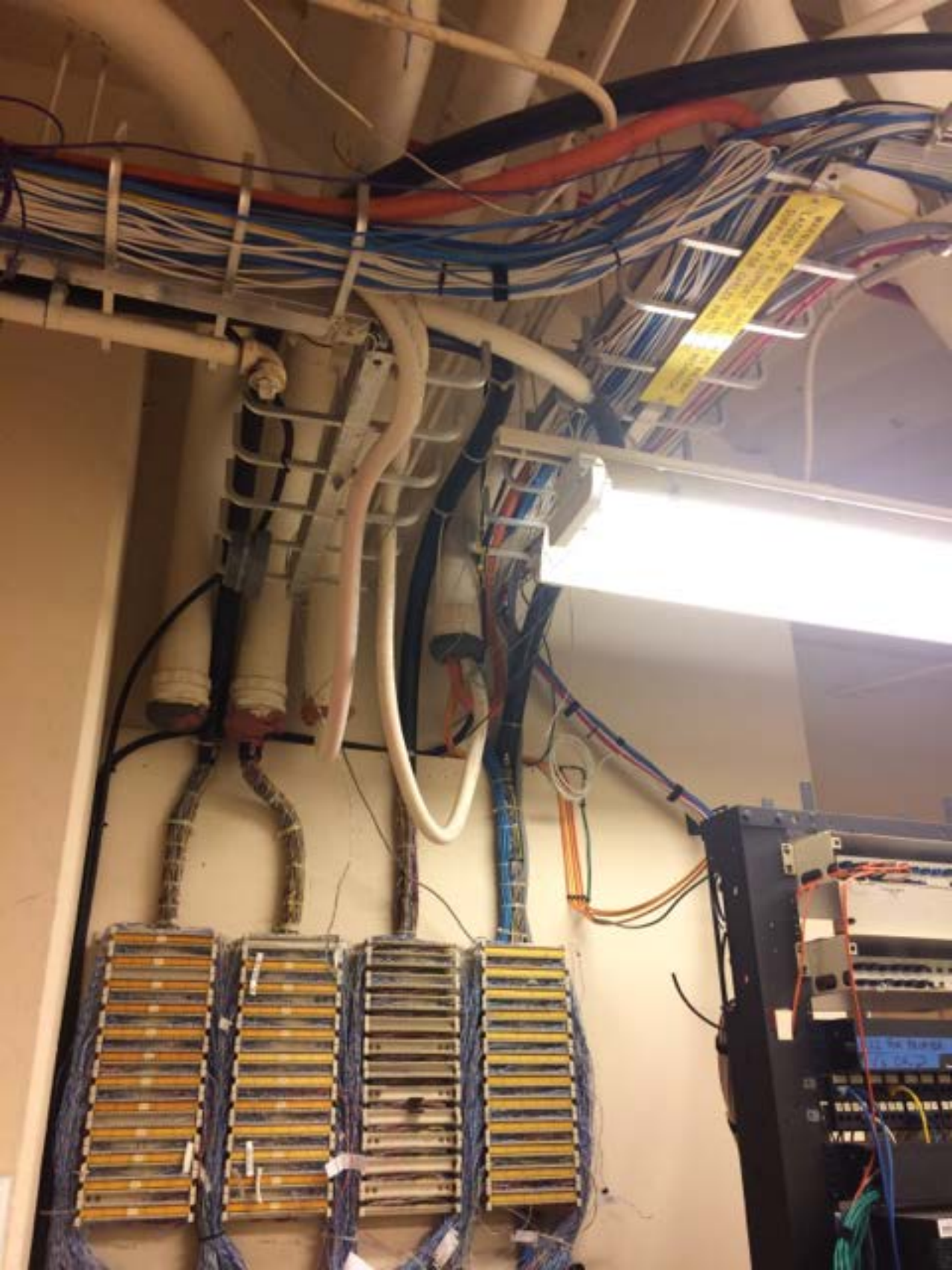
DESIGN FILE NO.: A-Floor-1C.dgn SHEET NO.: A-11

PRINT DATE: APRIL 2017 RING: 12









Label for fiber optic cables, likely indicating a specific network or service area.

