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**AMISTAD COMMUNITY HEALTH CENTER  
RENOVATION OF EXISTING MEDICAL CLINIC  
1533 BROWNLEE BLVD.  
CORPUS CHRISTI, TEXAS**

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APRIL 2013

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**DRAWING LEGEND:**

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**COVER SHEET**

**ARCHITECTURAL:**

- A-1 FLOOR PLANS AND GENERAL NOTES
- A-2 SCHEDULES, DETAILS, INTERIOR ELEVATIONS

**STRUCTURAL:**

- S0.1 STRUCTURAL GENERAL NOTES
- S1.0 LEVEL 1 FRAMING INFILL PARTIAL PLAN AND DETAILS
- S4.0 DETAILS

**MECHANICAL:**

- MEP-1 MEP SPECIFICATIONS
- M-1 HVAC FLOOR PLANS, SCHEDULES, AND DETAILS

**ELECTRICAL:**

- E-1 ELECTRICAL DEMOLITION PLANS
- E-2 ELECTRICAL FLOOR PLANS
- E-3 ELECTRICAL SCHEDULES AND RISER DIAGRAM

**PLUMBING:**

- P-1 PLUMBING DEMOLITION PLAN
- P-2 PLUMBING FLOOR PLANS
- P-3 PLUMBING SCHEDULES AND DETAILS

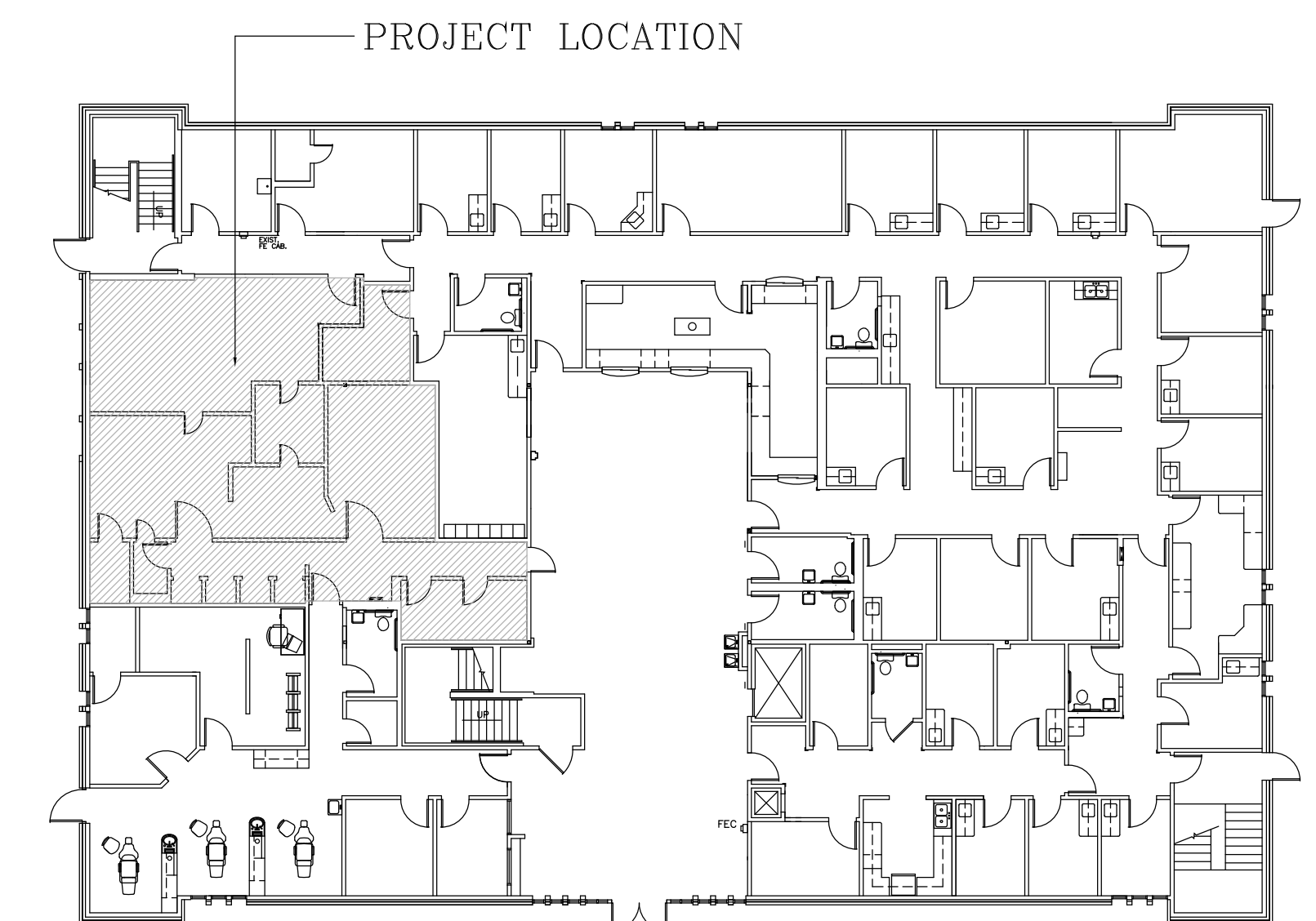
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**LOCATION MAP**

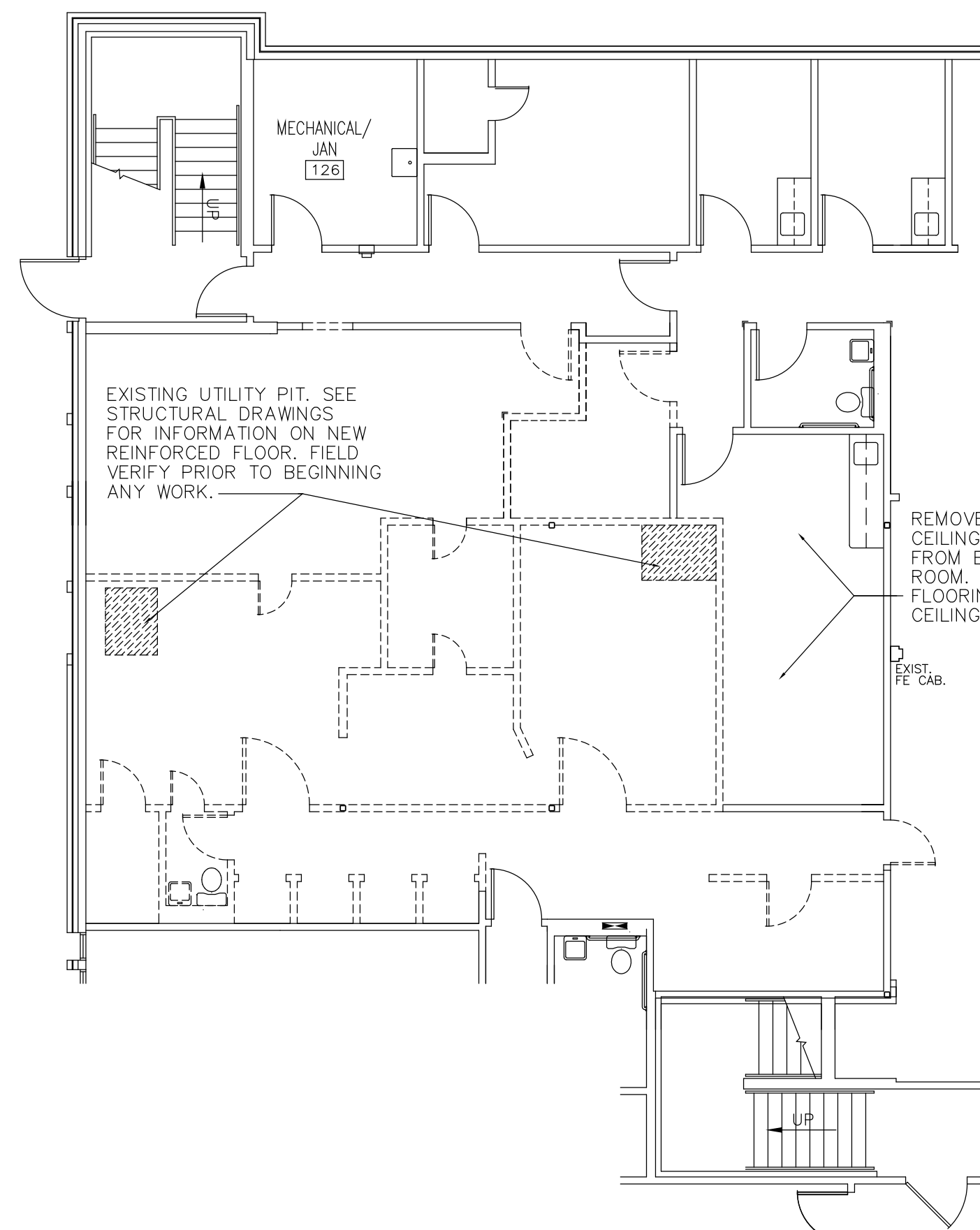
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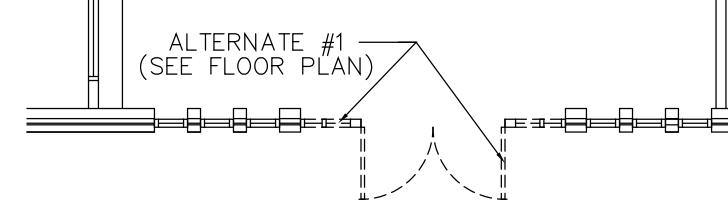
KEY PLAN  
NOT TO SCALE

FIRST FLOOR

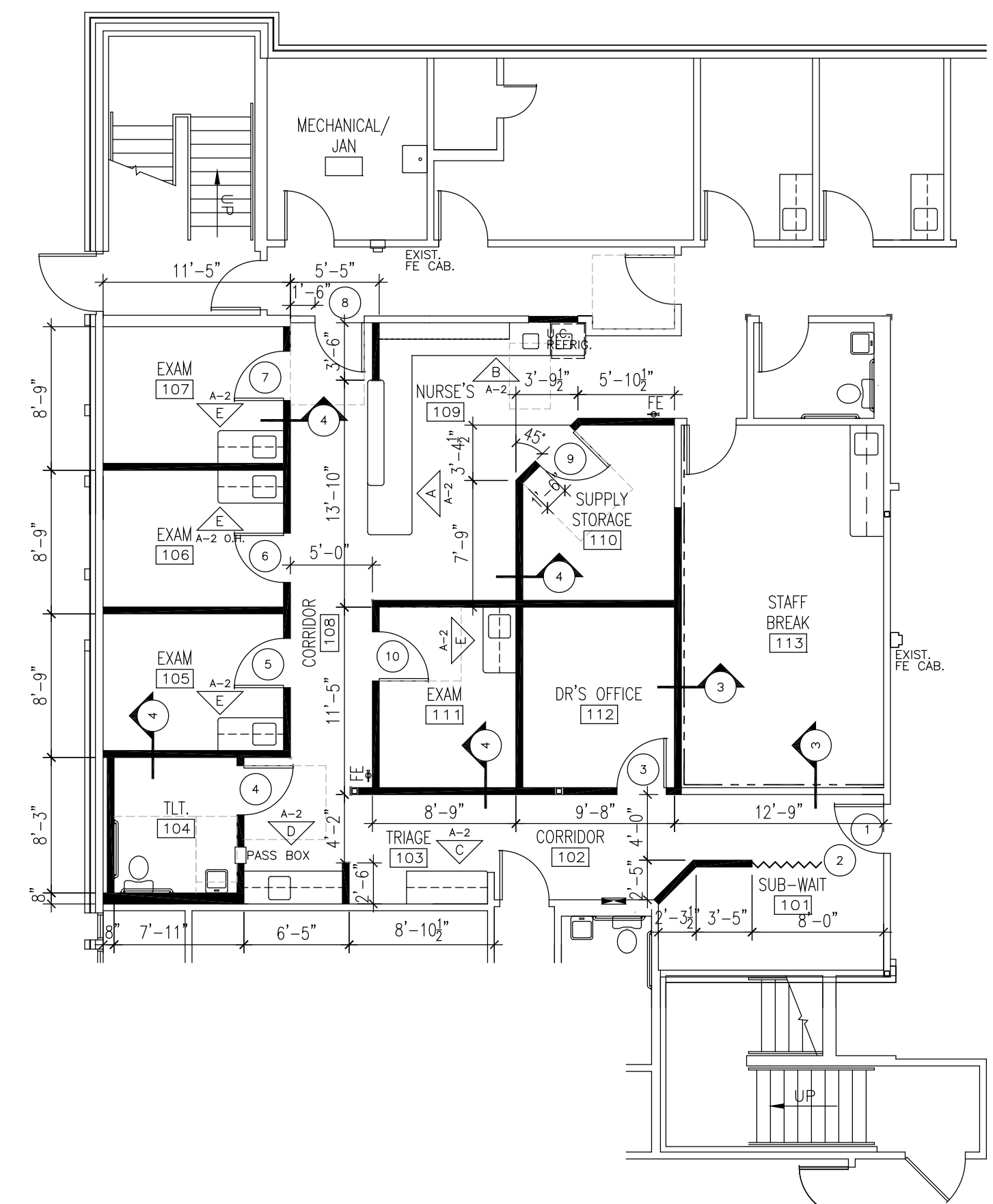


DEMOLITION PLAN  
1/8"=1'-0"

PLAN NORTH



NOTE:  
REMOVE ALL EXISTING FLOORING, WALLS, CEILING GRID AND TILES, AND ALL ASSUNDY ITEMS DESIGNATED ON THE DEMOLITION PLAN. SEE MEP DRAWINGS FOR ADDITIONAL INFORMATION.



FLOOR PLAN  
1/8"=1'-0"

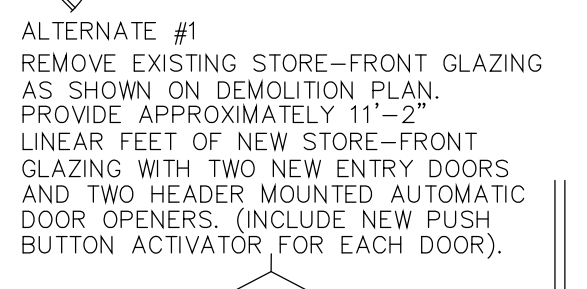
PLAN NORTH

WALL LEGEND:

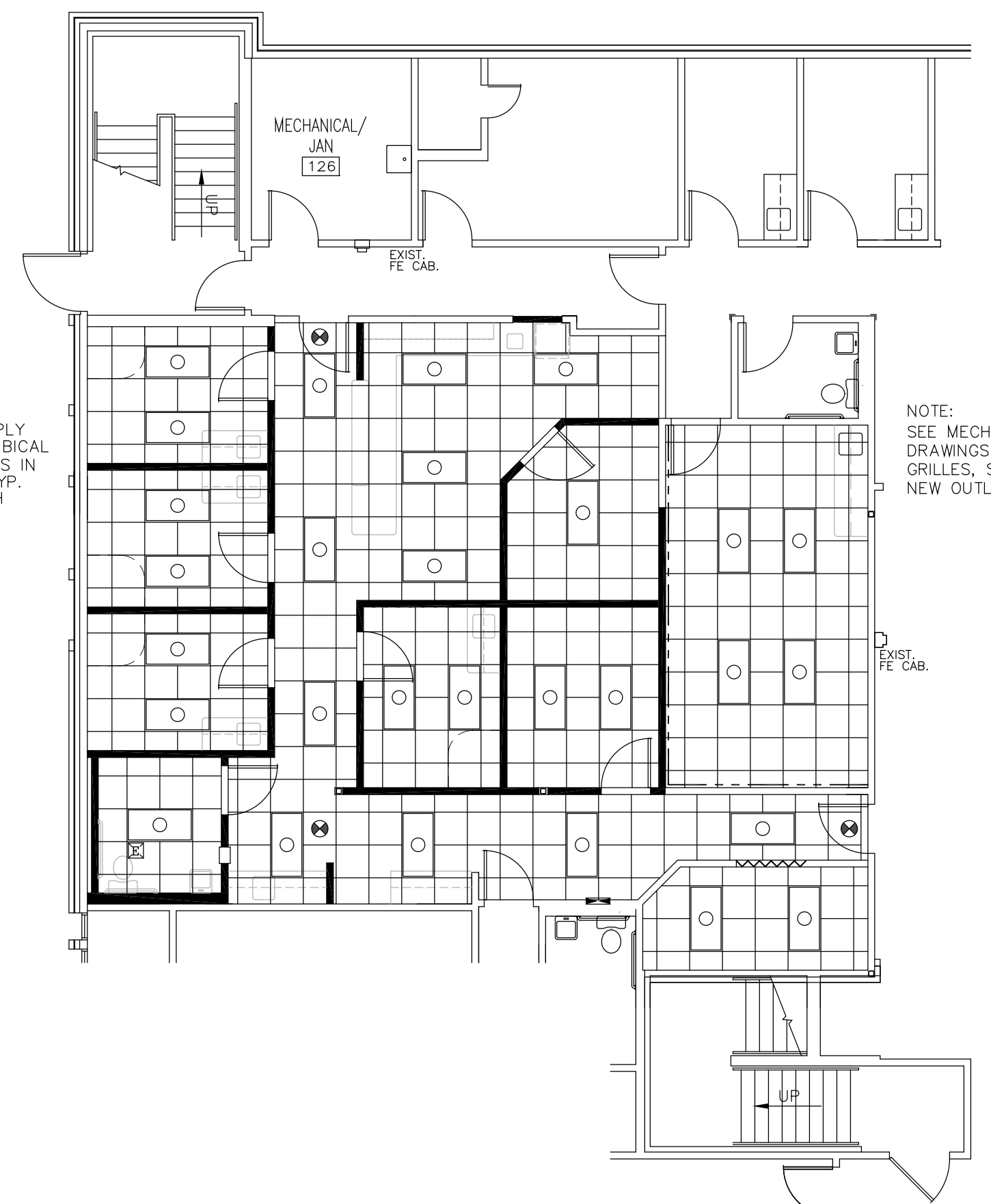
- EXISTING WALLS AND MISC. CONSTRUCTION TO BE REMOVED OR DEMOLISHED.
- ==== EXISTING WALL TO REMAIN
- NEW WALL - 3 5/8" METAL STUDS @ 16" O.C. ONE LAYER OF 5/8" GYP. ON EACH SIDE.

NOTE:  
GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR UPGRADING ALL EXISTING DOORS TO NEW LEVER HARDWARE PER T.D.L.R. SECTION (4.13.9). (FINISH TO MATCH EXISTING.)

NOTE:  
PROVIDE CORNER GUARDS AND END WALL PROTECTION SYSTEMS WHERE SHOWN ON FLOOR PLAN. USE IPC - MODEL 1600 - END WALL PROTECTORS, AND IPC MODEL 160 - HIGH IMPACT CORNER GUARDS.



NOTE:  
CONTRACTOR TO SUPPLY AND INSTALL NEW CUBICAL TRACKS AND CURTAINS IN FOUR EXAM ROOMS 105-107. VERIFY LOCATION WITH OWNER.



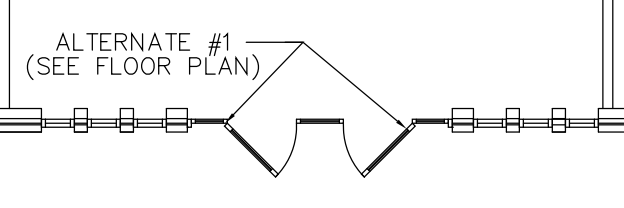
REFLECTED CEILING PLAN  
1/8"=1'-0"

PLAN NORTH

SYMBOL LEGEND:

- NEW 2'x4' FLUORESCENT LIGHT FIXTURE. (SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION).
- ⊠ EXHAUST FAN CONNECTED TO LIGHT SWITCH UNLESS DESIGNATED WITH A SEPERATE SWITCH.
- ⊙ EXIT SIGN

NOTE:  
PROVIDE NEW FIRE EXTINGUISHERS AND MOUNTING BRACKETS. NEW EXTINGUISHERS WILL BE MP SERIES, MULTI PURPOSE BY LARSEN'S. (MODEL MP5; TWO TYP.). SEE FLOOR PLAN FOR LOCATIONS.



GENERAL NOTES:

1. General Contractor shall, by submission of his bid, obligate himself to all requirements of the General Contractor as stated on these drawings.
2. Prior to bid submittal, the General Contractor shall carefully study and compare the Contract Documents with existing space and with information furnished by the Owner, and shall at once report to the Architect errors, inconsistencies or omissions discovered.
3. Prior to bid submittal, the General Contractor shall visit the site and verify field conditions and carefully compare such field conditions and other information known to the Contractor with the Contract Documents. Errors, inconsistencies, or omissions discovered shall be reported to the Architect at once.
4. General Contractor shall bid the plans and specifications as detailed and ensure a full finished project with no additional costs involved over what is included in the documents.
5. General Contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing activities.
6. General Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for construction means, methods, techniques, sequences, and procedures and for coordinating all trades, and all portions of the Work under the Contract, unless Contract Documents give other specific instructions.
7. General Contractor shall report any unforeseen field conditions, errors, inconsistencies or omissions discovered at any time before and during the Work to the Architect, before proceeding with that portion of the work, as he will be responsible for all Work affecting the project.
8. General Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons performing portions of his Work under a contract with the General Contractor.
9. If a change is requested by the Tenant, the Architect shall issue an appropriate Change Order request, which the General Contractor shall price out accordingly.
10. General Contractor shall cover no work until required inspections have been made.
11. All work shall conform to International Building Code 2006 Edition and to all McAllen City Amendments. Contractor shall include cost of permits in bid.
12. All work shall be done in a manner as to not disrupt the operation of the medical office building. All areas visible to public shall remain as clean as possible. Coordinate any shut downs with Building Engineers.
13. All studs shall be 3-5/8" deep, 25 gauge galvanized steel studs and runners, located at 16" o.c., extending 6" above the ceiling, except at tenant separation walls.
14. Gypsum Wall Board:
  - a. 5/8" thick wall board with taped and finish joints to 6" above suspended acoustical ceilings on all interior partitions.
  - b. 5/8" thick fire code type "x" with taped and finished joints of separation and chase walls. Extend all separation and chase walls to deck, seal and provide 1 or 2 hr. fire protection as noted on plans.
15. Flooring
  - a. Vinyl composite tile, 12" x 12" - Armstrong or approved equal. Colors to match existing. (Contractor will follow manufacturers guidelines for installation and initial maintenance.)
  - b. Rubber base shall be 4" high by ROPPE- Color to match existing.
16. Acoustical Ceilings:
  - a. Suspension system shall be Armstrong or equal.
  - b. Acoustical ceiling tile shall be as follows:
    - 1) Typical: 24" x 24" x 5/8" lay-in, white finish - Match existing tile.
17. Painting (Sherwin Williams or approved equal).
  - a. All interior walls to receive:
    - One (1) coat Health Spec Latex Primer.
    - Two (2) coats Health Spec Semi-gloss Latex finish.
  - b. Interior walls to receive Epoxy finish:
    - One (1) coat Water based Epoxy Primer.
    - One (1) coat Water based Sealer.
18. Finish Carpentry and Millwork:
  - a. Casework, Counters, and Countertops:
    - 1) All exposed surface, high-pressure plastic laminate, conforming to NEMA publication No. LD1-19064, part 3, Abrasion Class 1.
    - 2) Interior surfaces, thermojet panels (Melamine).
  - b. Casework Hardware:
    - 1) Hinges - Blum 33.360 European Style casework hinge and self-closing feature.
    - 2) Drawer Slides - Knappe and Vogt #1284 Epoxy coated.
    - 3) Pulls - satin chrome 4" wire, Stanley US26D or equal.
    - 4) Magnetic Catch - Epco 592, Aluminum Case.
    - 5) Locks - Finish to match pulls.
19. Drill holes in countertops as required to run electrical cords below countertop. Finish off hole with flanged satin finish stainless steel ring. Verify number and locations with Owner.
20. Contractor shall provide shop drawings for the following items prior to ordering:
  - a. Millwork
  - b. Acoustical Ceiling Tile and Grid
  - c. Flooring and Base
  - d. Painting
  - e. Electrical Fixtures and Accessories
  - f. Plumbing fixtures
  - g. Doors, Frames, Hardware
  - h. Toilet Accessories
21. Interior dimensions on floor plan are from face of gyp. bd. to face of gyp. bd..
22. Finish Hardware
  - a. Finish hardware has been specified herein by manufacturer's name and series to establish a basis of quality, finish, design and operational function.
    - 1) Butts: Hagar Hinge Co., McKinney Mfg., Lawrence Brothers or equal, full mortise template hinges, 5-knuckle type.
    - 2) Locksets, Latchsets and Privacy Sets: Sargent 10 line levers, as scheduled below or equal. Provide all levers, escutcheons, and cylinders of one manufacturer. Levers are required by A.D.A. Lever type "B", Rose "L". Use Grade II at passage and privacy sets in space.
    - 3) Silencers: By Trimco or approved equal.
    - 4) Door Stops (Bumper Type): By Trimco or approved equal.
  - b. Hardware Finishes:
    - 1) Locksets, Latchsets, Privacy Sets: US10B
    - 2) Closer: US10B
    - 3) Miscellaneous Items: US10B
  - c. All hardware shall match Existing style, finish and keying system.
23. Doors and Door Frames
  - a. Door Frames shall be KD Hollow Metal matching Existing Building Standard frames.
  - b. Interior Doors:
    - All doors shall be 5-ply construction, with Architectural Decorative Laminate. ANSI/ NWDA 1.S.1-A and AWI section 1300 Quality Standards, Pre-machined, prefit and prepared for hardware. All doors shall be provided with manufacturer's standard warranty. Match existing Door Laminate.
24. Store Front Doors and Glazing - (Alternate No.1)
 

Provide "Horton Automatics" Swing Door series 0500 (3'-0" x 7'-0") Include pull handles, sidelites (Three full ht. 1'-8" x 7'-2"), thresholds, center push bar, dark bronze anodized aluminum finish. Contractor will also provide Two (2) header mounted automatic closers. "Horton Automatics" Power Swing Door Operators - HD Swing Series 4100LE Surface Applied with push plate activators, (Two, C1260-4). Prepare doors and sidelites to receive 9/16" tempered, impact resistant glazing. Match tint of adjacent glazing to remain.
25. Contractor will be responsible for installing new Audio/Visual alarms and smoke detectors in all required spaces per applicable codes. (Exam Rms., Toilets, Waiting Rm., Offices, Break Rm., Storage, etc.) Verify mounting heights for A/V alarms. Tie into existing fire alarm system.
26. Porcelain tile:
  - a. Provide 3 x 3 floor tile and 12 x 12 wall tile for toilet rooms. Use Daltile - "Continental Slate. (Color to be selected by Owner). Install wall tiles to a height of 48" a.f.f. on all four walls. Include 3 x 12 bullnose cap at top course of tile.



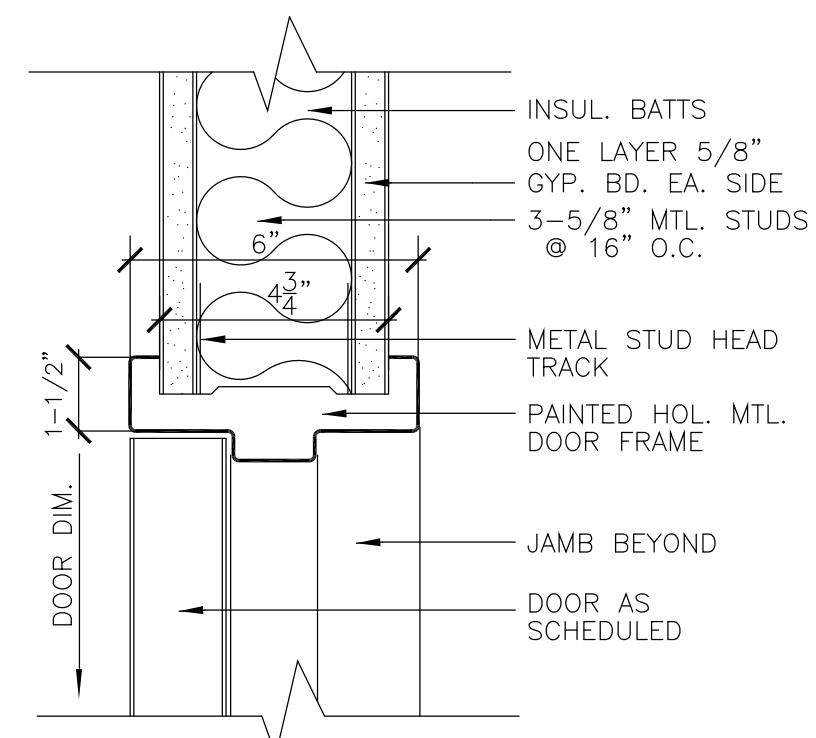
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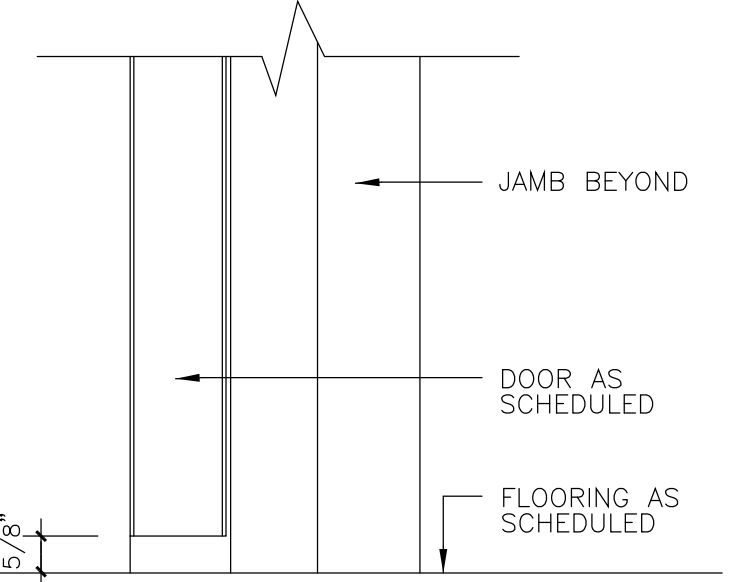
AMISTAD COMMUNITY HEALTH CENTER  
RENOVATION OF EXISTING MEDICAL CLINIC  
1533 BROWNLEE BLVD.  
CORPUS CHRISTI, TEXAS

JOB NO.: 201208  
DRN.BY: C.E.F.  
CKD.BY: FORSYTHE  
DATE: 04/12/2013  
REVISIONS:

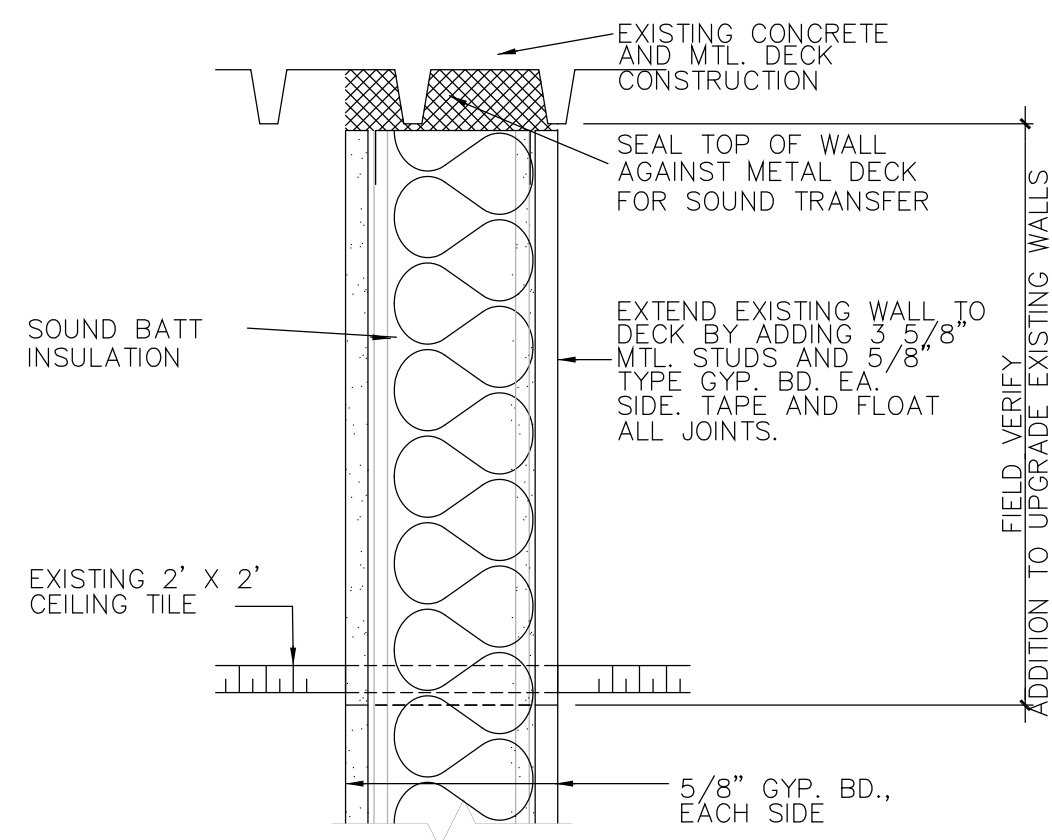
SHEET NUMBER  
**A-1**  
OF 2



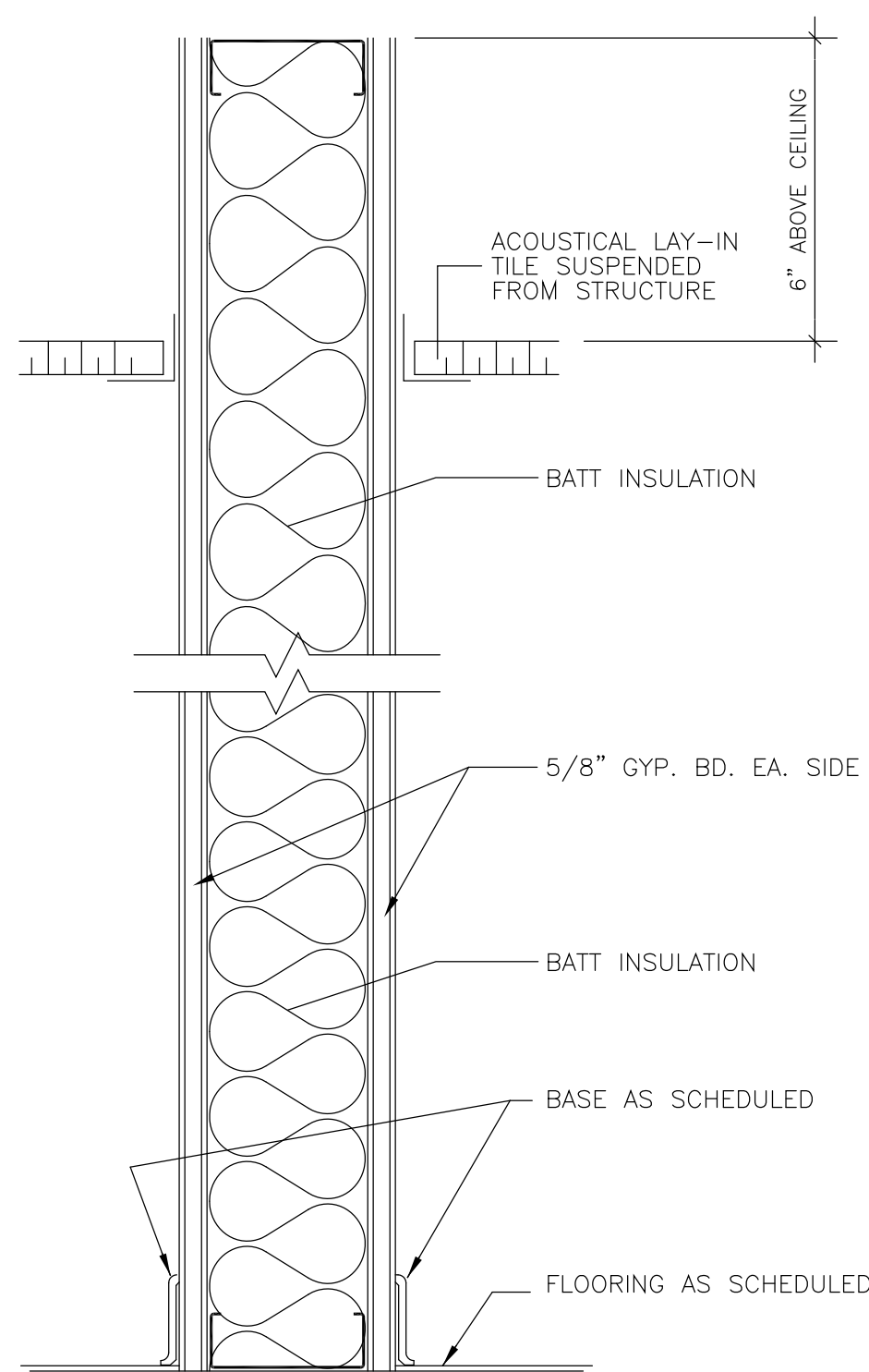
1 HEAD DETAIL  
3" = 1'-0" JAMB & SILL SIM.



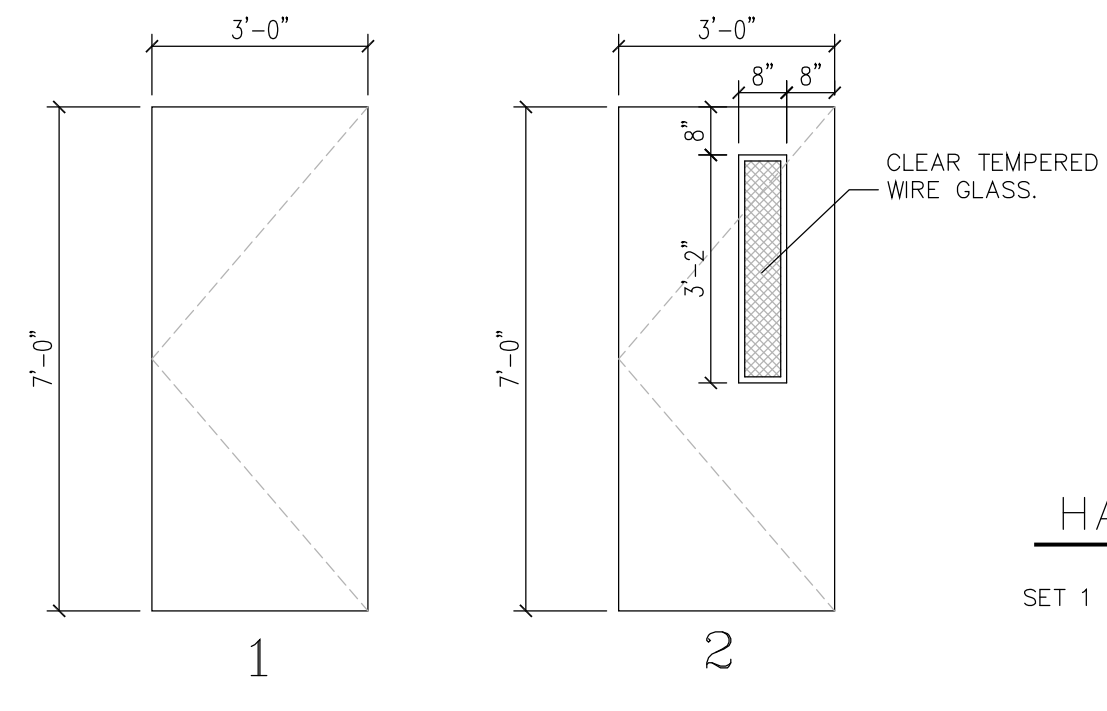
2 SILL DETAIL  
3" = 1'-0"



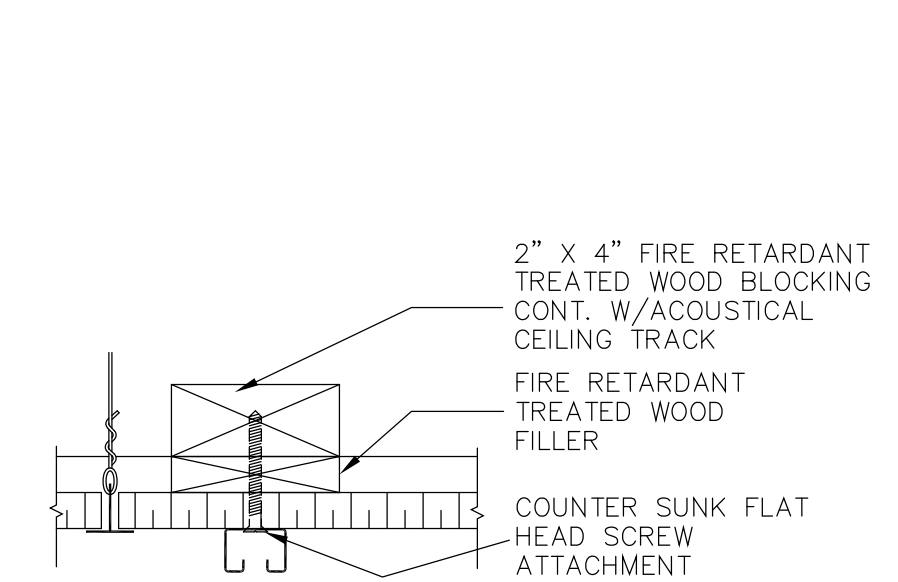
3 WALL SECTION  
3" = 1'-0" 1 HR. PARTITION



4 WALL SECTION  
3" = 1'-0"



DOOR ELEVATION  
3/8" = 1'-0"

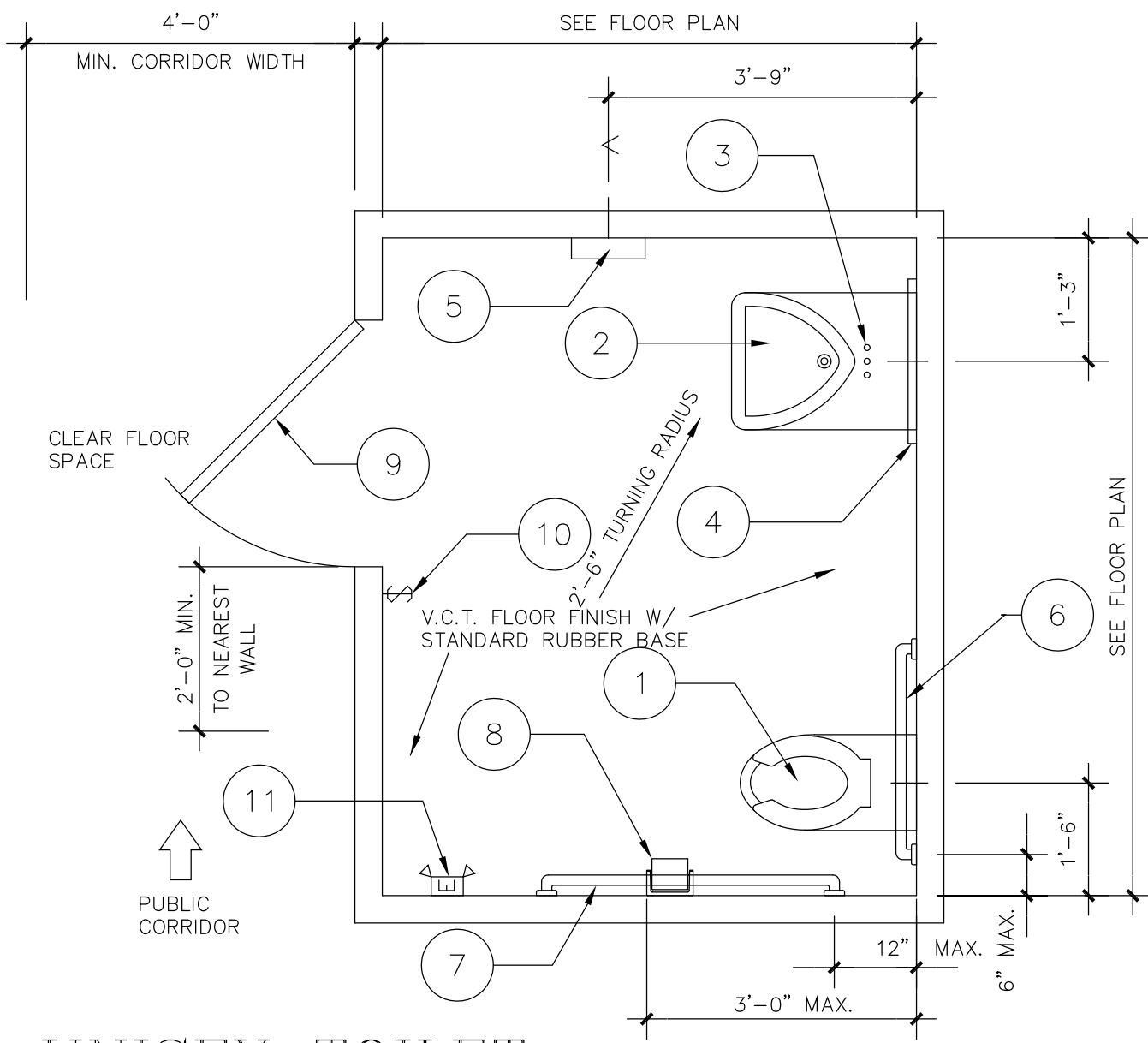


5 CUBICLE CURTAIN TRACK  
3" = 1'-0"

NOTE:  
NEW DOORS WILL BE 3'-0" X 7'-0" X 1 3/4" SOLID CORE WOOD, OR AS LISTED IN DOOR SCHEDULE, PLASTIC LAMINATE CLAD TO MATCH EXISTING.  
INSTALLED IN ALUMINUM FRAME. FINISH TO MATCH EXIST.  
PROVIDE NEW A.D.A. COMPLIANT LEVER HANDLES AND HARDWARE AS NOTED BELOW. (FINISH TO MATCH EXISTING)

HARDWARE SCHEDULE

- SET 1 : BUTTS PASSAGE SET SILENCERS STOP CLOSER  
SET 2 : BUTTS LOCK SET SILENCERS STOP  
SET 3 : BUTTS PRIVACY SET SILENCERS STOP  
SET 4 : BUTTS STORAGE LOCK SET SILENCERS STOP  
SET 5 : BUTTS PASSAGE SET SILENCERS STOP



UNISEX TOILET

1/2" = 1'-0"

SCHEDULE

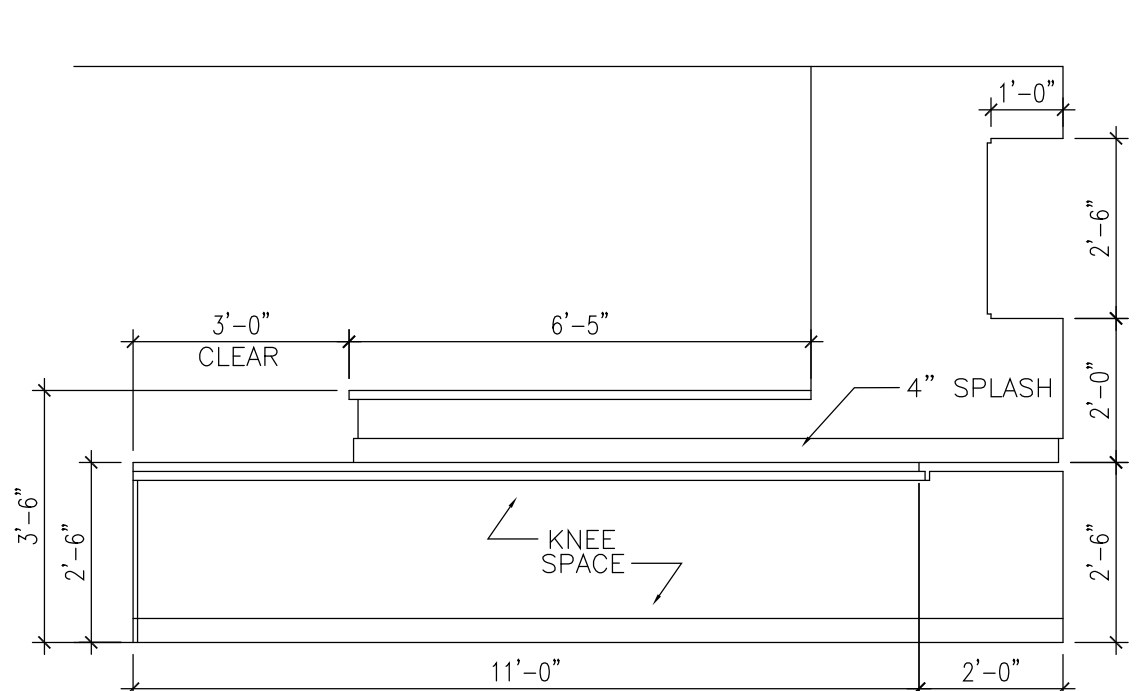
NOTE: SUBMIT ALTERNATE SUPPLIERS TO ARCHITECT FOR CONSIDERATION AS "OR EQUAL" FOR ALL ITEMS LISTED BELOW.

#	FIXTURE	MFR.	CAT.#	MOUNTING	REMARKS
1	WATER CLOSET	MATCH BUILDING STANDARD		17" MAX. TOP OF SEAT HT.	LOCATE 18" OFF SIDE WALL (CENTERLINE)
2	LABORATORY	MATCH BUILDING STANDARD		34" A.F.F. MAX. TOP OF LAV.	29" A.F.F. MIN. BELOW LAV.
3	FAUCET	MATCH BUILDING STANDARD			PROVIDE LEVER HANDLES
4	MIRROR	ASI - MODEL 0620		40" A.F.F. MAX. TO BTM OF MIRROR SURFACE	TOP OF MIRROR WILL BE 74" A.F.F. MIN.
5	P. TOWEL DISP.	MATCH BUILDING STANDARD		48" A.F.F. TO PAPER TOWEL PULL	
6	GRAB BAR 42"	ASI - 3800 SERIES		34" A.F.F.	MOUNT TO CENTERLINE OF BAR.
7	GRAB BAR 36"	ASI - 3800 SERIES		34" A.F.F.	MOUNT TO CENTERLINE OF BAR.
8	T. P. DISP.	MATCH BUILDING STANDARD		19" A.F.F. MAX.	MOUNT 8" OFF FRONT OF WATER CLOSET TO THE CENTERLINE OF THE DISPENSER.
9	DOOR	MIN. 3'-0" WIDE DOOR W/ LEVER HANDLE & PRIVACY LATCH - BLDG. STD. FRAME & DOOR FINISH			
10	SWITCH	TO 2' X 4' LIGHT FIXTURE IN CEILING & EXHAUST FAN TIED INTO BUILDING EXHAUST.			
11	FIRE ALARM	A/V, TIE INTO BUILDING ALARM SYSTEM, MOUNTED @ 80" A.F.F.			

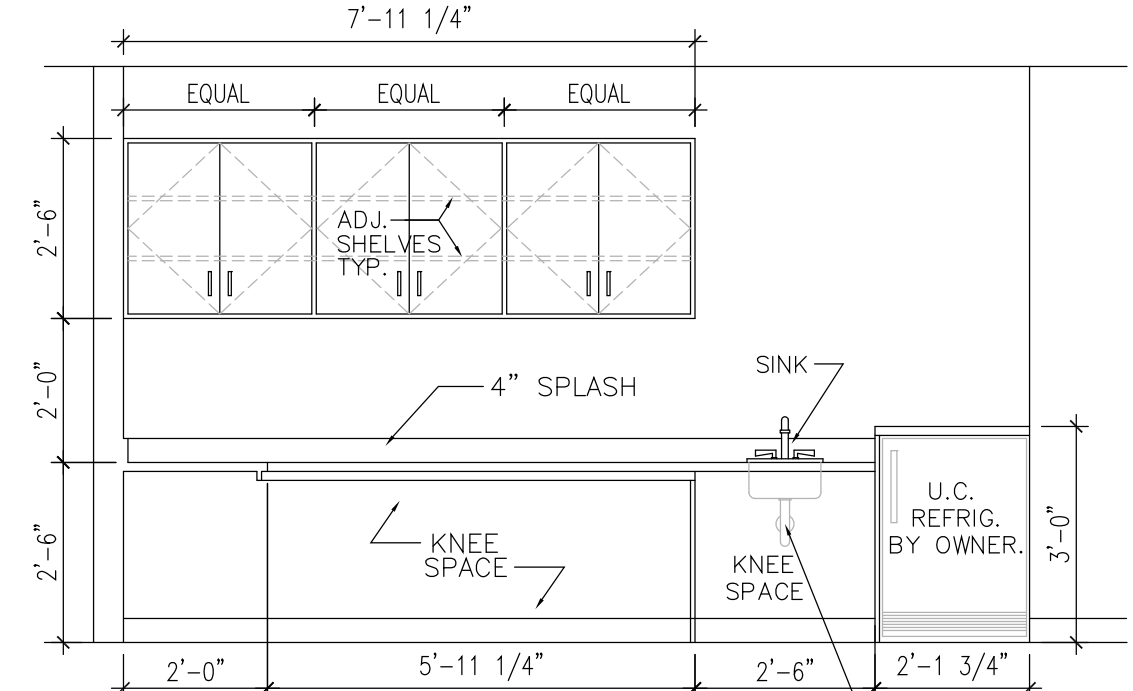
NOTE:  
THE DIAGRAM ABOVE IS A TYPICAL A.D.A. COMPLIANT TOILET. THIS DIAGRAM IS NOT NECESSARILY THE SAME AS THE TOILET SHOWN ON THE FLOOR PLAN.  
THIS DIAGRAM IS PROVIDED FOR TYPICAL DIMENSIONS OF FIXTURES OFF WALLS AND THEIR MOUNTING HEIGHTS. (CONTRACTOR IS TO FIELD VERIFY ALL FIXTURE LOCATIONS AND ROOM DIMENSIONS.)

NOTE:  
ALL NEW MILLWORK WILL BE PLASTIC LAMINATE CLAD. NO PARTICLE BOARD IS TO BE USED FOR COUNTERTOPS. ALL LAMINATES WILL BE SELECTED BY TENANT AT A LATER DATE.

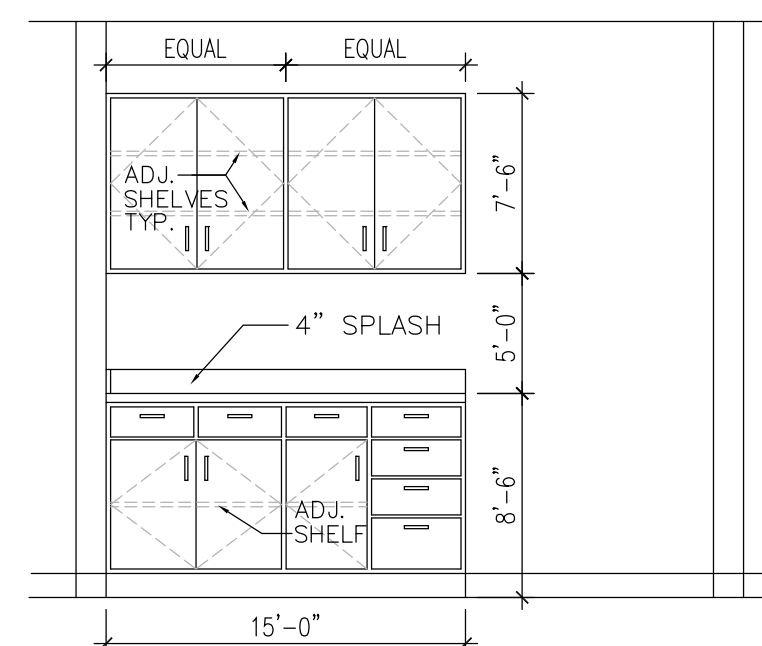
NOTE:  
PROVIDE PASS THROUGH SPECIMEN CABINET FROM TLT. TO WORK COUNTER. USE AMERICAN SPECIALTIES MODEL # 8154 OR EQUAL. MOUNT CENTER OF CABINET AT 4'-0" A.F.F. (VERIFY LOCATION PRIOR TO INSTALL.)



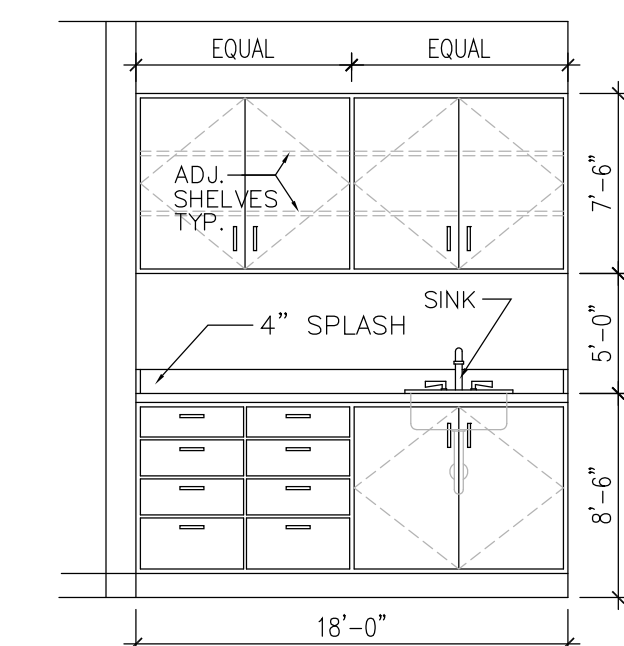
A NURSE'S  
3/8" = 1'-0"



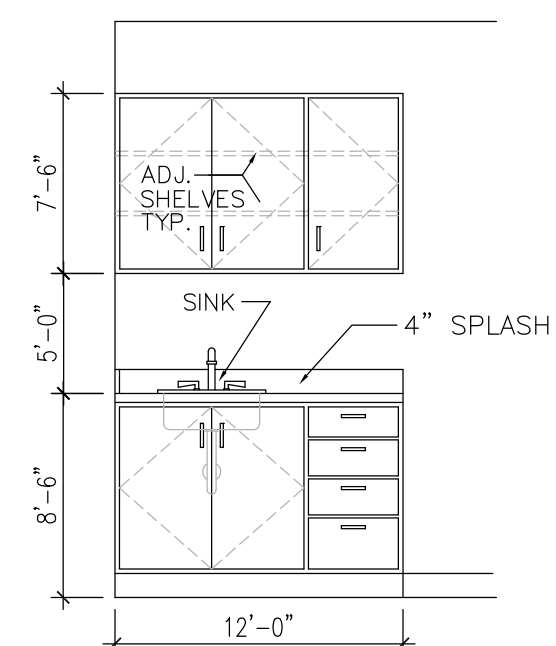
B NURSE'S  
3/8" = 1'-0"



C TRIAGE  
3/8" = 1'-0"



D WORK COUNTER  
3/8" = 1'-0"



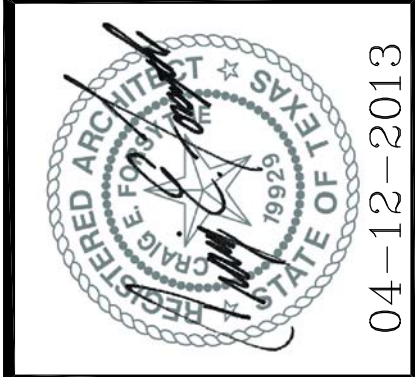
E EXAM  
3/8" = 1'-0"

DOOR SCHEDULE

DOOR NUMBER	SIZE	MATERIAL	FRAME	HARDWARE	HEAD	JAMB	ELEV.	FIRE	REMARKS
1	3'-0" X 7'-0" X 1-3/4"	8'-0" X 7'-0" ACCORDIAN		1 2 3 4 5 1/ A-2			1 2	20 MIN.	
2		3'-0" X 7'-0" W/SIDELITES							HARDWARE SUPPLIED BY HUF COR
3		P.L. CLAD SOLID CORE WOOD							
4		ALUMINUM STOREFRONT							
5		HUF COR 3100 SERIES (VINYL)							
6		HOLLOW METAL (PAINTED)							
7		SUPPLIED BY MANUFACTURER							
8									
9									
10									
11									HARDWARE SUPPLIED BY MANUFACTURER (DEADBOLT)
12									HARDWARE SUPPLIED BY MANUFACTURER (DEADBOLT)

ROOM FINISH SCHEDULE

ROOM NUMBER & NAME	FLOOR	BASE	WALLS				CEILING	CEILING HEIGHT	REMARKS
			NORTH	EAST	SOUTH	WEST			
101 SUB-WAIT									
102 CORRIDOR									
103 TRIAGE									
104 TOILET									PROVIDE TILE ON WALLS TO 48" A.F.F.
105 EXAM									
106 EXAM									
107 EXAM									
108 CORRIDOR									
109 NURSE'S									
110 SUPPLY/STORAGE									
111 EXAM									
112 DR'S. OFFICE									
113 STAFF BREAKROOM									



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SCHEDULES, DETAILS, INTERIOR ELEVATIONS

JOB NO.: 201164  
DRN.BY: C.E.F.  
CKD.BY: FORSYTH  
DATE: 04-12-13  
REVISIONS:

SHEET NUMBER  
**A-2**  
OF 2

04-12-2013

**II. COORDINATION**

- A. It is the responsibility of the General Contractor to obtain all Contract Documents and Addenda and to submit such documents to all subcontractors and material suppliers prior to the submittal of shop drawings, fabrication or any structural members, and construction.
- B. The General Contractor shall compare the Architectural, Structural Mechanical, Electrical, Plumbing, and other series drawings and report any discrepancies between each set of drawings and within each set of drawings prior to fabrication and installation of any structural members.

- C. The details designated as "Typical Details" apply generally to the Drawings in all areas where conditions are similar to those described in the details.

- D. All structural elements of the project have been designed by the Structural Engineer to resist the required code vertical and lateral forces that could occur in the final completed structure only. It is the responsibility of the Contractor to provide all required bracing during construction to maintain the stability and safety of all structural elements during the construction process until the lateral-load resisting or stability-providing system is completely installed and the structure is completely tied together.

- E. Where conflict exists among the various parts of the structural contract documents, structural drawings, general notes, and specifications, the strictest requirements, as indicated by the Engineer, shall govern.

- F. Periodic site observation by field representatives of Garza + McClain Structural Engineers, Inc. is solely for the purpose of determining if the Work is proceeding in accordance with the Structural Contract Documents. This limited site observation is not intended to be a check of the quality or quantity of the Work, but rather a periodic check in an effort to inform the Owner against defects and deficiencies in the work of the Contractor.

**III. SUBSTITUTIONS**

All requests for substitutions of materials or details shown in the contract documents shall be submitted for approval during the bidding period. Once bids are accepted, proposed substitutions will be considered only when they are officially submitted with an identified savings to be deducted from the contract and/or schedule impact and the material or product has been approved by the International Code Council Evaluation Service (ICCES) and the ICCES report are included in the request. Submittals not satisfying the above criteria will not be considered.

**III. CODES**

- A. The General Building Code used as the basis for the structural design is as follows: International Building Code, IBC 2009 with the City of Corpus Christi Amendments.
- B. Structural Concrete Building Code Requirements for Reinforced Concrete, American Concrete Institute, ACI 318.
- C. Structural Steel: Manual of Steel Construction, Load and Resistance Factor Design, American Institute of Steel Construction, Third Edition.

**IV. DESIGN LOADS**

- A. Dead loads include the self weight of the structural elements.

- B. Live Load for Floor Infill 100psf

- C. WIND LATERAL LOAD ON STRUCTURAL FRAME IS BASED ON ASCE 7 USING THE FOLLOWING:

- 1. BASIC WIND SPEED (3 SEC) 120 MPH
- 2. EXPOSURE B
- 3. IMPORFANCE FACTOR 1.0
- 4. GROSS WIND PRESSURES ON NEW DOOR ARE AS FOLLOWS:

WALL AREA	10 SOFT
A. TYPICAL BUILDING	TRIB AREA
INTERIOR (FIELD)	28.1 PSF

**V. SUBMITTALS**

- A. Shop drawings shall be prepared for all structural items and submitted for review by the Engineer. Contract Drawings shall not be reproduced and used as shop drawings. All items deviating from the Contract Drawings or from previously submitted shop drawings shall be clouded.

- B. The contractor shall review shop drawings for compliance with the contract documents and shall certify that he has done so by a Stamp noting that the drawings have been "Approved" and which bears the signature (or initials) of an authorized representative of the contractor and the date. Submittals which do not reflect the contractor's approval, signature and date will be returned without review.

- C. The contractor shall be responsible for delays caused by rejection of inadequate shop drawings.

- D. Where review and return of shop drawings is required or requested, the engineer will review each submittal and, where possible, return within two weeks of receipt.

- E. Corrections or comments on shop drawings or manufacturer's data sheets do not relieve the contractor from compliance with the requirements of the plans and specifications. The engineer's review is for general conformance with the requirements of the contract documents. The contractor is responsible for confirming and correcting all quantities and dimensions, selecting fabrication processes and techniques of construction, and coordinating his work with that of all other contractors.

- F. General Contractor shall submit four maximum bond copies. Engineer will review, comment and retain one copy of each submittal and transfer comments onto the remaining bond copies for distribution to architect, owner, and contractor. Additional copies submitted will not have comments transferred to them. General Contractor will be responsible for providing and distributing Engineers comments to their subcontractors.

- G. Submittal List and Schedule – The General Contractor shall prepare a detailed list and schedule of all submittal items to be sent to the Structural Engineer prior to the start of construction. This list shall be updated and revised and kept current as the job progresses. The submittal list shall be organized as shown below:

- 1. Shop Drawings
- 2. Manufacturers literature for products, assemblies and hardware
- 3. Products, assemblies and hardware
- 4. Product certifications, mill certificates and affidavits

- H. Shop Drawings

- 1. The General Contractor shall submit for Engineer review shop drawings for the following items:
    - a. Reinforcing Steel
    - b. Concrete Mix Designs
    - c. Form Deck
    - d. Structural Steel
- Items marked (\*) shall be designed by an engineer and drawings shall be sealed by a registered engineer in the state where the project is located. Items marked (#) shall be submitted to Engineer for Owner's record only and will not have the Engineer's shop drawing stamp affixed.

- 2. The omission from the shop drawings of any material required by the Contract Documents to be furnished shall not relieve the Contractor of the responsibility of furnishing and installing such materials, regardless of whether the shop drawings have been reviewed and approved.

- 1. Manufacturers literature – Submit two copies of manufacturer's literature for all materials and products used in the construction of the project.

- J. Reproduction – The use of reproductions of these contract documents by an contractor, subcontractor, erector, fabricator, or material supplier in lieu of preparation of shop drawings signifies his acceptance of all information shown hereon as correct, and obligates himself to any job expense, real or implied, arising due to any errors that may occur hereon.

- K. Letters –
  - 1. Steel erector shall provide a letter stating all elements have been installed per the shop drawings and erection drawings without deviation.
  - 2. G.C. to provide a letter to the Engineer stating all structural elements have been installed per the structural contract documents, shop drawings and supplemental sketches without deviation.
  - 3. Door installer shall provide a notarized letter stating that the door was installed per the TDI Requirements.

**VII. CAST IN PLACE CONCRETE**

- A. CLASSES OF CONCRETE

All concrete shall conform to the requirements as specified in the table below unless noted otherwise on the drawings:

Concrete Mix Schedule:					
Conc.	Strength	Agg.	Slump	slabs	
Class	psi	Type	Size	inches	w/c
A	3000	NWT	¾"	3-5	0.45

g) "NWT" refers to normal concrete having or dry unit weight of approximately 145 Pcf (ASTM 33 aggregate)

b) "Strength" is required compressive cylinder strength at an age of 28 days

Mix Usage Schedule:

-----	Concrete	Air
Description of Use	Class	Content
-----	A	-----

- B. Maximum shrinkage of the concrete shall be 0.03% at 28 days as determined by ASTM C157.

- C. There shall be no embedded conduits, or pipes in the Metal Deck slab.

**VIII. CONCRETE REINFORCING**

- A. Concrete reinforcement for the project shall conform to the following:

- 1. All Reinforcing Steel shall be ASTM A615, Grade 60 unless noted otherwise in the drawings or these notes.
- 2. Welded Reinforcing Steel: Provide reinforcing steel conforming to ASTM A706.
- 3. Deformed Bar Anchors: ASTM A496 minimum yield strength 70,000 PSI as Noted on the Drawings. Reinforcing Bars shall not be substituted for deformed bar anchors.

- B. Detailing of reinforcing steel shall conform to the American Concrete Institute 315 Detailing Manual and all hooks and bends in reinforcing bars shall conform to ACI detailing standards unless shown otherwise.

- C. In unscheduled grade beams, walls, and slabs, detail reinforcing as follows:

- 1. Provide Class B lap at other location pending Engineer's approval.

- D. Welding of reinforcing steel will not be permitted unless specifically shown on drawings.

- E. Heat shall not be used in the fabrication or installation of reinforcement.

- F. Reinforcing steel clear cover shall be as follows:

- 1. Slab-on-Metal Deck Centered

**VIII. POST INSTALLED ANCHORS**

- A. Expansion Anchors

- 1. Expansion Anchors system shall be one of the following products:
  - a. Hilli KWik Bolt III
  - b. Strong Bolt II

- B. Adhesive Anchors

- 1. Adhesive Anchors shall be:
  - a. HI HI 500
  - b. Simpson Epoxy Tie

**IX. TESTING LABORATORY SERVICES**

- A. Work specified herein shall be performed by a qualified independent testing laboratory, selected and paid by the Owner. The Contractor shall be responsible for notifying the independent testing laboratory at least 24 hours of advance of materials that require testing. The contractor shall pay for all retests of materials not meeting the requirements in the Contract Documents. Reports of each Test shall be prepared by the Independent Testing Laboratory and submitted promptly to the Owner, Contractor, Architect, and Engineer. Items found not to comply with the Construction Documents shall be brought to the immediate attention of the Contractor and Architect/Engineer for resolution.

- B. Concrete inspection and testing:

- 1. Secure composite samples of concrete at the jobsite in accordance with ASTM C172.
- 2. Mold and cure four specimens from each sample in accordance with ASTM C31. Test specimens in accordance with ASTM C39 for each pour of concrete.
- 3. Test one cylinder @ 7 days, 2 @ 28 days, and hold one for 56 days (test only if 28 day strength is low)
- 4. Perform one strength test (four cylinders) for each 10 cubic yards of fraction thereof, of each mix design placed in one day. Test one cylinder @ 7 days, 2 @ 28 days, and hold one for 56 days (test only if 28 day strength is low.)
- 5. Make one slump test for each set of cylinders following the procedural requirements of ASTM C143 and C172.
- 6. Determine total air content of air entrained concrete in accordance with ASTM C231. Perform one test for each strength test.

- C. Concrete Reinforcement: Inspect all concrete reinforcing steel and embedded metal assemblies prior to placement of concrete for compliance with Contract Documents and shop drawings. All instances of non-compliance shall be immediately brought to the attention of the contractor for correction, and if unacceptable, reported to the Engineer.

- D. Special Inspections: Special inspections shall be performed in accordance with Chapter 17 of the 2009 IBC by a Special Inspector hired by the Owner to perform the Special Inspections listed below. The Special Inspector shall be qualified by an approved agency according to the City to perform the special inspections for which they will be undertaking. The Contractor shall coordinate with and notify the Special Inspector of all tests. The Special Inspector shall be responsible to verify that the items detailed in the Construction Documents were built accordingly and shall prepare, sign, and submit reports to the Registered Design Professional (RDPRC) in Responsible Charge for all time spent at the site and shall notify the General Contractor responsible for the quality of the Project of the non-complying items. These Special Inspections are in addition to other listed in these Structural Notes or Project Specifications.

- E. Special Inspection Report, upon completion of the erection of the structure, submit a final report to the owner that includes all the daily inspection reports, testing reports and special inspector qualifications.

**X. STRUCTURAL STEEL**

- A. Material

- 1. All Material shall be new
- 2. All Angles shall conform to ASTM A36
- 3. All Structural steel plate shall conform to ASTM A36

- B. Connection

- 1. All Welding shall conform to AWS/AWS D1.1
- 2. All Electrodes shall conform to E70XX

- C. Galvanizing: Hot Dip Galvanize all exposed Structural steel.

**XI. METAL FORM DECK**

- A. Form Deck

1. Metal Form Deck Schedule						
Location	Depth	Type	Gauge	Concrete	Section	Properties
Floor	1.0	C	24	NWT	Sp	Sn
					0.098	0.103
					0.057	0.059

Sp = positive section modulus in3  
Sn = negative section modulus in3  
Ip = moment of inertia  
In = negative moment of inertia

- 2. Sheet steel for galvanized floor deck and accessories shall conform to ASTM A653-94, Structural Quality, with a minimum yield strength of 33 ksi.
- 3. Galvanizing shall conform to ASTM A924-94 with a minimum coating of G60 as defined in A653-94.
- 4. Place deck panels on structural supports and adjust to final position with ends lapped 2 inches over structural supports. Lap sides of deck 1 corrugation. Provide minimum end bearing of 2 inches.
- 5. Attach form deck to members with puddle welds on a 3S/4 pattern with welding washers with 2-#10 TEK screw side lap fasteners.
- 6. Do not use admixtures with chloride salts in concrete for slabs over metal deck.

**XII. TEXAS DEPARTMENT OF WINDSTORM CERTIFICATION**

- A. Texas Department of Windstorm Certification:

The project is located in NIECES County an Inland I wind zone designated catastrophe area. All exterior windows, doors, wall coverings, roof coverings, canopies and mechanical equipment and their attachment to the main structure must be designed for a component and cladding wind pressure corresponding to a 3-sec gust of 120 mph wind speed Exposure C-1=1.0 according to the International Building Code 2006 with the Texas Windstorm Amendments. All products will require certification stating that the products have been designed and installed for the components and cladding uniform static wind pressure of the aforementioned code. The sub-contractor shall submit the wind storm product certification, the component and cladding wind pressure the product was designed for, any manufacturer certification in regards to Texas Wind Storm, and the connection requirements for the product to the Engineer of Record. In addition, all exterior openings i.e. windows and doors shall be impact resistant to wind debris.

- B. Glazed Exterior openings and doors shall be impact resistant from windstorm debris and be designed and attached to meet the following wind speed 120 mph, exposure C, I = 1.0 and Kd = 11.0 TDI submittals shall include elevations for attachment that specifically show type and spacing of connectors.

- C. Texas Windstorm Submittals:

The Contractor and Subcontractors must submit products approved by the Texas Department of Insurance or Equal. When submitting an equal Test Reports, Engineered Calculations and Elevations with Attachment Anchorage must be submitted. Any submittal without proper certifications and data proving that the product meets TDI will be rejected.

- a. Exterior Doors

- D. Texas Windstorm Inspections

- 1. Structural Steel framing
- 2. Exterior Doors

- E. TDI Corrosion Resistance Requirements for Construction in the Designated Catastrophe Zone, as defined by TDI, the following modifications must be made to the Fastener Schedule:

- 1. Inland I and Inland II Areas – Metal connectors and fasteners located in open areas shall be either stainless steel and meet ASTM A167, hot-dip galvanized after fabrication and meet ASTM A123 or ASTM A153; hot-dip galvanized or electrogalvanized in accordance with ASTM A641; mechanically deposited zinc coatings in accordance with ASTM B695; or electrodeposited zinc coatings in accordance with ASTM B633.

- 2. Inland I and Inland II Areas – Metal connectors and fasteners located in vented or enclosed areas may meet the requirements of R325.1.2.1 or shall be epoxy-coated in accordance with ASTM A899.

- 3. Exception for all Areas – Metal connectors and fasteners located in conditioned areas (heated and cooled living areas) are not required to be corrosion resistant. One-half inch diameter or greater steel bolts are not required to be corrosion resistant.

- 4. Open Areas Shall include Porches, Decks, Carports, Exterior Wall Coverings, Roof Coverings, Metal Ties for Stone and Masonry Veneer, The Underside of Elevated Structures, Anchors for Securing Mechanical Equipment, Garage Door Attachments, Roof Vent Attachments, Skylight Attachments, and Impact Protective Systems (Shutters).

- 5. Vents Areas Shall include Attics, Exterior Wall Stud Cavities, Crawl Spaces, Window and Exterior Door Attachments, Roof Sheathing, and Wall Sheathing.

Seward Areas –	130 mph
Inland I Areas –	120 mph
Inland II Areas –	110 mph

- F. Products that are not Approved by TDI or The Florida Building Code will require Certification by a professional Engineer. The drawings and calculations shall be sealed. Additional cost will be charged to the Contractor for review of submittals that are not TDI or Florida Building Code Approved.

**XIII. VAPOR BARRIER**

- Vapor Retarder shall conform to ASTM E1745, Class A with a maximum water to vapor permeance of 0.1 perms per ASTM E1249, 10 mils minimum.



**AMISTAD COMMUNITY HEALTH CENTER  
RENOVATION OF EXISTING MEDICAL CLINIC**  
1533 BROWNLEE BLVD.  
CORPUS CHRISTI, TEXAS  
STRUCTURAL GENERAL NOTES

THIS IS TO GIVE NOTICE AND CERTIFY THAT THE TEXAS BOARD OF ARCHITECTURAL REGULATION GRANT HAS JURISDICTION OVER THE PROFESSIONAL PRACTICE OF ARCHITECTURE FOR QUESTIONS CONCERNING THE PROFESSIONAL PRACTICE OF ARCHITECTURE IN THE STATE OF TEXAS. CONTACT THE BOARD AT (504) 393-6000. WWW.TSABOR-BOA.ORG OR VISIT TO THE TEXAS BOARD OF ARCHITECTURAL REGULATION, P.O. BOX 6007, AUSTIN, TEXAS 78761-0007.

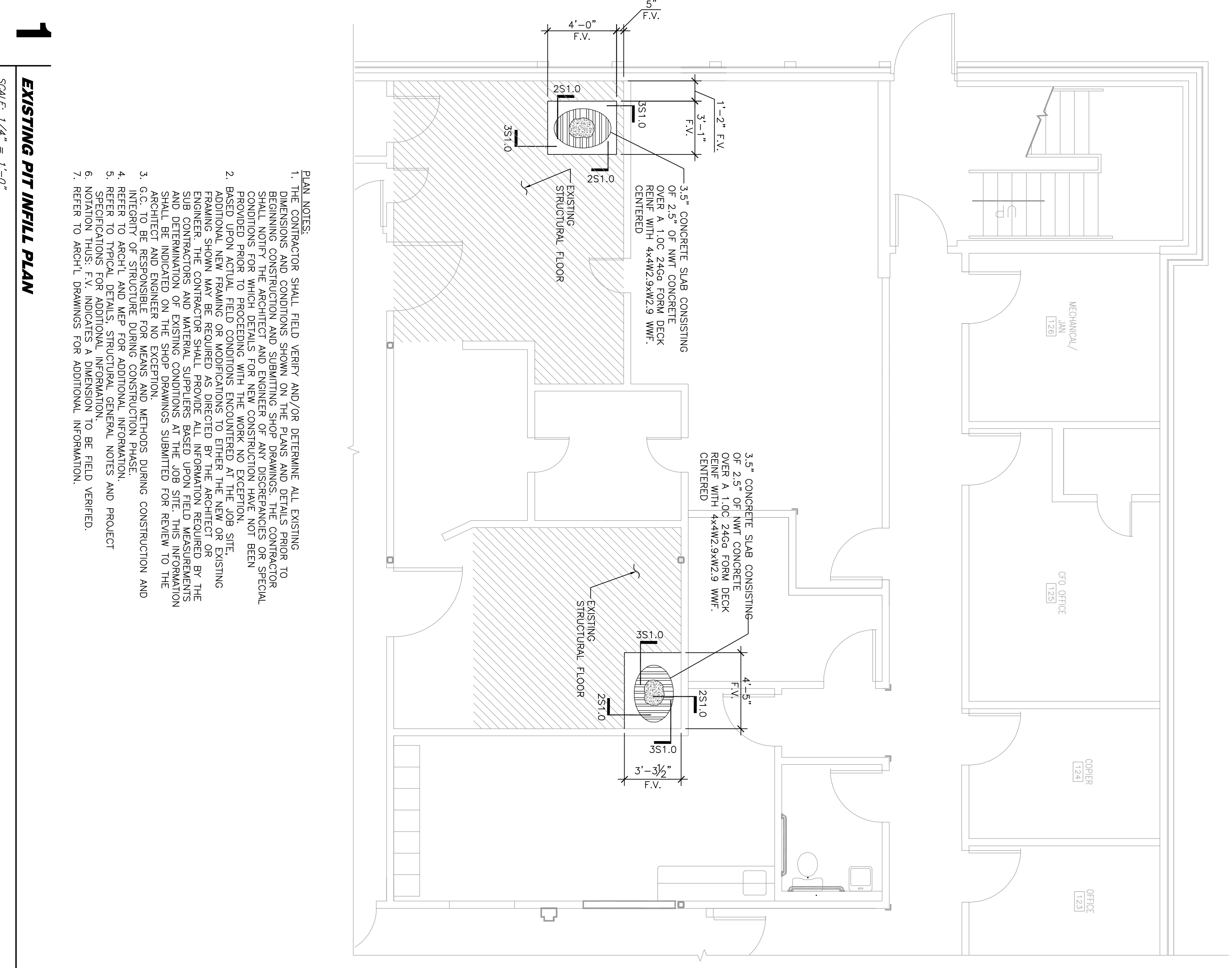


615 N. UPPER BROADWAY  
 SUITE 1250  
 CORPUS CHRISTI, TX 78477-0050  
 T: 361.884.3295  
 F: 361.884.3298  
 www.clkarch.com



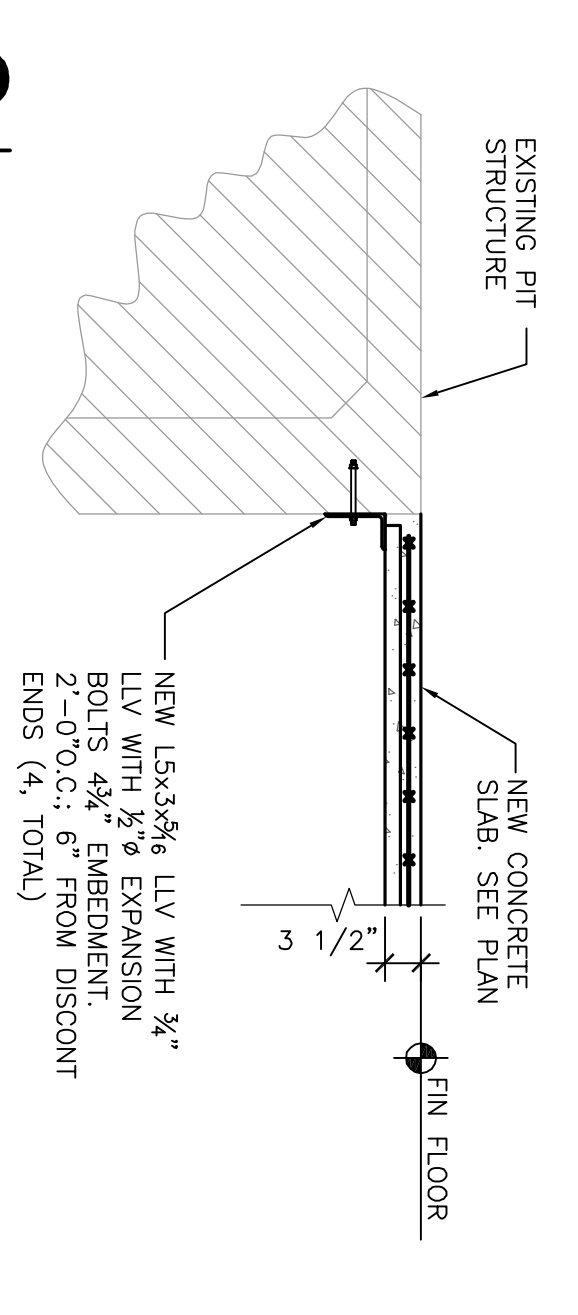
**AMISTAD COMMUNITY HEALTH CENTER  
 RENOVATION OF EXISTING MEDICAL CLINIC  
 1533 BROWNLEE BLVD.  
 CORPUS CHRISTI, TEXAS  
 LEVEL 1 FRAMING INFILL PARTIAL PLAN AND DETAILS**

THIS IS TO BE READ IN CONJUNCTION WITH THE TERMS AND CONDITIONS OF ARCHITECTURAL AGREEMENT WHICH HAS SUBSCRIPTION OVER THE PROFESSIONAL PRACTICE OF ARCHITECTURE. FOR QUESTIONS CONCERNING THE PROFESSIONAL PRACTICE OF ARCHITECTURE IN THE STATE OF TEXAS, CONTACT THE BOARD AT 546-6000-6006, WWW.BOARD-STATE.TX OR TEXT TO THE TEXAS BOARD OF ARCHITECTURAL EXAMINERS, P.O. BOX 6897, AUSTIN, TEXAS 78761-0897.

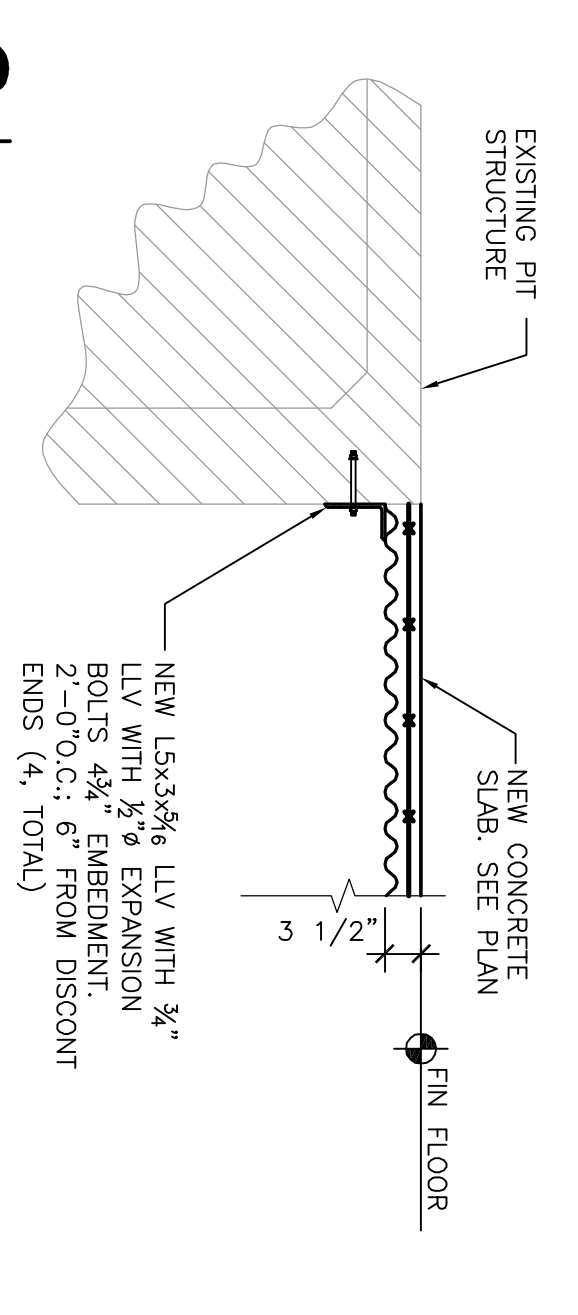


- PLAN NOTES:**
1. THE CONTRACTOR SHALL FIELD VERIFY AND/OR DETERMINE ALL EXISTING DIMENSIONS AND CONDITIONS SHOWN ON THE PLANS AND DETAILS PRIOR TO BEGINNING CONSTRUCTION. ANY DISCREPANCIES OR CONDITIONS NOT SHOWN SHALL NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES OR SPECIAL CONDITIONS FOR WHICH DETAILS FOR NEW CONSTRUCTION HAVE NOT BEEN PROVIDED PRIOR TO PROCEEDING WITH THE WORK. NO EXCEPTION.
  2. BASED UPON ACTUAL FIELD CONDITIONS ENCOUNTERED AT THE JOB SITE, ADDITIONAL NEW FRAMING OR MODIFICATIONS TO EITHER THE NEW OR EXISTING FRAMING SHALL BE SHOWN ON SHOP DRAWINGS. THE CONTRACTOR SHALL PROVIDE ALL INFORMATION REQUIRED BY THE ENGINEER, THE CONTRACTOR SHALL PROVIDE ALL INFORMATION REQUIRED BY THE SUB CONTRACTORS AND MATERIAL SUPPLERS BASED UPON FIELD MEASUREMENTS AND DETERMINATION OF EXISTING CONDITIONS AT THE JOB SITE. THIS INFORMATION SHALL BE INDICATED ON THE SHOP DRAWINGS SUBMITTED FOR REVIEW TO THE ARCHITECT AND ENGINEER NO EXCEPTION.
  3. THE CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF STRUCTURE DURING CONSTRUCTION PHASE.
  4. REFER TO ARCH'L AND MEP FOR ADDITIONAL INFORMATION.
  5. REFER TO TYPICAL DETAILS, STRUCTURAL GENERAL NOTES AND PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.
  6. NOTATION THUS: F.V. INDICATES A DIMENSION TO BE FIELD VERIFIED.
  7. REFER TO ARCH'L DRAWINGS FOR ADDITIONAL INFORMATION.

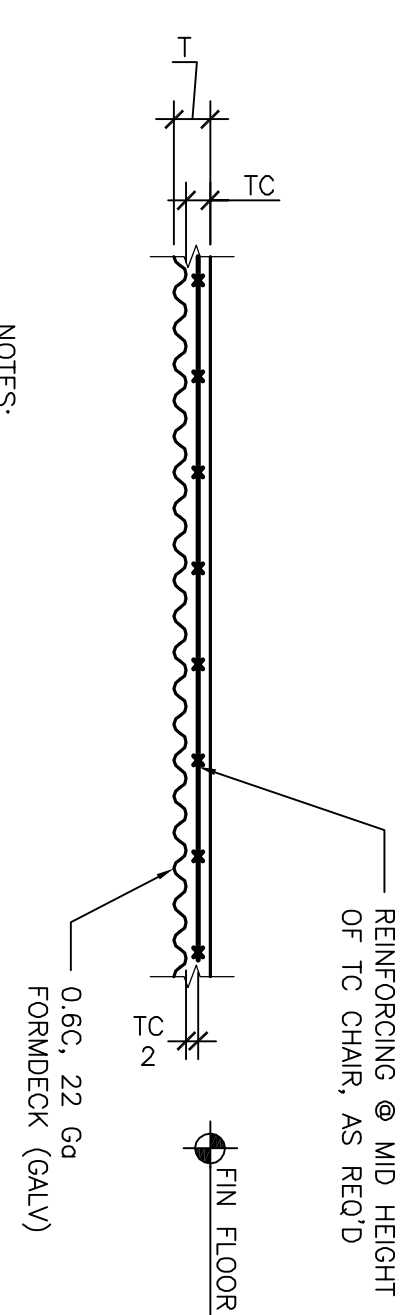
**1 EXISTING PIT INFILL PLAN**  
 SCALE: 1/4" = 1'-0"



**2 DETAIL**  
 SCALE: 3/4" = 1'-0"

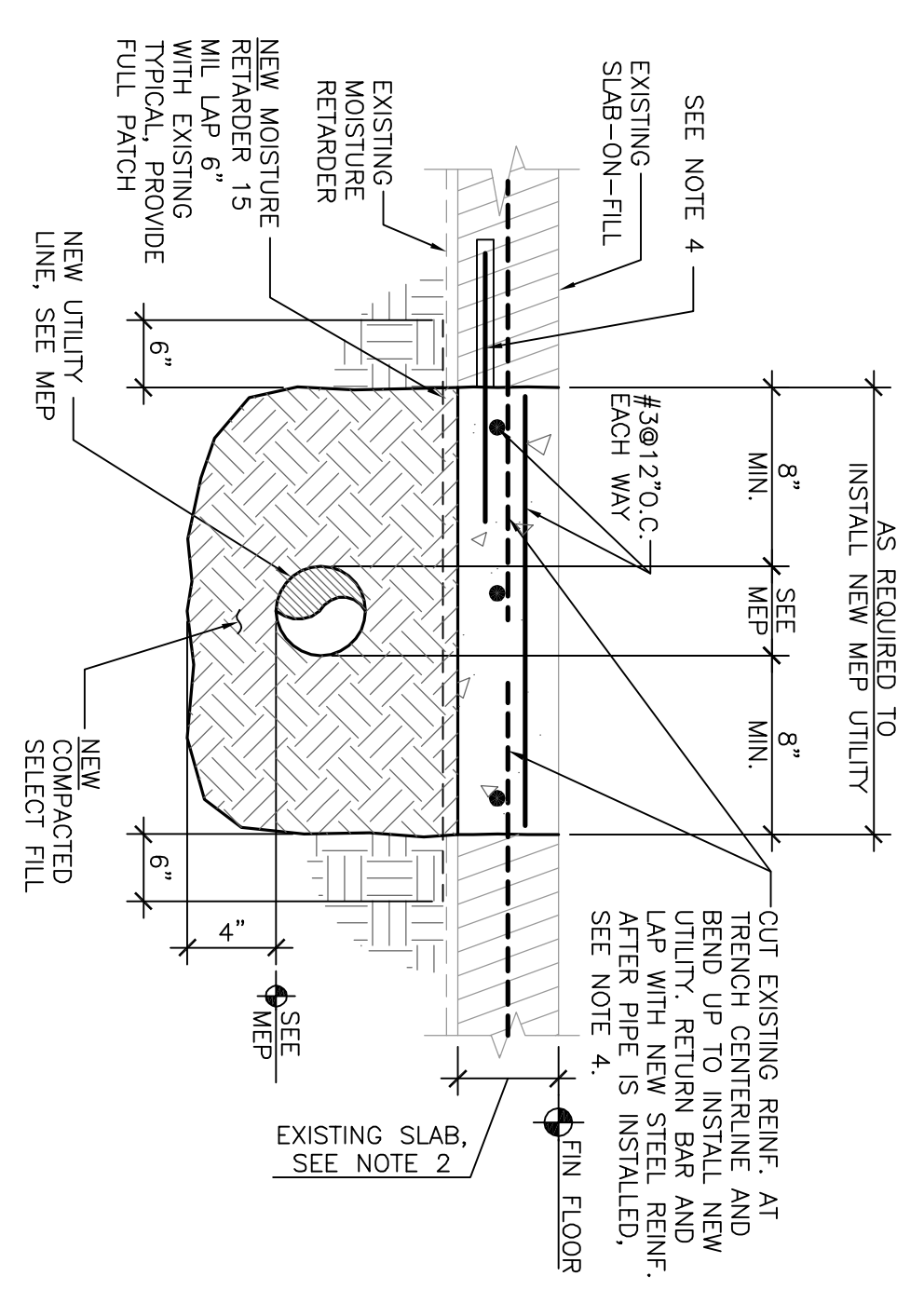


**3 DETAIL**  
 SCALE: 3/4" = 1'-0"



**4 TYPICAL DECK REINFORCEMENT/**  
 SCALE: 3/4" = 1'-0"

- NOTES:**
1. T=TOTAL SLAB THICKNESS
  2. TC=CONCRETE SLAB THICKNESS ABOVE METAL DECK

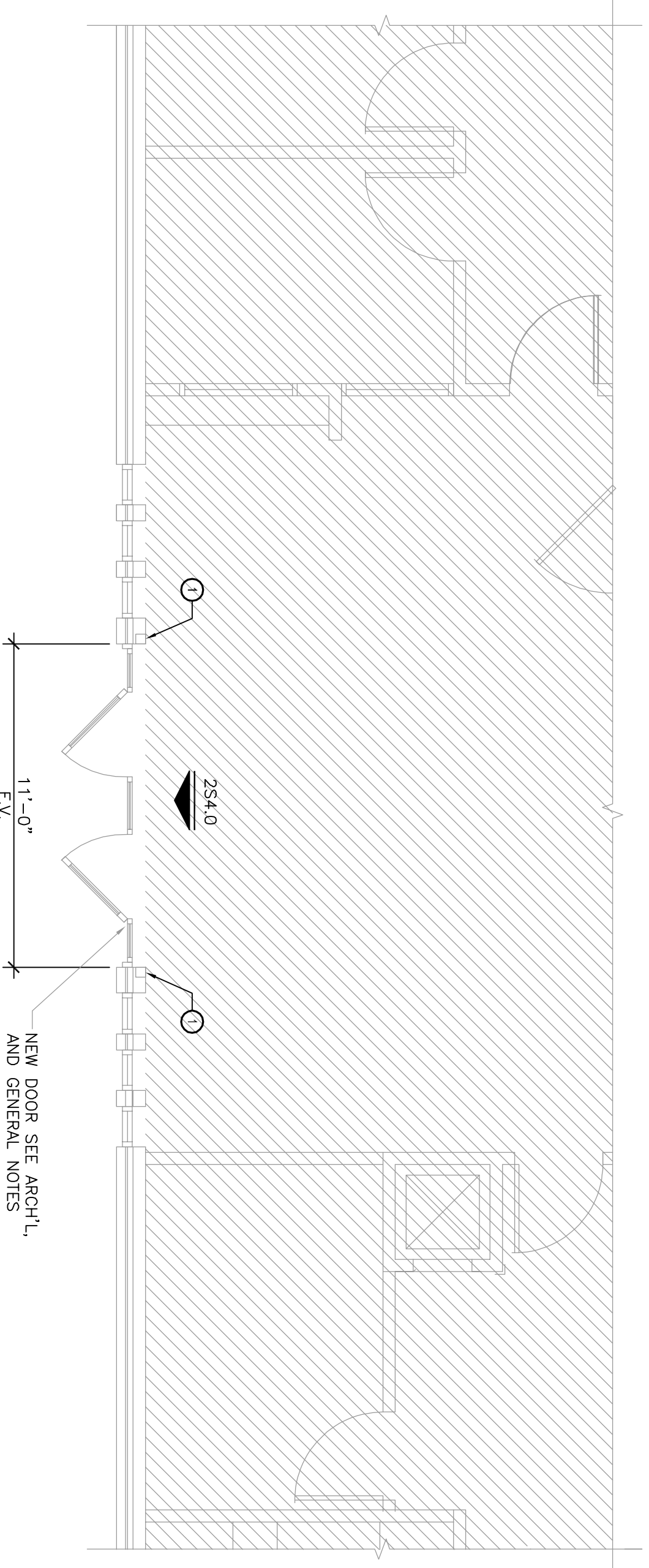
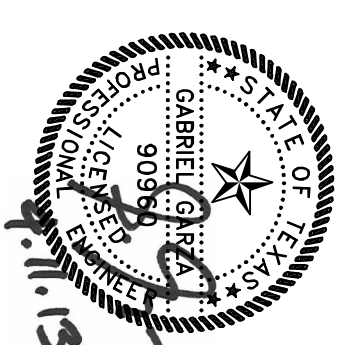


**5 TYPICAL NEW TRENCH DETAIL AT EXISTING SLAB-ON-FILL CONSTRUCTION**  
 SCALE: 1/2" = 1'-0"

- NOTES:**
1. CONTRACTOR SHALL PROVIDE AN ALLOWANCE TO SEAL ALL NEW CONCRETE WITH A SEALING COMPOUND THAT WILL ALLOW THE FLOORING TO BOND WITH THE CONCRETE SURFACE. SEE STRUCTURAL GENERAL NOTES.
  2. REFER TO ARCH'L AND MEP DRAWINGS FOR EXACT LOCATION OF NEW UTILITY LINES.
  3. EXISTING UTILITY PURPOSES ASSUME A 5" THICK SLAB.
  4. IF REINFORCING IS CUT PROVIDE #4x2'-0" DIMS @24"O.C. STAGGERED EACH SIDE DRILL AND EPOXY DIMS A MINIMUM OF 9x" INTO CONCRETE.
  5. CONCRETE TO BE FLUSH AND SMOOTH WITH EXISTING.
  6. CLEAN AND PREPARE CONCRETE SURFACE AND APPLY EPOXY BONDING AGENT PRIOR TO PLACEMENT OF NEW CONCRETE.
  7. EXISTING SUBGRADE AS WHICH AS POSSIBLE.

JOB NO.: 201208  
 DRN.BY: OM  
 CKD.BY: CG  
 DATE: 04/11/2013  
 REVISIONS:

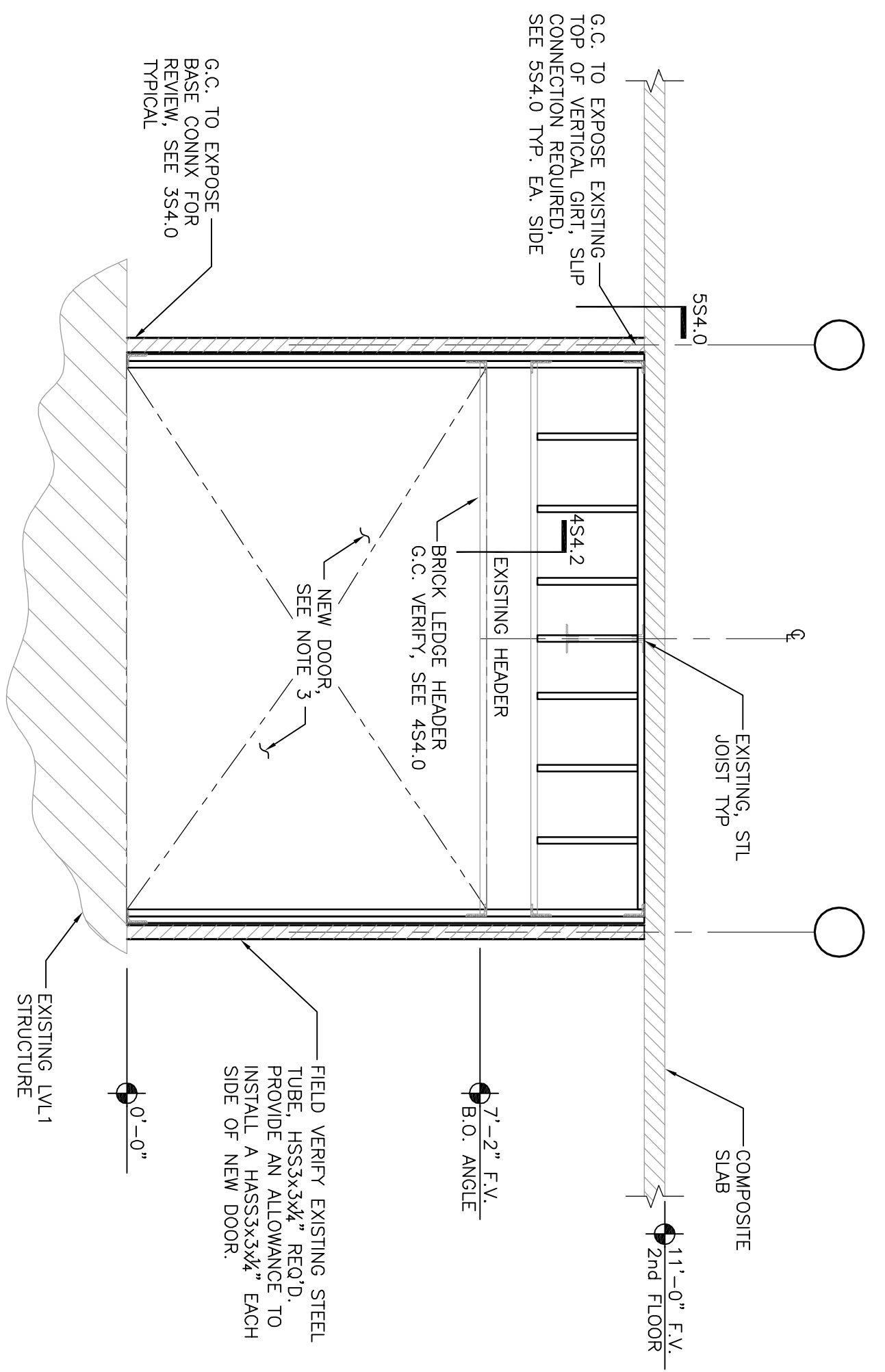
SHEET NUMBER  
**S1.0**  
 OF



- PLAN NOTES:
1. THE CONTRACTOR SHALL FIELD VERIFY AND/OR DETERMINE ALL EXISTING DIMENSIONS AND CONDITIONS SHOWN ON THE PLANS AND DETAILS PRIOR TO BEGINNING CONSTRUCTION AND SUBMITTING SHOP DRAWINGS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES OR SPECIAL CONDITIONS FOR WHICH DETAILS FOR NEW CONSTRUCTION HAVE NOT BEEN PROVIDED.
  2. BASED UPON ACTUAL FIELD CONDITIONS ENCOUNTERED AT THE JOB SITE, ADDITIONAL NEW FRAMING OR MODIFICATIONS TO EITHER THE NEW OR EXISTING FRAMING SHOWN MAY BE REQUIRED AS DIRECTED BY THE ARCHITECT OR ENGINEER. THE CONTRACTOR SHALL PROVIDE ALL INFORMATION REQUIRED BY THE ARCHITECT AND ENGINEER FOR THE SUBMITTAL OF SHOP DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEANS AND METHODS DURING CONSTRUCTION AND INTEGRITY OF STRUCTURE DURING CONSTRUCTION PHASE.
  3. REFER TO ARCH'L AND MEP FOR ADDITIONAL INFORMATION.
  4. REFER TO ARCH'L DETAILS, STRUCTURAL GENERAL NOTES AND PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.
  5. NOTATION THUS: F.V. INDICATES A DIMENSION TO BE FIELD VERIFIED.
  6. REFER TO ARCH'L DRAWINGS FOR ADDITIONAL INFORMATION.
  7. NOTATION THUS: O INDICATES AN EXISTING STEEL TUBE FIELD VERIFY TUBE SIZE.

# 1 NEW DOOR PLAN

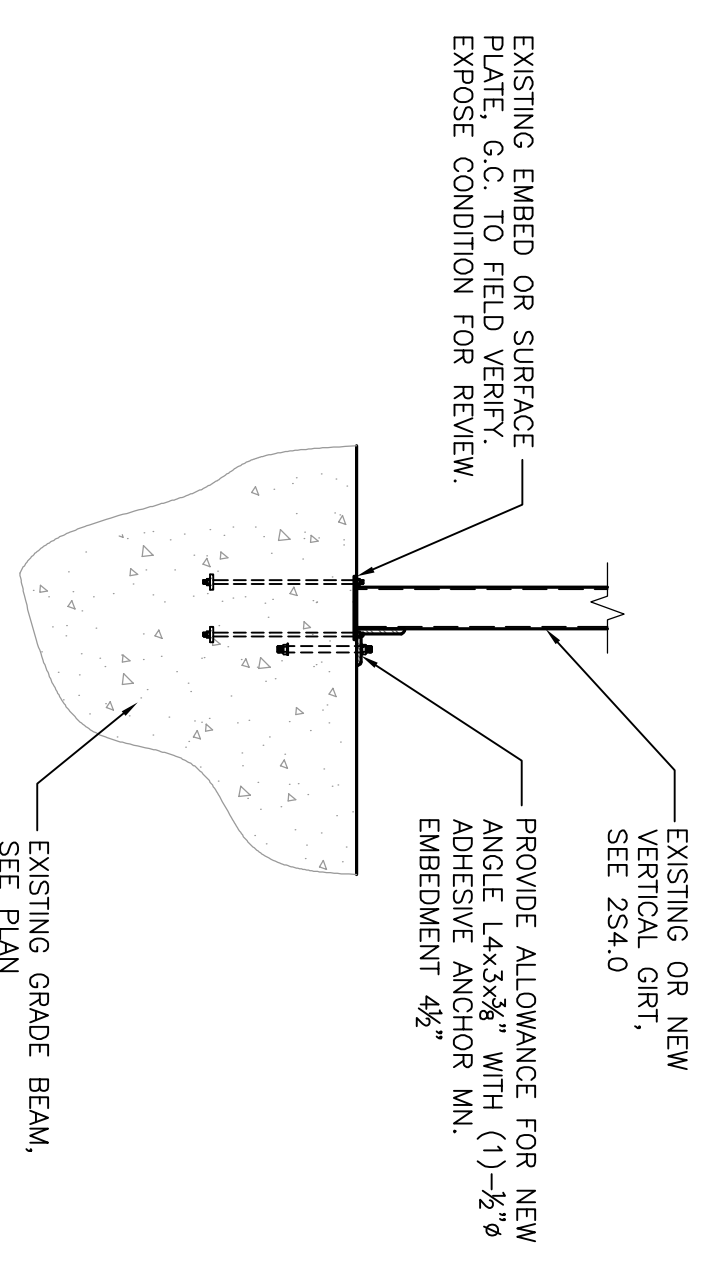
SCALE: 1/4" = 1'-0"



- DETAIL NOTES:
1. THE CONTRACTOR SHALL FIELD VERIFY AND/OR DETERMINE ALL EXISTING DIMENSIONS AND CONDITIONS SHOWN ON THE PLANS AND DETAILS PRIOR TO BEGINNING CONSTRUCTION AND SUBMITTING SHOP DRAWINGS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES OR SPECIAL CONDITIONS FOR WHICH DETAILS FOR NEW CONSTRUCTION HAVE NOT BEEN PROVIDED PRIOR TO PROCEEDING.
  2. BASED UPON ACTUAL FIELD CONDITIONS ENCOUNTERED AT THE JOB SITE, ADDITIONAL NEW FRAMING OR MODIFICATIONS TO EITHER THE NEW OR EXISTING FRAMING SHOWN MAY BE REQUIRED AS DIRECTED BY THE ARCHITECT OR ENGINEER. THE CONTRACTOR SHALL PROVIDE ALL INFORMATION REQUIRED BY THE ARCHITECT AND ENGINEER FOR THE SUBMITTAL OF SHOP DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEANS AND METHODS DURING CONSTRUCTION AND INTEGRITY OF STRUCTURE DURING CONSTRUCTION PHASE.
  3. REFER TO ARCH'L AND MEP FOR ADDITIONAL INFORMATION.
  4. REFER TO ARCH'L DETAILS, STRUCTURAL GENERAL NOTES AND PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.
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  7. NOTATION THUS: O INDICATES AN EXISTING STEEL TUBE FIELD VERIFY TUBE SIZE.

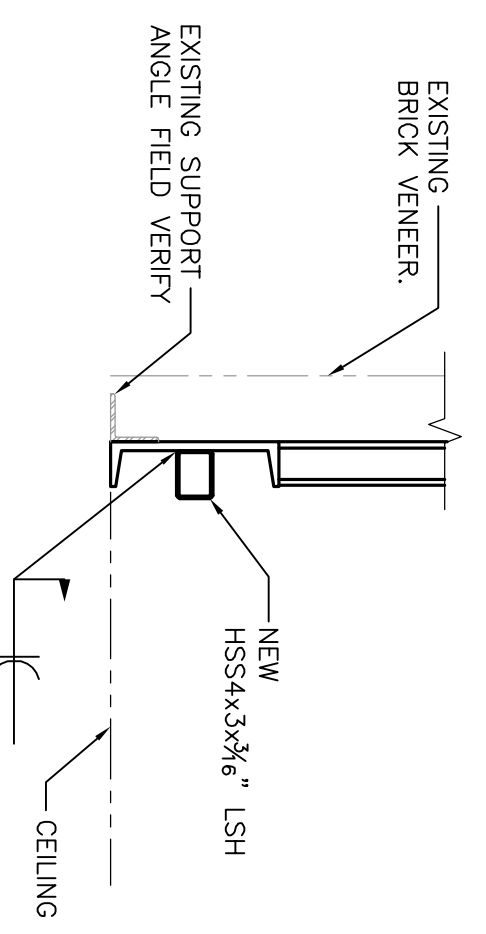
# 2 NEW EXTERIOR DOOR ELEVATION

SCALE: 3/8" = 1'-0"



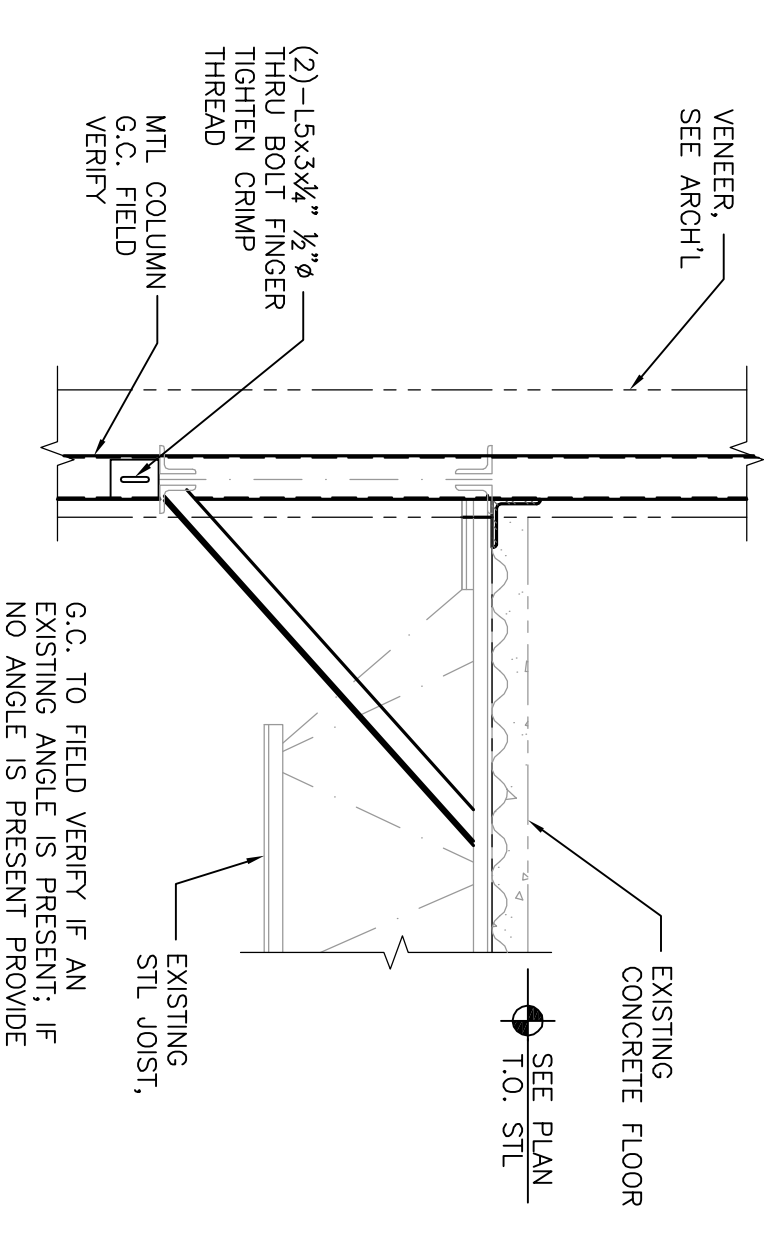
# 3 TYPICAL MULTIPLE METAL COLUMN CONNECTION DETAIL AT FOUNDATION

SCALE: NTS



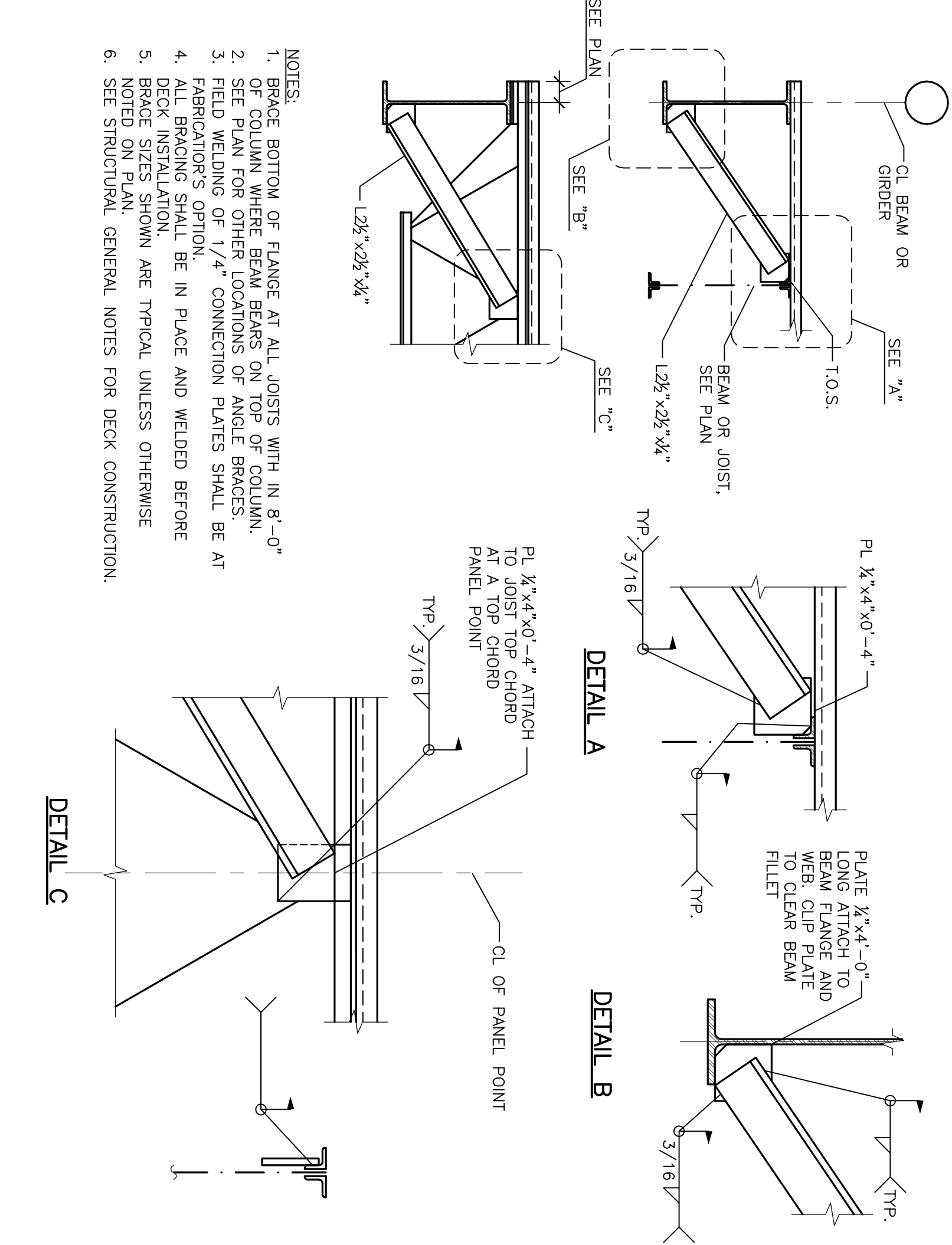
# 4 SECTION

SCALE: NTS



# 5 DETAIL

SCALE: 3/4" = 1'-0"



# 6 TYPICAL DETAIL BEAM BOTTOM FLANGE BRACE

SCALE: 3/4" = 1'-0"

- NOTES:
1. BRACE BOTTOM OF FLANGE AT ALL JOISTS WITH IN 8'-0"
  2. SEE PLAN FOR OTHER LOCATIONS OF ANGLE BRACES.
  3. FABRICATOR'S OPTION.
  4. ALL BRACING SHALL BE IN PLACE AND WELDED BEFORE DECK INSTALLATION.
  5. BRACE SIZES SHOWN ARE TYPICAL UNLESS OTHERWISE NOTED ON PLAN.
  6. SEE STRUCTURAL GENERAL NOTES FOR DECK CONSTRUCTION.

**AMISTAD COMMUNITY HEALTH CENTER  
RENOVATION OF EXISTING MEDICAL CLINIC**  
1533 BROWNLEE BLVD.  
CORPUS CHRISTI, TEXAS

DETAILS

THIS IS TO BE READ IN CONJUNCTION WITH THE PROFESSIONAL PRACTICE OF ARCHITECTURE FOR QUESTIONS CONCERNING THE PROFESSIONAL PRACTICE OF ARCHITECTURE IN THE STATE OF TEXAS, CONTACT THE TITLE AT (361)652-7440 OR VISIT TO THE TEXAS BOARD OF ARCHITECTURAL EXAMINERS, P.O. BOX 6897, AUSTIN, TEXAS 78761-0897.

JOB NO.: 201208  
DRN.BY: OM  
CKD.BY: GS  
DATE: 04/11/2013  
REVISIONS:

SHEET NUMBER  
**S4.0**  
OF

## GENERAL MEP SPECIFICATIONS

**GENERAL:** THESE DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO REPRESENT THE GENERAL EXTENT OF THE WORK REQUIRED FOR THIS PROJECT. IT IS THE INTENT OF THESE DRAWINGS TO PROVIDE COMPLETE AND FUNCTIONAL MECHANICAL, ELECTRICAL, AND PLUMBING SYSTEMS. PROVIDE ALL NECESSARY SUPERVISION, TESTING, COORDINATION, LABOR, MATERIALS, EQUIPMENT, FIXTURES, DRAYAGE, HOISTING, TOOLS, MACHINERY AND CONNECTIONS TO UTILITIES FOR THE INSTALLATION OF COMPLETE AND OPERATIONAL MEP SYSTEMS. IF DETAILS OR SPECIAL CONDITIONS ARE REQUIRED IN ADDITION TO THOSE SHOWN ON DRAWINGS, PROVIDE ALL MATERIAL, LABOR, ACCESSORIES AND EQUIPMENT USUALLY FURNISHED WITH SUCH SYSTEMS OR REQUIRED TO COMPLETE THEIR INSTALLATION, WHETHER NOTED ON PLANS OR NOT.

**CODES AND STANDARDS:** COMPLY WITH ALL LOCAL AND NATIONAL CODES STANDARDS THAT ARE APPLICABLE FOR THE PROJECT LOCATION, INCLUDING BUT NOT LIMITED TO, IBC, IMC, IPC, IFGC, IFC, NEC, NFPA, AND ANY APPLICABLE FEDERAL, STATE, COUNTY, CITY AND MUNICIPAL CODES, ORDINANCES AND REGULATIONS. IN CASE OF A CONFLICT BETWEEN CODES, THE MOST STRINGENT REQUIREMENT SHALL TAKE PRECEDENCE.

**LICENSES:** ALL CONTRACTORS SHALL HAVE A CURRENT STATE (AND CITY, IF APPLICABLE) LICENSE SUITABLE FOR PERFORMANCE OF THE SCOPE OF WORK UNDER THEIR CONTRACT.

**CONTRACT DOCUMENTS:** IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CAREFULLY EXAMINE ALL OF THE CONTRACT DOCUMENTS AND TO COMPLY WITH THEM IN EVERY RESPECT. SHOULD THERE BE OMISSIONS OR DISCREPANCIES IN THE DOCUMENTS NOTIFY THE ARCHITECT OR ENGINEER PRIOR TO THE BID DATE SO A WRITTEN CLARIFICATION CAN BE ISSUED. FAILURE TO EXAM ALL THE CONTRACT DOCUMENTS SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR THE WORK REQUIRED OR BE USED AS THE BASIS FOR ADDITIONAL COMPENSATION.

**EXISTING CONDITIONS:** IT SHALL BE RESPONSIBILITY OF THE CONTRACTOR TO CAREFULLY EXAMINE THE EXISTING CONDITIONS AT THE PROJECT SITE. CONTRACTOR SHALL ACCOUNT FOR ALL EXISTING CONDITIONS IN THIS BID/PROPOSAL. FAILURE TO FIELD VERIFY THE EXISTING CONDITIONS SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR THE WORK REQUIRED OR BE USED AS THE BASIS FOR ADDITIONAL COMPENSATION.

**MEASUREMENTS:** ALL MEASUREMENTS SHALL BE MADE IN THE FIELD OR DERIVED FROM DRAWINGS SHOWING SPECIFIC DIMENSIONS. DO NOT USED "SCALED" DIMENSIONS AS THE BASIS FOR INSTALLATION OF WORK.

**COORDINATION:** IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THEIR WORK WITH THE WORK PERFORMED BY OTHER CONTRACTORS SO AS NOT TO DELAY OR DAMAGE ANY PART OF THE OVERALL CONSTRUCTION.

**CHANGE ORDERS:** ADDITIONAL COMPENSATION WILL NOT BE AWARDED TO THE CONTRACTOR FOR MINOR RELOCATIONS OR DEVIATIONS FROM THE PLANS. A CHANGE IN THE CONTRACT PRICE WILL ONLY BE ALLOWED FOR ADDITIONS TO OR CHANGES TO THE ORIGINAL DESIGN INTENT AND THEN ONLY WITH WRITTEN APPROVAL FROM THE ARCHITECT OR OWNER. OMISSION OF PERTINENT OR SPECIFIC DETAILS FROM THE CONTRACT DOCUMENTS SHALL NOT BE USED AS A BASIS FOR ADDITIONAL COMPENSATION.

**PRODUCT AND MATERIALS:** ALL MATERIAL AND EQUIPMENT SHALL BE NEW, UNLESS SPECIFICALLY NOTED OTHERWISE, AND SHALL BE OF THE MANUFACTURER'S CURRENT PRODUCTION.

**SUBMITTALS:** SUBMIT IN TIMELY MANNER FOR ENGINEER'S REVIEW, CUTSHEETS OR SHOP DRAWINGS DESCRIBING ALL MATERIALS, EQUIPMENT, ACCESSORIES, APPURTENANCES, FIXTURES AND SPECIALLY FABRICATED STRUCTURES PROPOSED FOR USE IN THE PERFORMANCE OF THE WORK ON THIS PROJECT. SUBMITTALS SHALL INCLUDE LITERATURE, DRAWINGS, RATING TABLES, PERFORMANCE CURVES, AND ANY DETAILS NECESSARY TO PERFORM A THROUGH EVALUATION OF THE PRODUCT SUBMITTED. SUBMITTALS FOR EACH CONTRACTOR WILL BE REVIEWED ONCE; ANY PRODUCT NOT SUBMITTED ON THE FIRST SUBMITTAL WILL NOT BE REVIEWED AND THE CONTRACTOR WILL BE REQUIRED TO PROVIDE THE SPECIFIED PRODUCT. DEVIATIONS FROM CONTRACT DOCUMENTS SHALL BE ENUMERATED ON SEPARATE SHEET AND SO ENTITLED. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR QUANTITY TAKEOFFS.

**SUBSTITUTIONS:** THE EQUIPMENT AND MATERIALS SPECIFIED REPRESENT A MINIMUM GRADE AND DESIGN. ANY FEATURE INCLUDED AS STANDARD WITH THE MATERIALS SPECIFIED SHALL BE INCLUDED IN ANY SUBSTITUTION. SUBSTITUTIONS OF EQUAL GRADE AND DESIGN MAY BE PERMITTED AND MUST BE SUBMITTED FOR APPROVAL BY THE ENGINEER. THE ENGINEER RESERVES THE RIGHT TO ACCEPT OR REJECT ANY PROPOSED SUBSTITUTION AND HIS JUDGEMENT SHALL BE FINAL. IF A SUBSTITUTION IS DEEMED UNACCEPTABLE, THE CONTRACTOR SHALL FURNISH THE SPECIFIED PRODUCT. IF A SUBSTITUTION IS DEEMED ACCEPTABLE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COST TO OTHER TRADES ASSOCIATED WITH THE USE OF THE SUBSTITUTED PRODUCT. ALL MATERIALS AND EQUIPMENT SHALL BE SUBJECT TO FINAL ACCEPTANCE BY THE ARCHITECT, OWNER, AND ENGINEER AT THE COMPLETION OF THE PROJECT.

**WORKMANSHIP:** LABOR SHALL BE PERFORMED BY SKILLED CRAFTSMEN, EXPERIENCED IN THEIR PARTICULAR TRADE. ALL WORK SHALL BE INSTALLED SQUARE AND PLUMB, PARALLEL OR PERPENDICULAR TO BUILDING LINES, WITH ACCESSIBILITY ALLOWED FOR PROPER OPERATION AND MAINTENANCE OF THE BUILDING SYSTEMS. ANY WORK THAT DOES NOT REPRESENT A NEAT AND WORKMANLIKE APPEARANCE SHALL BE REPLACED OR CORRECTED AT THE DIRECTION OF THE ARCHITECT OR ENGINEER AND WITHOUT ANY ADDITIONAL COST TO THE OWNER.

**PRODUCT HANDLING:** EQUIPMENT AND MATERIAL SHALL BE STORED IN SUCH A MANNER THAT IS IT PROTECTED FROM DAMAGE OR DETERIORATION. DAMAGED EQUIPMENT AND MATERIAL SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER PRIOR TO SUBSTANTIAL COMPLETION. TOUCH-UP OR REFINISH DAMAGED SURFACES OF FIXTURES AND EQUIPMENT TO PRESENT A NEW APPEARANCE.

**PROTECTION OF ROUGH WORK:** ALL OPENINGS OF EVERY DESCRIPTION SHALL BE SECURELY CAPPED OR OTHERWISE PROTECTED AGAINST DEBRIS OR OTHER FOREIGN MATERIAL ENTERING THE SYSTEM UNTIL THE EQUIPMENT OR FIXTURE IS PERMANENTLY ATTACHED.

**PAINTING:** ALL PIPING, CONDUIT, JUNCTION BOXES, DUCTWORK, AND EQUIPMENT LOCATED WITHIN AN EXPOSED STRUCTURAL SYSTEM SHALL BE PAINTED TO MATCH THE COLOR OF THE STRUCTURE (COLOR TO BE SELECTED BY ARCHITECT).

**DEFECTIVE WORK:** IF INSPECTION OR TESTING SHOW DEFECTS, SUCH DEFECTIVE WORK OR MATERIALS SHALL BE REPLACED AND INSPECTION AND TEST REPEATED. ALL REPAIRS TO PIPING SHALL BE MADE WITH NEW MATERIAL.

**SYSTEM START-UP:** UPON COMPLETION OF THE INSTALLATION OF THE WORK, START-UP ALL SYSTEMS AND TEST, BALANCE AND ADJUST ALL SYSTEMS UNTIL THEY ARE FULLY OPERATIONAL AND FUNCTIONING AS INTENDED BY ENGINEER.

**CLEANING:** AT THE COMPLETION OF THE WORK ALL PARTS OF THE INSTALLATION SHALL BE THOROUGHLY CLEANED. REMOVE ALL RUBBISH OR DEBRIS THAT HAS ACCUMULATED AT THE PROJECT SITE ON A DAILY BASIS.

**ROOF PENETRATIONS:** ROOF PENETRATIONS SHALL WEATHERPROOFED TO PREVENT LEAKS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MEANS, METHODS, AND MATERIALS REQUIRED BY THE ROOF WARRANTY (IF APPLICABLE). THE CONTRACTOR SHALL SUBCONTRACT ALL ROOF WORK TO AN ENTITY APPROVED BY THE OWNER OR WARRANTY PROVIDER.

**SITE OBSERVATIONS AND PUNCHLIST:** THE ENGINEER MAY VISIT PROJECT SITE ON OCCASION FOR THE PURPOSE OF REVIEWING THE WORK FOR GENERAL COMPLIANCE WITH PLANS AND SPECIFICATIONS. THESE REVIEWS SHALL NOT EXTEND ENGINEER'S RESPONSIBILITY INTO THE AREA OF GENERAL CONTRACTOR'S OR MECHANICAL CONTRACTORS' SUPERVISION OR RESPONSIBILITY, NOR SHALL THEY RELIEVE CONTRACTORS' RESPONSIBILITY TO COMPLY WITH THE CONTRACT DOCUMENTS. AFTER SUCH A VISIT, ENGINEER WILL PROVIDE A LISTING OF ITEMS THAT HE HAS OBSERVED THAT REQUIRE MODIFICATION OR CORRECTION. SUCH A LISTING SHALL BE CALLED A "PUNCHLIST". TAKE APPROPRIATE ACTION TO CORRECT ALL PUNCHLIST ITEMS. INFORM ARCHITECT AND ENGINEER IN WRITING OF THE TYPE OF CORRECTIVE ACTION TAKEN.

**INSPECTIONS AND CERTIFICATE OF OCCUPANCY:** CONTRACTOR SHALL ARRANGE FOR ALL INSPECTIONS OR TESTING REQUIRED BY LOCAL BUILDING OFFICIALS AND STATE AGENCIES. CORRECT DEFICIENCIES REQUIRED TO COMPLY WITH CODES AND STANDARDS TO RECEIVE CERTIFICATE OF OCCUPANCY. UPON SUBSTANTIAL COMPLETION OF THIS PROJECT, SUBMIT WRITTEN EVIDENCE OF COMPLIANCE WITH THE ABOVE TO ARCHITECT. FINAL ACCEPTANCE WILL NOT BE ISSUED AND THE WARRANTY DATE WILL NOT BE ESTABLISHED UNTIL SUCH COMPLIANCE IS DEMONSTRATED.

**RECORD DRAWINGS:** DURING THE COURSE OF CONSTRUCTION, CONTRACTOR SHALL KEEP AS-BUILT DRAWINGS, CALLED "RECORD DRAWINGS", CONTINUALLY UPDATED ON THE PROJECT SITE. DRAWINGS SHALL INDICATE EXACT LOCATIONS AND DEPTHS OF UNDERGROUND PIPING AND CHANGES IN PIPE ROUTING OR FIXTURE AND EQUIPMENT LOCATIONS. UPON COMPLETION OF PROJECT, TURN RECORD DRAWINGS OVER TO OWNER. SUBMIT WRITTEN EVIDENCE OF COMPLIANCE TO ENGINEER. FINAL ACCEPTANCE WILL NOT BE ISSUED AND THE WARRANTY DATE WILL NOT BE ESTABLISHED UNTIL SUCH COMPLIANCE IS DEMONSTRATED.

**OWNER INSTRUCTION AND O&M MANUALS:** UPON SUBSTANTIAL COMPLETION OF THIS PROJECT, THOROUGHLY INSTRUCT OWNER'S REPRESENTATIVE IN THE OPERATION AND CARE OF ALL SYSTEMS, FIXTURES, AND EQUIPMENT. INSTRUCTION MAY BE PROVIDED ON MORE THAN ONE DAY, BUT SHALL NOT BE LESS THAN TWO HOURS FOR HVAC SYSTEMS, TWO HOURS FOR ELECTRICAL SYSTEMS, AND TWO HOURS FOR PLUMBING SYSTEMS. TRAVEL TIME TO AND FROM PROJECT SHALL NOT BE CREDITED TO INSTRUCTION TIME.

**WARRANTY:** CONTRACTOR SHALL WARRANTY ALL MATERIAL, EQUIPMENT, AND THE INSTALLATION FOR A MINIMUM OF ONE YEAR. ANY DEFECTS IN EQUIPMENT OR WORKMANSHIP WITHIN ONE YEAR FROM THE DATE OF ACCEPTANCE SHALL BE CORRECTED AT NO COST TO THE OWNER. THIS WARRANTY SHALL INCLUDE LABOR AND MATERIAL. PROVIDE ANY ADDITIONAL WARRANTY THAT IS FURNISHED BY THE EQUIPMENT MANUFACTURERS.

## HVAC SPECIFICATIONS

**PIPING:**

- CONDENSATE DRAIN PIPING SHALL BE TYPE "M" HARD DRAWN COPPER WITH SOLDERED JOINTS.
- REFRIGERANT PIPING SHALL BY TYPE "L" ACR HARD DRAWN COPPER TUBING WITH BRAZED JOINTS. ALL ELBOWS SHALL BE 90° ELBOWS. ALL FITTINGS SHALL BE LONG RADIUS TYPE. ALL FITTINGS SHALL BE LONG RADIUS TYPE.
- CHILLED WATER PIPING SHALL BE TYPE "L" HARD DRAWN COPPER WITH SOLDERED JOINTS.
- HOT WATER PIPING SHALL BE TYPE "L" HARD DRAWN COPPER WITH SOLDERED JOINTS.

**DUCTWORK:** G-90 GALVANIZED SHEETMETAL, FABRICATED AND INSTALLED PER LATEST EDITION OF SMACNA DUCT CONSTRUCTION STANDARD. DUCT SIZES SHALL BE AS INDICATED ON DRAWINGS. DUCT SIZES INDICATED ARE CLEAR INSIDE DIMENSIONS. ALL DUCTWORK SHALL BE SEALED AT EVERY JOINT WITH DUCT SEALANT.

**FLEXIBLE INSULATED DUCT:** FLEXIBLE INSULATED DUCT SHALL HAVE A SEAMLESS INTERIOR ACOUSTICALLY RATED CPE LINER ENCAPSULATING A SPRING STEEL HELIX. THE INNER AIR CORE SHALL BE COVERED WITH R-8.0 FIBERGLASS INSULATION WRAPPED WITH A METALLIZED, SPIRALLY REINFORCED VAPOR BARRIER. THE DUCT SHALL BE ATTACHED TO BELL-MOUTH STARTING COLLARS HAVING INTEGRAL BUTTERFLY BALANCING DAMPERS, INSULATION SHIELD AND DIE-FORMED MOUNTING GROOVE, ALL OF GALVANIZED STEEL CONSTRUCTION. THE FLEXIBLE DUCT SHALL BE ATTACHED TO THE STARTING COLLAR AND DIFFUSER NECK WITH 1/2" STAINLESS STEEL LOCKING BANDS OR MACHINE TIGHTENED PLASTIC BANDS AND FOIL FACE DUCT TAPE. MANUALLY TIGHTENED PLASTIC BANDS WILL NOT BE ACCEPTED.

**INSULATION:**

- DUCTWORK SHALL BE INSULATED WITH 2" THICK, 1 PCF DENSITY, FIBERGLASS DUCTWRAP INSULATION, MINIMUM R-6.0.
- CHILLED WATER AND HOT WATER PIPING LARGER THAN 2" SHALL BE INSULATED WITH 2" THICK, FIBERGLASS PIPE INSULATION WITH ALL SERVICE JACKET. PIPING SMALLER THAN 2" SHALL BE INSULATED WITH 1-1/2" THICK FIBERGLASS PIPE INSULATION WITH ALL SERVICE JACKET.
- REFRIGERANT PIPING SHALL BE INSULATED WITH 1" THICK ELASTOMERIC CLOSED CELL FOAM PIPE INSULATION.
- CONDENSATE DRAIN LINES SHALL BE INSULATED WITH 1/2" THICK ELASTOMERIC CLOSED CELL FOAM PIPE INSULATION.
- PIPE INSULATION EXPOSED OUTDOORS SHALL BE PROVIDED WITH AN ALUMINUM JACKET.
- PIPE INSULATION EXPOSED INDOORS OR IN MECHANICAL ROOMS SHALL BE PROVIDED WITH A PVC JACKET.

**AIR DEVICES:** AIR DEVICES SHALL BE ALUMINUM CONSTRUCTION WITH A WHITE FINISH, UNLESS SPECIFICALLY NOTED OTHERWISE. REFER TO AIR DEVICES SCHEDULE FOR SIZE, TYPE, AND MOUNTING REQUIREMENTS.

**FLEXIBLE DUCT CONNECTIONS:** FLEXIBLE DUCT CONNECTIONS SHALL BE FABRICATED FROM 20 OUNCE CANVAS TREATED TO RETARD MILDEW AND BURNING.

**FLEXIBLE PIPE CONNECTIONS:** FLEXIBLE PIPE CONNECTIONS SHALL STAINLESS STEEL BRAIDED HOSES; CONNECTOR SHALL BE AS REQUIRED TO CONNECT TO PIPING OR EQUIPMENT.

**TEST AND BALANCE:** ALL HVAC EQUIPMENT SHALL BE RUN TESTED AND BALANCED BY AN INDEPENDENT, NEBB OR AABC CERTIFIED TEST AND BALANCE CONTRACTOR PRIOR TO SUBSTANTIAL COMPLETION. FURNISH TEST DATA ON NEBB OR AABC APPROVED FORMS FOR ALL EQUIPMENT.

## PLUMBING SPECIFICATIONS

**GENERAL:** PROVIDE CHROME PLATED BRASS ESCUTCHEONS WHERE PIPES PASS THRU FINISHED WALL, CEILINGS, OR FLOORS.

**WASTE & VENT PIPING:** WASTE AND VENT PIPING SHALL BE DWV HUBLESS CAST IRON.

**DOMESTIC WATER PIPING:** DOMESTIC WATER PIPING SHALL BE TYPE "L" HARD DRAWN COPPER WITH SOLDERED JOINTS. IF APPROVED BY THE OWNER, THE CONTRACTOR MAY UTILIZED VIEGA PROGRESS FITTINGS AT HIS DISCRETION.

**PIPE INSULATION:**

- INSULATE HOT WATER AND HOT WATER RETURN PIPING WITH 1" THICK FIBERGLASS PIPE INSULATION WITH ALL SERVICE JACKET.
- INSULATE COLD WATER PIPING EXPOSED TO FREEZING WITH 1" THICK FIBERGLASS PIPE INSULATION WITH ALL SERVICE JACKET.
- DRAINS FROM ELECTRIC WATER COOLERS OR RECEIVING CONDENSATE FROM HVAC OR REFRIGERATION EQUIPMENT SHALL BE INSULATED WITH 1/2" ELASTOMERIC CLOSED CELL FOAM PIPE INSULATION.
- ROOF DRAIN PIPING SHALL BE INSULATED WITH 2" THICK FIBERGLASS DUCTWRAP INSULATION.
- INSULATION EXPOSED OUTDOORS SHALL BE PROVIDED WITH AN ALUMINUM JACKET.
- INSULATION EXPOSED INDOORS OR IN MECHANICAL ROOMS SHALL BE PROVIDED WITH A PVC JACKET.

**PLUMBING FIXTURES:** PLUMBING FIXTURES SHALL BE PROVIDED AS SCHEDULED. PLUMBING FIXTURES SHALL BE INSTALLED AT LOCATIONS AND HEIGHTS SHOWN ON ARCHITECTURAL DRAWINGS OR AS DIRECTED BY ARCHITECT. ALL PLUMBING FIXTURE TRIM SHALL BE CHROME PLATE ON BRASS UNLESS NOTED OTHERWISE; CAULK AROUND ALL PLUMBING FIXTURES AND ADJACENT WALL/FLOOR WITH SILICONE SEALANT (COLOR TO BE SELECTED BY ARCHITECT).

## FIRE ALARM SPECIFICATIONS

**GENERAL:** THE EXISTING FIRE ALARM SYSTEM IN THE AREAS OF RENOVATION SHALL BE MODIFIED TO MEET NFPA 72 REQUIREMENTS. THE SYSTEM SHALL ALSO MEET 2012 TEXAS ACCESSIBILITY STANDARDS (TAS). FIRE ALARM LAYOUT SHALL BE DESIGNED BY A NICET LEVEL III CERTIFIED "FIRE ALARM SYSTEM" DESIGNER OR A FIRE PROTECTION ENGINEER.

**DEVICES:** NEW DEVICES SHALL BE COMPATIBLE WITH AND INTEGRATED INTO EXISTING FIRE ALARM SYSTEM. ALL AUDIO/VISUAL AND VISUAL DEVICES (NEW AND EXISTING) SHALL BE SYNCHRONIZED.

## ELECTRICAL SPECIFICATIONS

**GENERAL:** WORK UNDER THIS CONTRACT INCLUDES MODIFICATIONS TO EXISTING ELECTRICAL SYSTEM AND PROVIDING NEW EQUIPMENT, MATERIAL, FIXTURES, DEVICES AND ACCESSORIES NECESSARY FOR A COMPLETE FUNCTIONING ELECTRICAL SYSTEM. THE WORK ALSO INCLUDES FINAL CONNECTION TO EQUIPMENT ITEMS PROVIDED BY OTHERS.

**PANELBOARDS:** PANELBOARDS SHALL BE U.L. LISTED FOR THE INTENDED APPLICATION AND SHALL BE PROVIDED WITH COPPER BUSSING AND A SOLID NEUTRAL. ENCLOSURES SHALL BE ONE PIECE CONSTRUCTION, GALVANIZED STEEL WITH MOUNTING STUDS, WIRING GUTTERS OF AMPLE SIZE AND KNOCKOUTS FOR CONDUIT CONNECTIONS AS REQUIRED. FRONTS SHALL BE GALVANIZED STEEL WITH A PAINTED FINISH AND SHALL BE PROVIDED WITH ADJUSTABLE FASTENERS. ACCEPTABLE MANUFACTURERS: CUTLER HAMMER, SQUARE D, GENERAL ELECTRIC.

**CIRCUIT BREAKERS:** CIRCUIT BREAKERS SHALL BE THERMAL MAGNETIC TYPE, BOLT-ON TYPE OF SINGLE UNIT CONSTRUCTION. ACCEPTABLE MANUFACTURERS: CUTLER HAMMER, SQUARE D, GENERAL ELECTRIC.

**DISCONNECT SWITCHES:** DISCONNECT SWITCHES SHALL BE HEAVY-DUTY TYPE, U.L. LISTED FOR THE INTENDED APPLICATION. ACCEPTABLE MANUFACTURERS: CUTLER HAMMER, SQUARE D, GENERAL ELECTRIC. DISCONNECT SWITCHES SHALL NOT BE INSTALLED DIRECTLY TO EQUIPMENT. COORDINATE MOUNTING LOCATION WITH ARCHITECT OR EQUIPMENT PROVIDER. PROVIDE FUSES AS REQUIRED.

**TRANSFORMERS:** TRANSFORMERS SHALL BE U.L. LISTED FOR THE INTENDED APPLICATION. ACCEPTABLE MANUFACTURERS: CUTLER HAMMER, SQUARE D, GENERAL ELECTRIC.

**CONDUIT:** CONDUIT BELOW GRADE SHALL BE SCHEDULE 80 PVC WITH SOLVENT WELD JOINTS. CONDUIT IN A CRAWLSPACE SHALL BE SCHEDULE 80 PVC WITH SOLVENT WELD JOINTS, RIGID STEEL (OR STAINLESS STEEL) CONDUIT, OR RIGID ALUMINUM CONDUIT. CONDUIT WITHIN THE BUILDING SHALL BE ELECTRICAL METALLIC TUBING (EMT) WITH COMPRESSION FITTINGS. CONDUIT OUTDOORS SHALL BE RIGID STEEL CONDUIT. MC CABLE OR FLEXIBLE CONDUIT MAY BE USED (IN LENGTHS NOT EXCEEDING 6') FOR CONNECTION TO LIGHT FIXTURES AND EQUIPMENT. UTILIZE LIQUID-TIGHT FLEXIBLE METAL CONDUIT AND FITTINGS FOR CONNECTION EQUIPMENT IN WET LOCATIONS.

**CONDUCTORS:** CONDUCTORS SHALL BE TYPE THHN/THWN, INSULATED, SOFT ANNEALED, 98% PURE COPPER, RATED FOR 600V UNLESS NOTED OTHERWISE. MINIMUM CONDUCTOR SIZE SHALL BE 12 AWG. CONDUCTORS 10 AWG OR SMALL SHALL BE SOLID; CONDUCTORS 8 AWG OR LARGER SHALL BE STRANDED.

**TERMINAL LUG RATINGS:** ALL EQUIPMENT SHALL BE PROVIDED WITH CU/AL 75°C TERMINAL LUGS.

**GROUNDING:** PERMANENTLY AND EFFECTIVELY GROUND ALL METAL CONDUIT, SUPPORTS, ENCLOSURES, JUNCTION BOXES, FIXTURES, PANELBOARDS AND SYSTEM NEUTRAL CONDUCTORS. MAINTAIN CONTINUITY OF EQUIPMENT GROUND THROUGHOUT THE SYSTEM. GROUND CLAMPS SHALL BE AN APPROVED TYPE, SPECIFICALLY DESIGNED FOR GROUNDING. WHERE GROUNDING CONDUCTORS ARE ENCLOSED IN CONDUIT, PROVIDE GROUNDING BUSHING.

**LIGHT FIXTURES:** LIGHT FIXTURES SHALL BE COMPLETE ASSEMBLIES WITH FEATURES, OPTIONS, LAMPS, AND ACCESSORIES NOTED IN LIGHT FIXTURE SCHEDULE. PRIOR APPROVAL FOR SUBSTITUTE LIGHT FIXTURES IS REQUIRED. REQUEST FOR SUBSTITUTION OF LIGHT FIXTURES SHALL BE SUBMITTED TO ENGINEER AT LEAST 10 DAYS PRIOR TO BID DATE. IN SOME CASE, STANDARDIZATION OF MATERIAL FOR THE OWNER'S BENEFIT MAY FAVOR THE SPECIFIED FIXTURE, EVEN THOUGH THE PROPOSED SUBSTITUTION MAY BE DEEMED EQUAL. THESE FIXTURES WILL BE IDENTIFIED IN THE PRIOR APPROVAL PROCESS TO PROTECT THE OWNER'S INTEREST. AT THE BIDDER'S EXPENSE, A SAMPLE OF EACH SUBSTITUTE LIGHT FIXTURE SHALL BE MADE AVAILABLE LOCALLY TO THE ARCHITECT/ENGINEER FOR EXAMINATION WITHIN 5-DAYS, IF REQUESTED. PHOTOMETRIC LAYOUTS SHALL ACCOMPANY ANY REQUEST FOR SUBSTITUTION. FIXTURE WATTAGE SHALL NOT DEVIATE FROM THE SPECIFIED FIXTURE DUE TO ITS EFFECT ON LIGHT LEVELS, ENERGY CODE REQUIREMENTS, POSSIBLE CIRCUIT CHANGES AND POWER CONSUMPTION. SUBSTITUTION PROPOSALS MUST BE PROVIDED BY AN AUTHORIZED DEALER OR DISTRIBUTOR OF THE LIGHT FIXTURE MANUFACTURER AND SHALL CARRY THE SAME OR SUPERIOR WARRANTY AND SERVICE AS THE SPECIFIED FIXTURE. DEVIATIONS FOR THE SPECIFIED OR PRIOR APPROVED ITEMS WILL BE GROUNDS FOR REJECTION OF THE PRODUCTS WHEN RECEIVED AT THE JOBSITE, AND THE CONTRACTOR WILL HAVE TO PROVIDE THE SPECIFIED PRODUCT AT THEIR OWN EXPENSE. REQUEST FOR PRIOR APPROVAL AND FINAL SUBMITTAL DATA WILL ONLY BE REVIEWED ONCE. ANY ADDITIONAL COST TO THE PROJECT DUE TO ACCEPTANCE OF THE SUBSTITUTED LIGHT FIXTURE SHALL BE PAID FOR BY THE CONTRACTOR.

**EQUIPMENT IDENTIFICATION:**

- NAMEPLATES: PROVIDE ENGRAVED NYLON NAMEPLATES FOR ALL ELECTRICAL EQUIPMENT. NAMEPLATES SHALL BE MINIMUM 1/16" THICK, 1-1/2" HIGH WITH 1/2" HIGH LETTERS. NAMEPLATES FOR EQUIPMENT ON EMERGENCY POWER SHALL BE RED WITH WHITE LETTERING. NAMEPLATES FOR ALL OTHER EQUIPMENT SHALL BE WHITE WITH BLACK LETTERING.
- LINE MARKERS: PROVIDE PLASTIC LINE MARKERS FOR ALL BURIED CONDUITS AND CABLING. LINE MARKERS SHALL BE PERMANENT, BRIGHT COLORED, CONTINUOUSLY PRINTED PLASTIC TAPE, INTENDED FOR DIRECT BURIAL, NOT LESS THAN 6" WIDE X 4 MILS THICK. LINE MARKER SHALL BE PROVIDED WITH WORDING THAT MOST ACCURATELY DESCRIBES THE TYPE OF SERVICE FOR THE BURIED CONDUIT OR CABLING.

**BRANCH CIRCUITS:** LAYOUT BRANCH CIRCUIT WIRING AND ARRANGE HOMERUNS FOR MAXIMUM ECONOMY AND EFFICIENCY. WHERE VOLTGE DROP EXCEEDS 3% OR LENGTH OF RUN EXCEEDS 100 FT., INCREASE WIRE AND CONDUIT SIZE ACCORDINGLY. ALL BRANCH CIRCUITS SHALL INCLUDE A GREEN, INSULATED, GROUNDING CONDUIT.

**INSTALLATION:** CONCEAL WIRING SYSTEMS ABOVE CEILINGS AND IN WALL WHERE POSSIBLE. INSTALL CONDUIT AND RACEWAYS PARALLEL OR PERPENDICULAR TO BUILDING LINES. CONDUIT SHALL BE INSTALLED CONTINUOUS BETWEEN JUNCTION BOXES AND ENCLOSURES WITH NO MORE THAN FOUR (4) 90° BENDS. SECURELY FASTEN CONDUIT WITH STRAPS, HANGERS AND STEEL SUPPORTS AS REQUIRED. CONDUIT SHALL NOT BE SUPPORTED FROM CEILING GRID OR SUSPENSION WIRES. REAM CONDUIT ENDS AND THOROUGHLY CLEAN BEFORE INSTALLATION. OPENINGS SHALL BE PLUGGED OR COVERED TO KEEP CONDUIT FREE OF DEBRIS. BOXES FOR SWITCHES OR RECEPTACLES SHALL NOT BE USED AS A "FEED THRU" TO ANOTHER SWITCH OR RECEPTACLE. WIRING CONFIGURATION SHALL BE SUCH THAT THE DISCONNECTION OR REMOVAL OF A RECEPTACLE, FIXTURE, OR OTHER DEVICE FED FROM A JUNCTION BOX SHALL NOT INTERRUPT THE CONTINUITY OF THE BRANCH CIRCUIT.

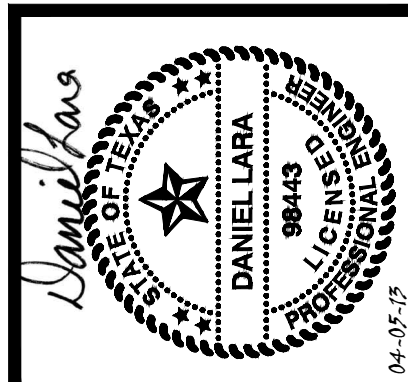
**TESTING:** ALL ELECTRICAL EQUIPMENT AND DEVICES SHALL BE FUNCTION TESTED FOR PROPER OPERATION.

**DEVICES & COVERPLATES:** ACCEPTABLE MANUFACTURER: LEVITON, HUBBELL, PASS-SEYMOUR.

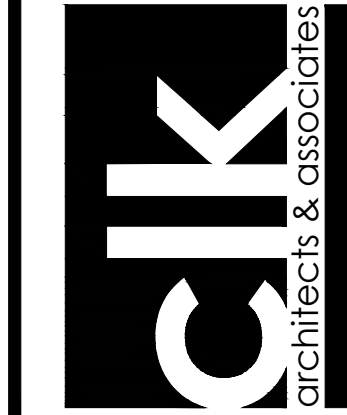
- COVERPLATES FOR ALL DEVICES SHALL BE NYLON AND MATCH THE BUILDING STANDARD. FOR NEW CONSTRUCTION OR WHEN A BUILDING STANDARD IS NOT IDENTIFIED, COVER PLATES AND DEVICES SHALL BE IVORY WHEN NOT CONNECTED TO A PANEL SERVED BY A BACK-UP GENERATOR. COVER PLATES AND DEVICES SHALL BE RED WHEN CONNECTED TO BACK-UP GENERATOR POWER.
- DUPLEX RECEPTACLES SHALL BE 20A, 125V, 2-POLE, 3-WIRE, GROUNDING TYPE WITH NEMA CONFIGURATION 5-20R.
- RECEPTACLES IN PATIENT CARE AREAS SHALL BE HOSPITAL GRADE.
- GFCI RECEPTACLES SHALL BE PROVIDED WHERE REQUIRED BY NEC.
- PROVIDE WEATHERPROOF COVER FOR OUTDOOR RECEPTACLES.
- RECEPTACLES IN PUBLIC AREAS SHALL BE TAMPER RESISTANT TYPE.
- TOGGLE SWITCHES SHALL BE 20A, 120/277V, QUIET TYPE, WITH MOUNTING YOKE INSULATED FROM MECHANISM.

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MEP SPECIFICATIONS

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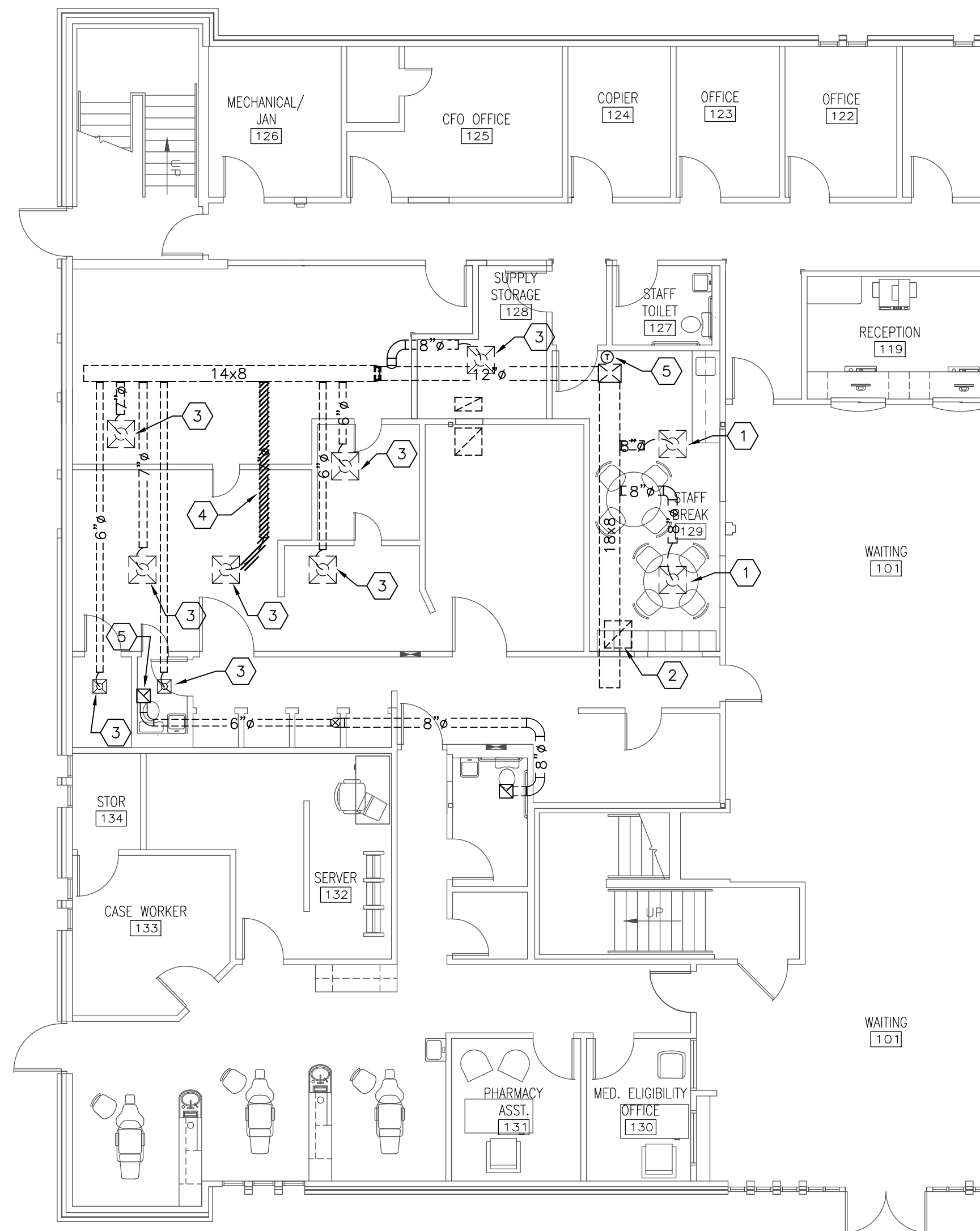
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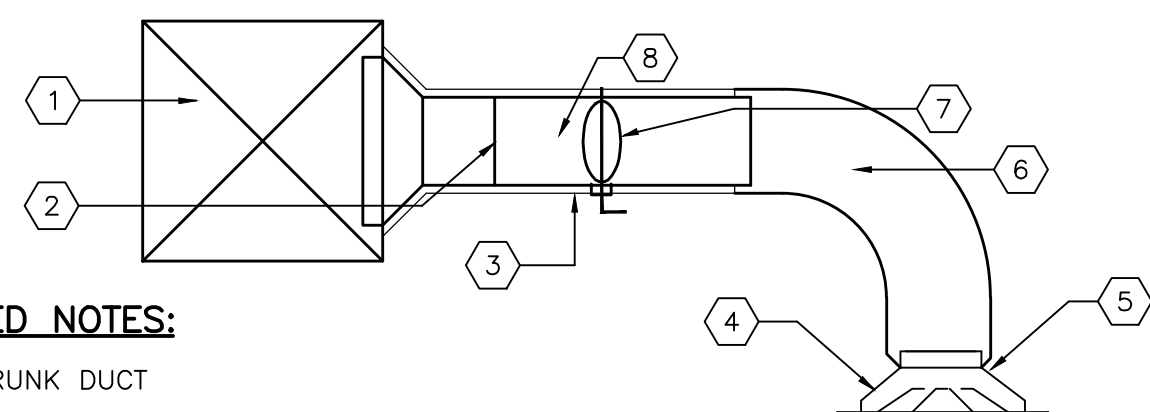
OF \_\_\_\_\_



1 HVAC DEMOLITION PLAN  
1/8" = 1'-0"

**HVAC DEMOLITION KEYED NOTES:**

- 1 RELOCATED EXISTING DIFFUSER. REFER TO 2/M-1 FOR NEW LOCATION.
- 2 RELOCATE EXISTING RETURN GRILLE. REFER TO 2/M-1 FOR NEW LOCATION.
- 3 REMOVE EXISTING SUPPLY DIFFUSER.
- 4 REMOVE EXISTING SECTION SUPPLY DUCTWORK SHOWN HATCHED.
- 5 RELOCATE EXISTING THERMOSTAT IN BREAKROOM. REFER TO 2/M-1 FOR NEW LOCATION.

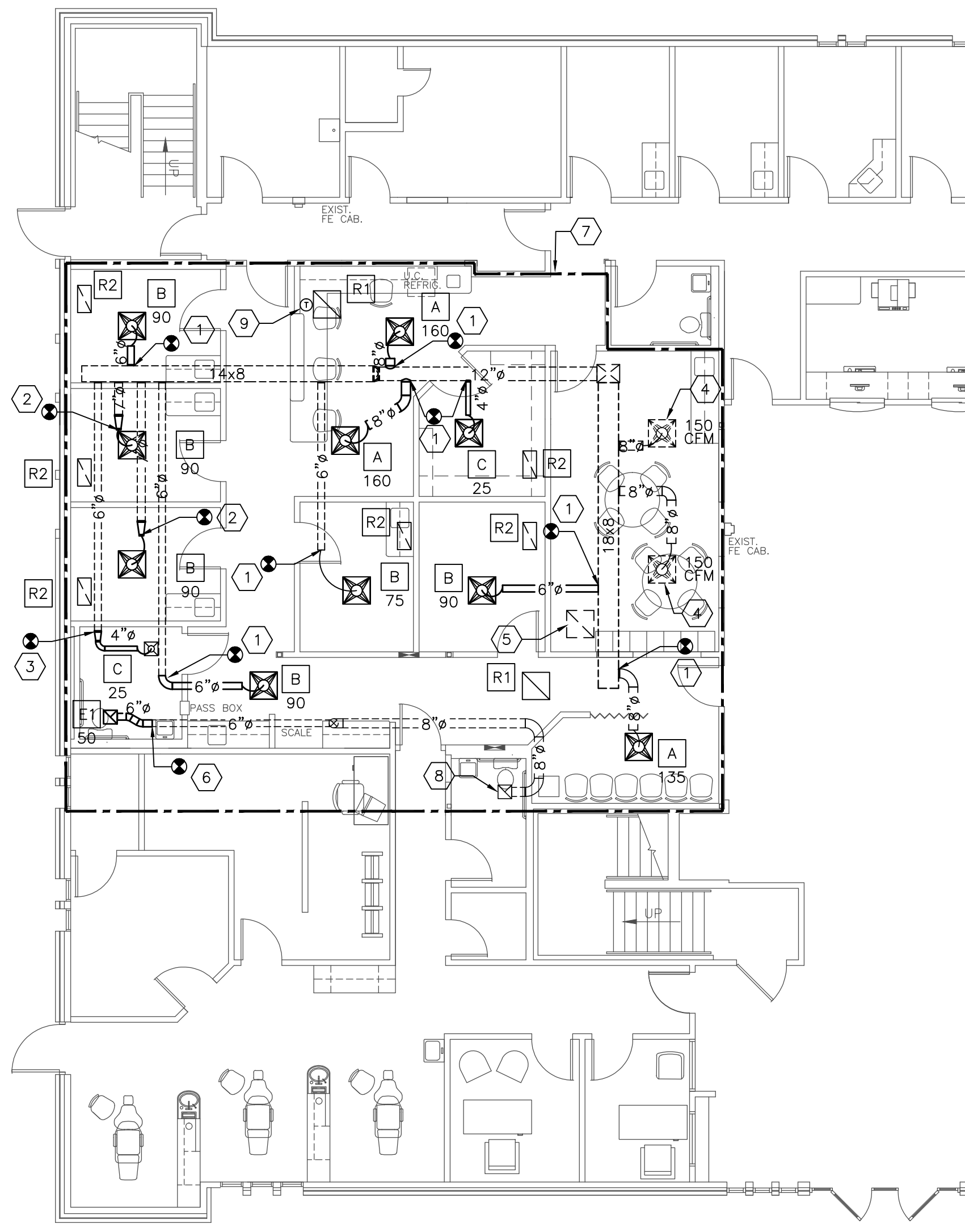


**KEYED NOTES:**

- 1 TRUNK DUCT
- 2 'SPIN-IN' FITTING WITH BELLMOUTH CONNECTION TO DUCT. 'GEN-FLEX' TYPE SM-2C. SEAL AIRTIGHT AROUND FITTING TO DUCT CONNECTION WITH APPROVED DUCT TAPE OR CANVAS CLOTH AND MASTIC.
- 3 EXTERNAL DUCT INSULATION PER SPECS. INSULATION SHOULD COVER 'SPIN-IN' FITTING AND BE SEALED VAPOR TIGHT TO TRUNK DUCT. SEAL OPENING FOR LOCKING QUADRANT WITH APPROVED CANVAS CLOTH AND MASTIC.
- 4 DIFFUSER.
- 5 COVER DUCT INCREASER, SQUARE-TO-ROUND ADAPTOR AND BACK SIDE OF DIFFUSER WITH INSULATION.
- 6 INSULATED FLEXIBLE DUCT, HELICALLY REINFORCED. RUN NO MORE THAN SIX FEET OF FLEXIBLE DUCT PER DIFFUSER. USE 'CERTIFLEX' BY CERTAINTED OR APPROVED EQUAL. CONNECTIONS TO 'SNAP-LOCK' AND TO DIFFUSERS SHALL BE DOUBLE TAPED AND CLAMPED PER MFR. RECOMMENDATIONS. STRETCH FLEXIBLE DUCT AS TIGHT AS POSSIBLE.
- 7 BUTTERFLY DAMPER.
- 8 SINGLE WALL SPIRAL DUCT.

**NOTE:**  
THE USE OF A SPIN-IN FITTING WITH BUILT-IN BUTTERFLY DAMPER IS ACCEPTABLE.

3 CEILING DIFFUSER RUNOUT DETAIL  
N.T.S.



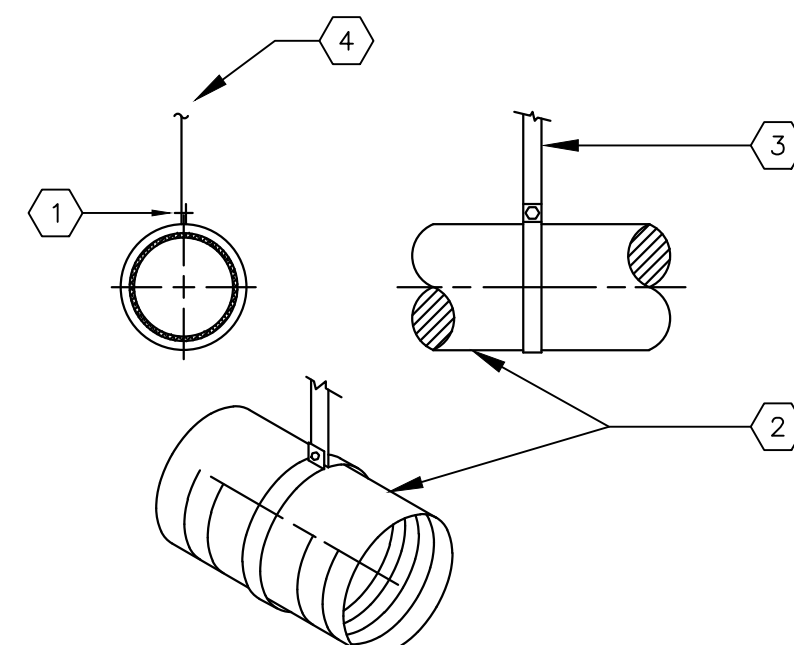
2 HVAC FLOOR PLAN  
1/8" = 1'-0"

**HVAC KEYED NOTES:**

- 1 CONNECT TO EXISTING SUPPLY DUCT. EXTEND DUCTWORK TO NEW SUPPLY DIFFUSER. PROVIDE BALANCING DAMPER IN EXISTING DUCT IF ONE IS NOT LOCATED AT TAP FROM MAIN DUCT.
- 2 CONNECT TO EXISTING SUPPLY DUCT. PROVIDE TRANSITION TO 6" DUCT AND EXTEND DUCTWORK TO NEW SUPPLY DIFFUSER. PROVIDE BALANCING DAMPER IN EXISTING DUCT IF ONE IS NOT LOCATED AT TAP FROM MAIN DUCT.
- 3 CONNECT TO EXISTING SUPPLY DUCT. PROVIDE TRANSITION TO 4" DUCT AND EXTEND DUCTWORK TO NEW SUPPLY DIFFUSER. PROVIDE BALANCING DAMPER IN EXISTING DUCT IF ONE IS NOT LOCATED AT TAP FROM MAIN DUCT.
- 4 RELOCATED SUPPLY DIFFUSER; BALANCE TO AIRFLOW SHOWN.
- 5 RELOCATED RETURN AIR GRILLE.
- 6 CONNECT TO EXISTING EXHAUST DUCT. EXTEND DUCTWORK TO NEW EXHAUST GRILLE.
- 7 INSULATE ALL EXISTING SUPPLY DUCT IN THIS AREA PER SPECIFICATIONS.
- 8 BALANCE EXISTING EXHAUST GRILLE AIRFLOW TO 50 CFM.
- 9 RELOCATED THERMOSTAT. EXTEND CONTROL WIRING TO THIS LOCATION.

**KEYED NOTES:**

- 1 BOLT
- 2 METAL EXHAUST DUCT OR DRYER VENT
- 3 1" MIN. BAND CLAMP
- 4 SUPPORT FROM STRUCTURE



4 FLEXIBLE DUCT SUPPORT DETAIL  
N.T.S.

AIR DEVICE SCHEDULE					
MARK	NECK SIZE	FACE SIZE	TYPE	MOUNTING	MFG. & MODEL
A	8"ø	24x24	SUPPLY DIFFUSER	LAY-IN	TITUS TMS-AA
B	6"ø	24x24	SUPPLY DIFFUSER	LAY-IN	TITUS TMS-AA
C	4"ø	12x12	SUPPLY DIFFUSER	LAY-IN	TITUS TMS-AA
E1	10"x10"	12"x12"	EXHAUST GRILLE	LAY-IN	TITUS 50F
R1	22"x22"	24x24	RETURN GRILLE	LAY-IN	TITUS 50F
R2	22"x10"	24x24	RETURN GRILLE	LAY-IN	TITUS 50F

**NOTES:**

- ALL DEVICES SHALL BE ALUMINUM CONSTRUCTION AND HAVE A WHITE FINISH.
- PROVIDE FOAM GASKET FOR ALL SURFACE MOUNTED AIR DEVICES.
- ACCEPTABLE MANUFACTURERS: TITUS, METALAIR, AND KRUEGER.

**HVAC SYMBOLS AND ABBREVIATIONS**

	SUPPLY/ RETURN DUCT, ROUND		RETURN AIR GRILLE
	SUPPLY/ RETURN DUCT, RECTANGULAR		EXHAUST REGISTER
	FLEXIBLE DUCT CONNECTION		DUCT MOUNTED SMOKE DETECTOR
	BRANCH TAP WITH MANUAL DAMPER		CARBON DIOXIDE SENSOR
	SPLITTER DAMPER		THERMOSTAT
	CEILING SUPPLY DIFFUSER		TEMPERATURE / HUMIDITY SENSOR
	MOTORIZED DAMPER		DRAIN PIPING
	MANUAL VOLUME DAMPER		FIRE DAMPER

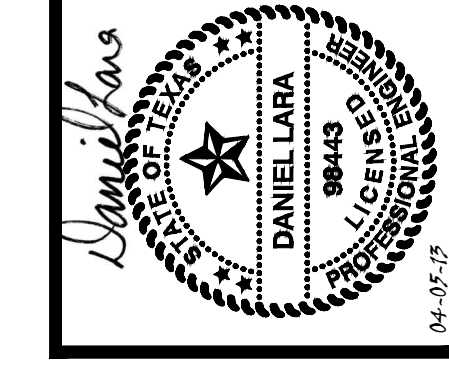
RPM	REVOLUTIONS PER MINUTE	R/A	RETURN AIR
LBS	POUNDS	IAQ	INDOOR AIR QUALITY
WP	WEATHERPROOF	BTUH	BRITISH THERMAL UNIT PER HOUR
KW	KILOWATT	MOCP	MAXIMUM OVERCURRENT PROTECTION
O/A	OUTSIDE AIR	GA.	GAUGE
FC	FLEXIBLE CONNECTION	FLA	FULL LOAD AMPS
SS	STAINLESS STEEL	FLA	RUNNING LOAD AMPS
#	SQUARE	AFF	ABOVE FINISHED FLOOR
ø	ROUND	EAT	ENTERING AIR TEMPERATURE
SP	STATIC PRESSURE	LAT	LEAVING AIR TEMPERATURE
ESP	EXTERNAL STATIC PRESSURE	EWT	ENTERING WATER TEMPERATURE
C.PNL	CONTROL PANEL	LWT	LEAVING WATER TEMPERATURE
FD	FIRE DAMPER	GPM	GALLONS PER MINUTE
HVAC	HEATING VENTILATING & AIR CONDITIONING	AP	ACCESS PANEL
HP	HORSE POWER	SD	SMOKE DAMPER
		MFG.	MANUFACTURER

NOTE: ALL SYMBOLS & ABBREVIATIONS MAY NOT APPLY TO THIS PROJECT

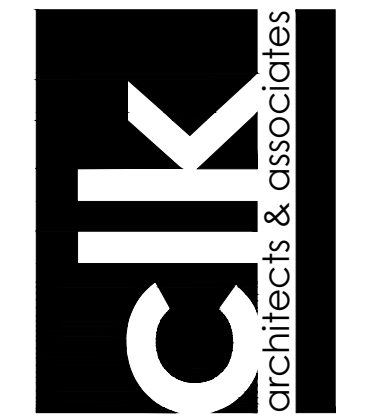
**HVAC GENERAL NOTES:**

- ALL DUCTWORK SHALL BE SUPPORTED FROM BUILDING STRUCTURE WITH STEEL ANGLES, UNISTRUT, OR 1" WIDE 16 GAUGE STRAPS.
- ROUND DUCTWORK TAKEOFFS FROM RECTANGULAR DUCTS SHALL BE 45° TAKEOFF OR SPIN-IN TYPE WITH INTEGRAL DAMPER.
- MOUNT ALL THERMOSTATS AT 48" AFF TO THE TOP OF THE DEVICES. COORDINATE EXACT THERMOSTAT LOCATION WITH ARCHITECT PRIOR TO INSTALLATION.
- SHOP DRAWINGS/SUBMITTALS FOR NEW EQUIPMENT AND MATERIALS SHALL BE PROVIDED FOR ENGINEERING REVIEW. HVAC EQUIPMENT SUBMITTED OTHER THAN SCHEDULED MANUFACTURER'S SHALL MEET THE REQUIRED PERFORMANCE AND NOT EXCEED PHYSICAL DIMENSIONS DUE TO SPACE LIMITATIONS.
- PROVIDE ACCESS TO ALL CONTROL, MOTORIZED, BALANCING, AND FIRE DAMPERS AS REQUIRED BY CODE OR FOR PROPER MAINTENANCE. PROVIDE ACCESS DOORS IN DUCTS AND CEILINGS WHERE NECESSARY.
- CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL CORE DRILLS REQUIRED FOR THE INSTALLATION OF THE HVAC SYSTEM.
- CONTRACTOR SHALL PROPERLY FIRE SEAL ALL PENETRATIONS THRU FIRE RATED FLOORS.
- ALL CONDENSATE DRAIN LINES SHALL BE COPPER AND SHALL SLOPE AT LEAST 1/8" PER FOOT.
- MANUAL VOLUME DAMPERS INSTALLED IN RECTANGULAR DUCTWORK SHALL BE OPPOSED BLADE TYPE. MANUAL VOLUME DAMPERS INSTALLED IN ROUND DUCTWORK SHALL BE BUTTERFLY TYPE.
- CONTRACTOR SHALL PROVIDE CONDUIT AND JUNCTION BOXES IN WALLS FOR INSTALLATION OF THERMOSTATS/HUMIDISTATS AND CONTROL WIRING. ALL CONTROL WIRING SUBJECT TO DAMAGE SHALL BE INSTALLED IN CONDUIT. CONDUIT INSTALLED OUTDOORS SHALL BE EMT. CONDUIT INSTALLED OUTDOORS SHALL BE RIGID GALVANIZED STEEL.
- HVAC SYSTEMS AFFECTED BY THE SCOPE OF WORK SHALL BE BALANCED BY AN INDEPENDENT, AABC OR NEBB CERTIFIED TEST AND BALANCE CONTRACTOR. SUBMIT COMPLETED TEST AND BALANCE REPORTS FOR ENGINEERING REVIEW.

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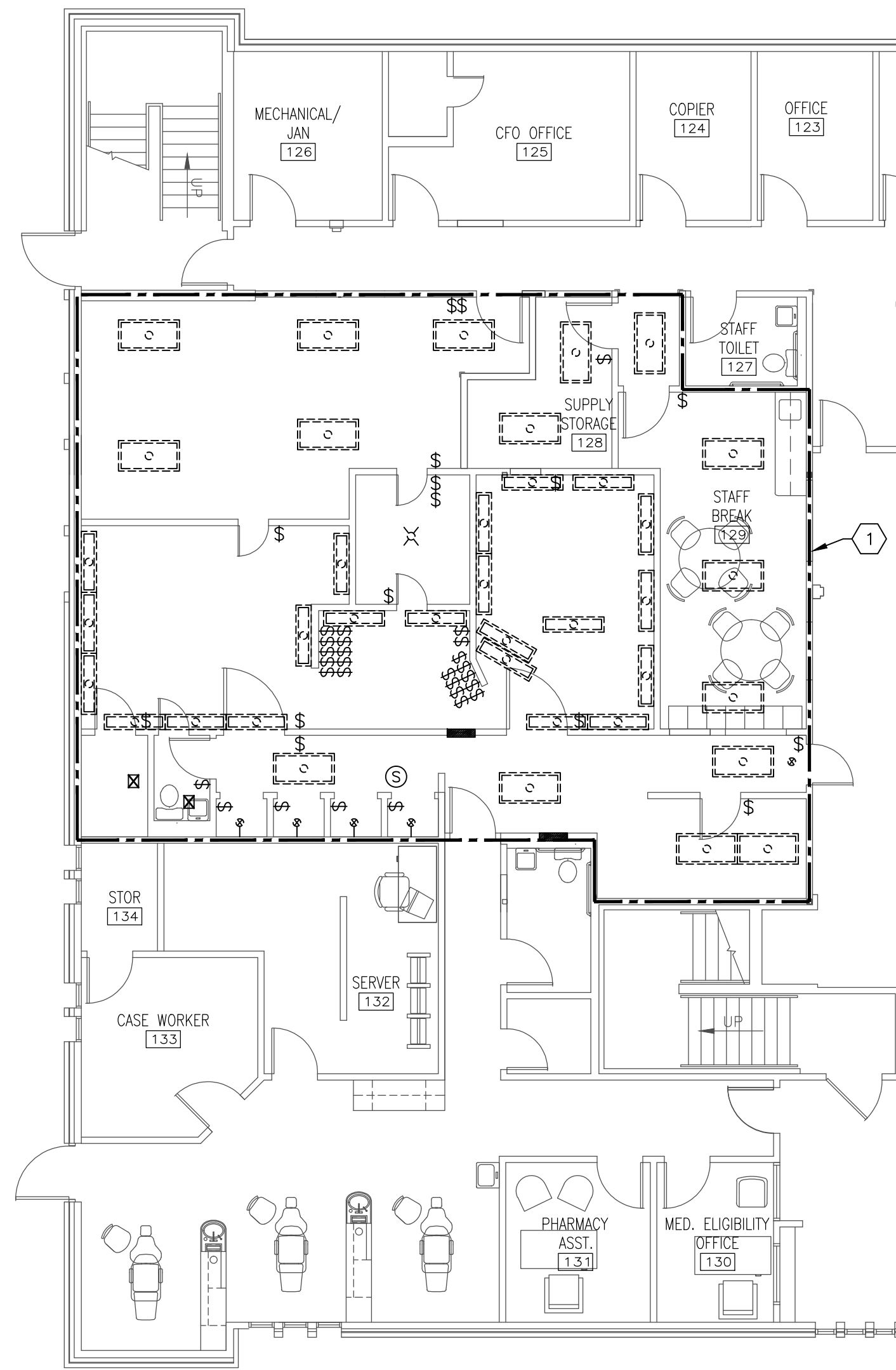
**AMISTAD COMMUNITY HEALTH CENTER  
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HVAC FLOOR PLANS, SCHEDULES, AND DETAILS

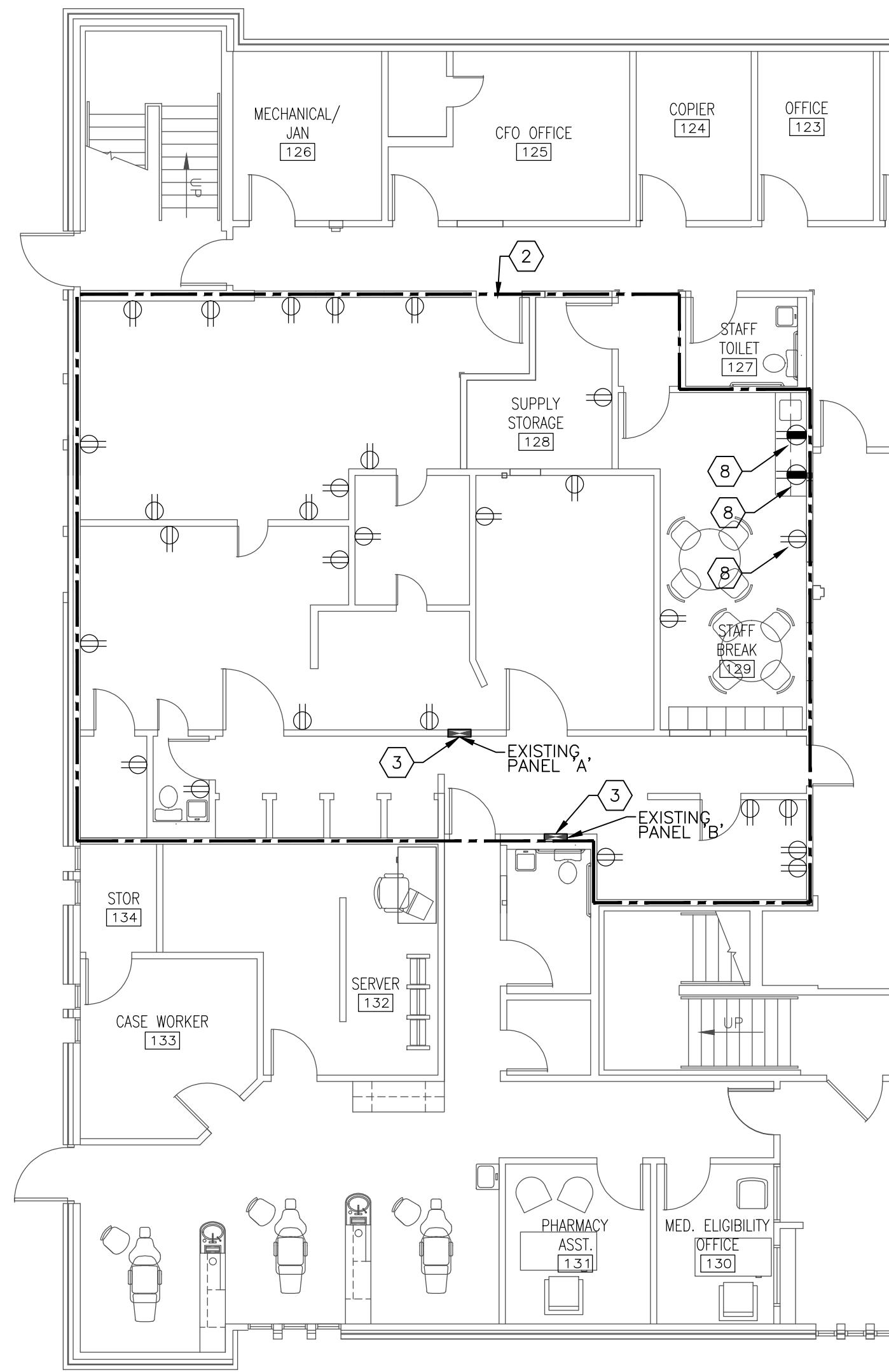
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REVISIONS:

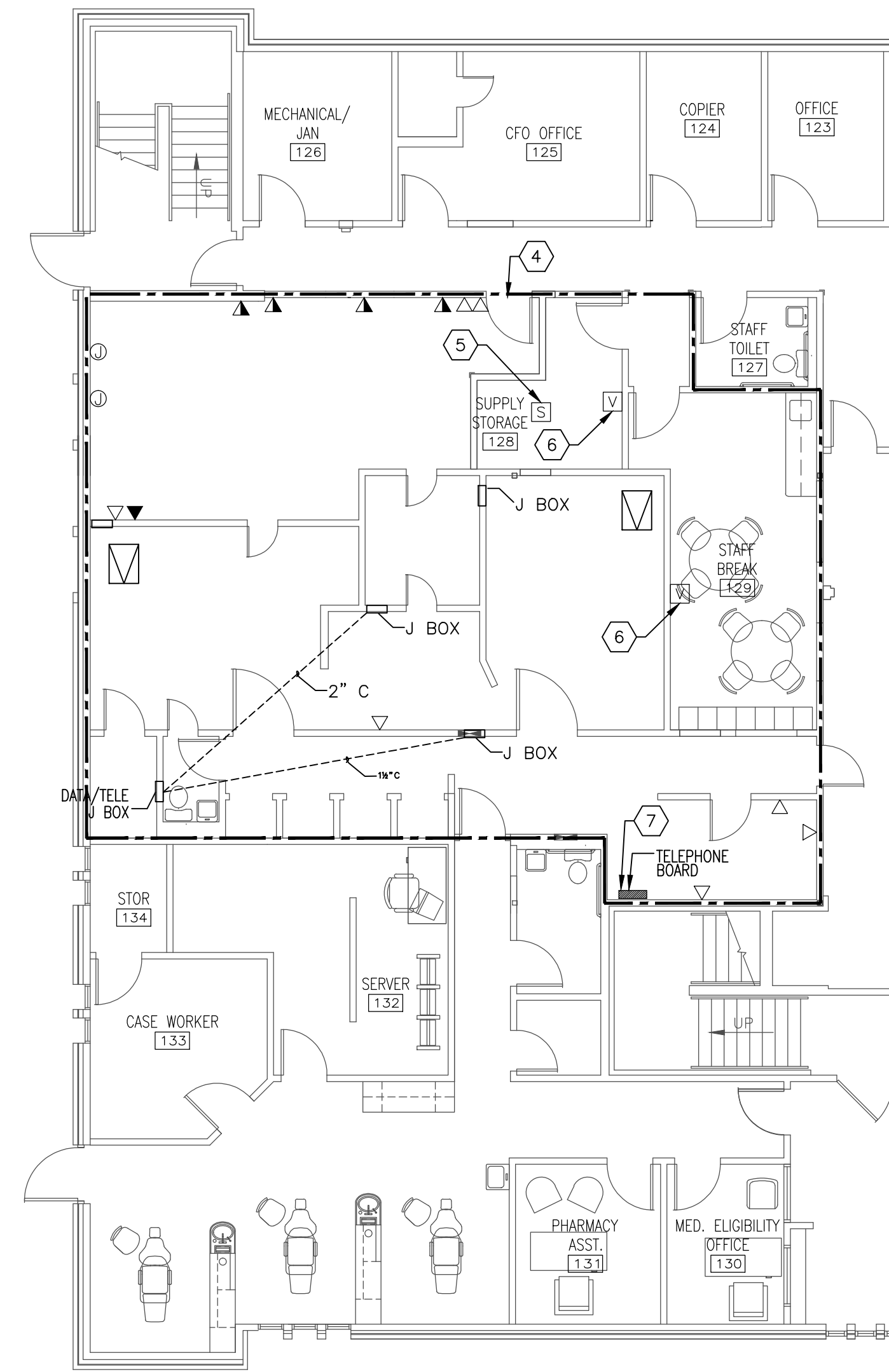
SHEET NUMBER  
**M-1**  
OF



1 ELECTRICAL LIGHTING DEMOLITION PLAN  
1/8" = 1'-0"



2 ELECTRICAL POWER DEMOLITION PLAN  
1/8" = 1'-0"

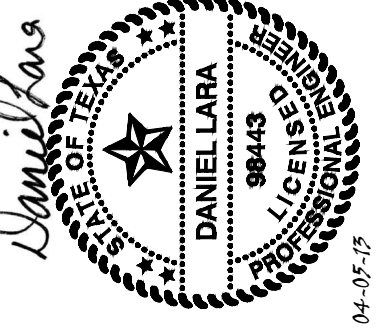


3 ELECTRICAL SPECIAL SYSTEMS DEMOLITION PLAN  
1/8" = 1'-0"

ELECTRICAL DEMOLITION KEYED NOTES:

- ① REMOVE EXISTING LIGHT FIXTURES AND LIGHT SWITCH CONTROLS WITHIN THE AREA OF WORK. REMOVE CONDUIT AND WIRING BACK TO SOURCE.
- ② REMOVE EXISTING ELECTRICAL DEVICES WITHIN THE AREA OF WORK. REMOVE CONDUIT AND WIRING BACK TO SOURCE.
- ③ EXISTING ELECTRICAL PANEL TO REMAIN.
- ④ REMOVE EXISTING COMMUNICATION DEVICES WITHIN AREA OF WORK AND ASSOCIATED WIRING BACK TO SOURCE. REMOVE MISCELLANEOUS JUNCTION BOXES AND CONDUIT. COORDINATE REQUIREMENTS WITH COMMUNICATIONS/IT VENDOR.
- ⑤ RELOCATE EXISTING SMOKE DETECTOR. REFER TO 3/E-2 FOR NEW LOCATION.
- ⑥ RELOCATE EXISTING FIRE ALARM VISUAL DEVICE. REFER TO 3/E-2 FOR NEW LOCATION.
- ⑦ EXISTING TELEPHONE BOARD TO REMAIN.
- ⑧ EXISTING RECEPTACLE TO REMAIN.

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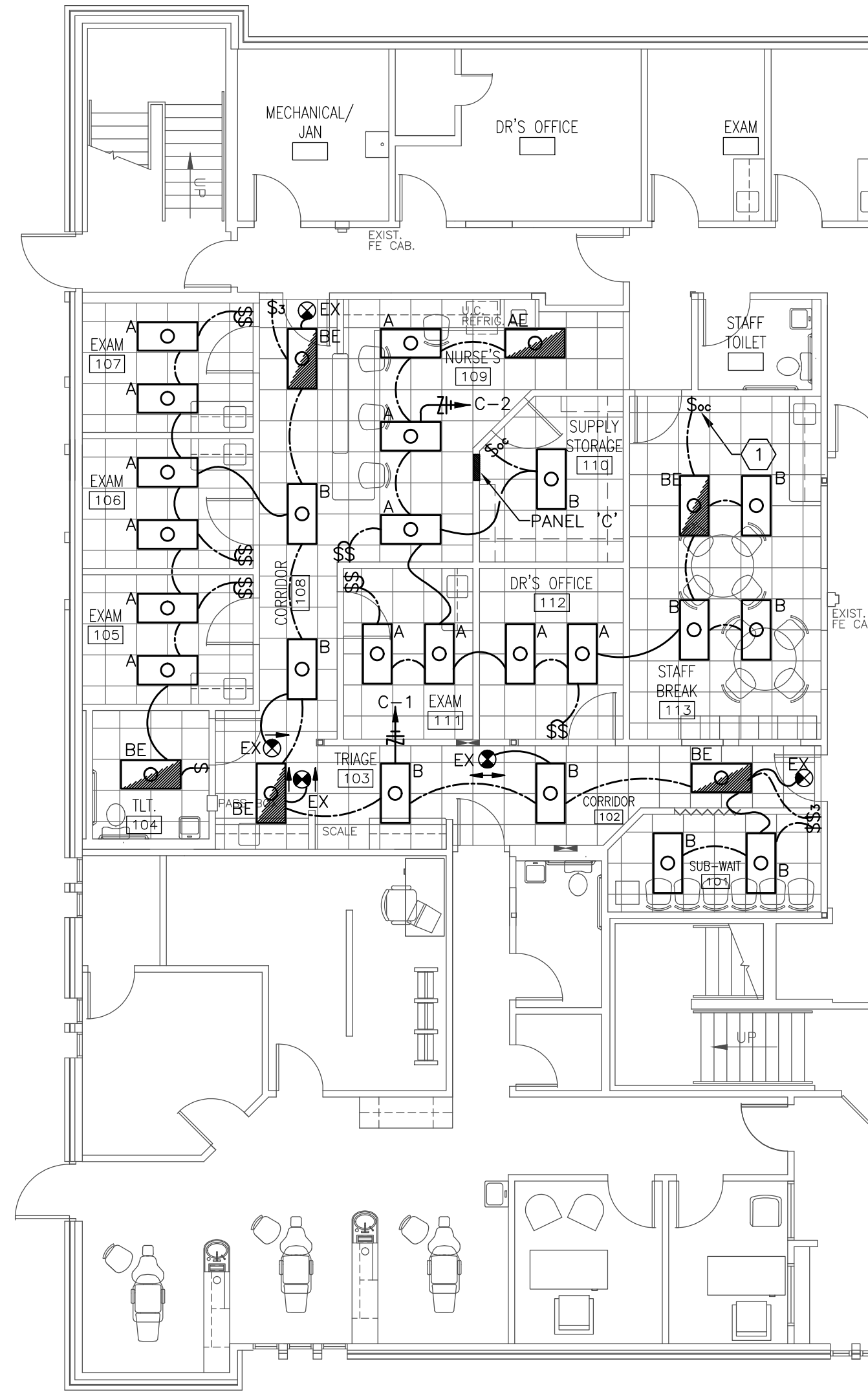
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**ELECTRICAL DEMOLITION PLANS**

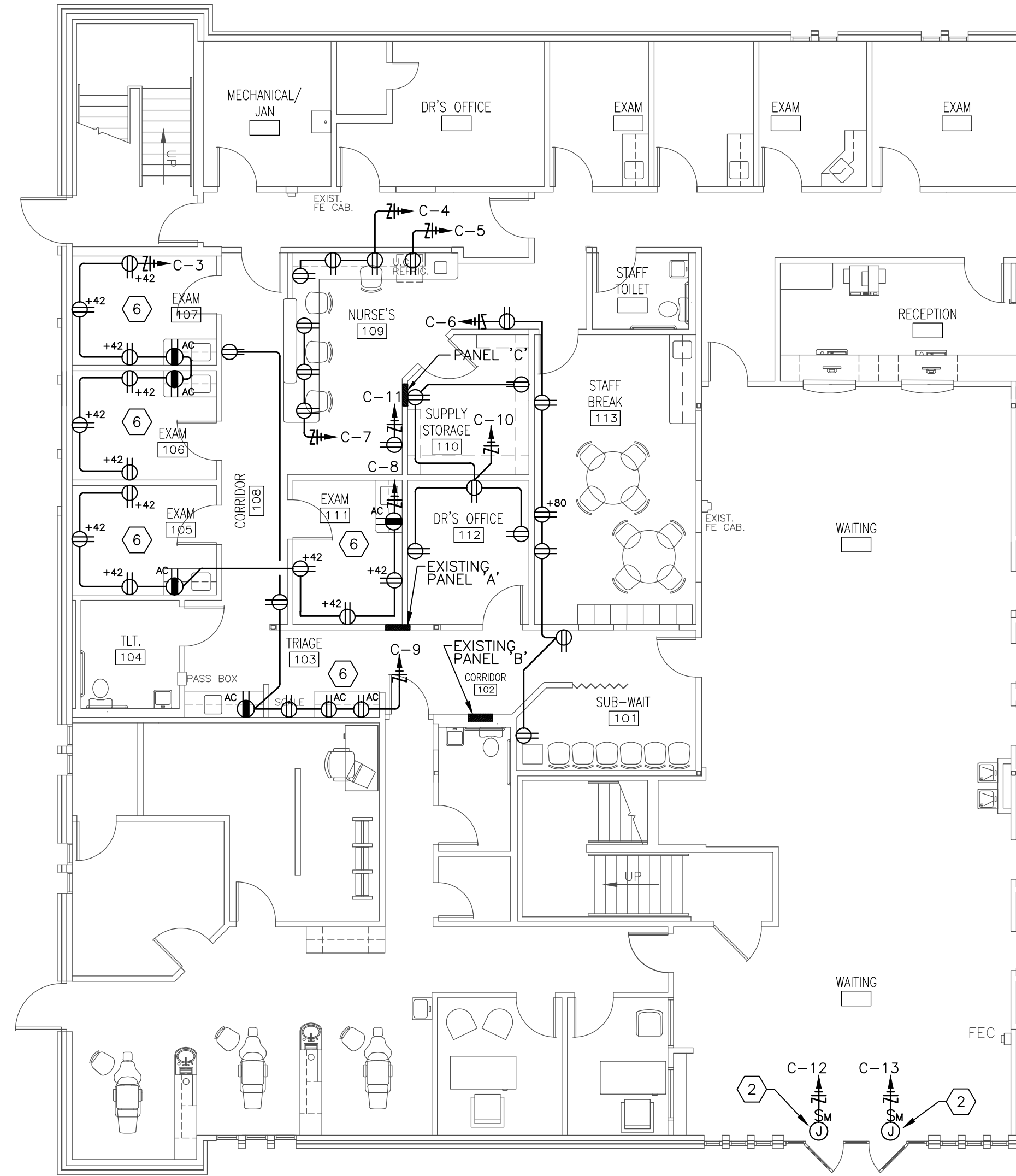
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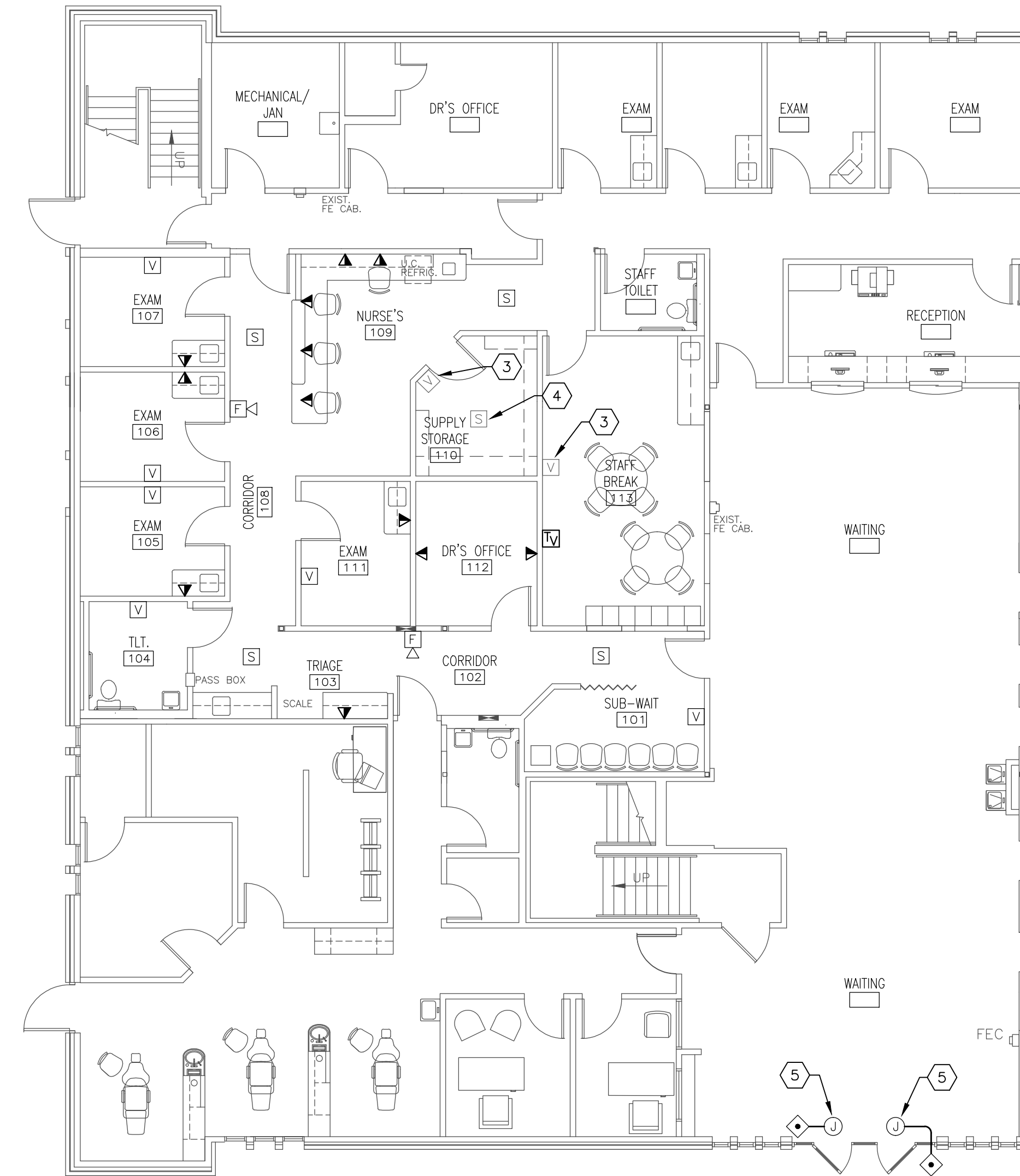
SHEET NUMBER  
**E-1**  
OF



1 ELECTRICAL LIGHTING FLOOR PLAN  
1/8" = 1'-0"



2 ELECTRICAL POWER FLOOR PLAN  
1/8" = 1'-0"



3 ELECTRICAL SPECIAL SYSTEMS FLOOR PLAN  
1/8" = 1'-0"

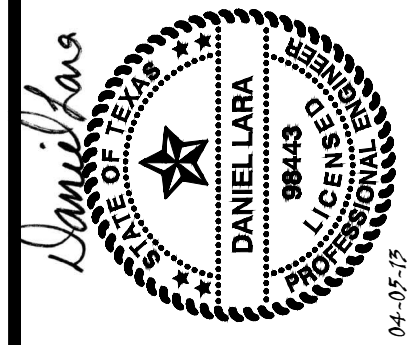
ELECTRICAL KEYED NOTES:

- ① OCCUPANCY SENSOR SHALL BE SENSOR SWITCH, DUAL TECHNOLOGY TYPE OR EQUIVALENT.
- ② PROVIDE POWER CONNECTION TO DOOR OPERATOR. COORDINATE EXACT REQUIREMENT WITH GENERAL CONTRACTOR.
- ③ RELOCATED FIRE ALARM VISUAL.
- ④ RELOCATED SMOKE DETECTOR.
- ⑤ PROVIDE JUNCTION BOX FOR MOUNTING DOOR OPERATOR PUSH BUTTON. PROVIDE 3/4" CONDUIT AND WIRING FROM PUSH BUTTON TO DOOR OPERATOR. COORDINATE EXACT REQUIREMENTS WITH GENERAL CONTRACTOR.
- ⑥ RECEPTACLES IN PATIENT CARE AREAS SHALL BE HOSPITAL GRADE AND SHALL BE INSTALLED IN ACCORDANCE WITH 2008 NEC ARTICLE 517-HEALTHCARE FACILITIES.

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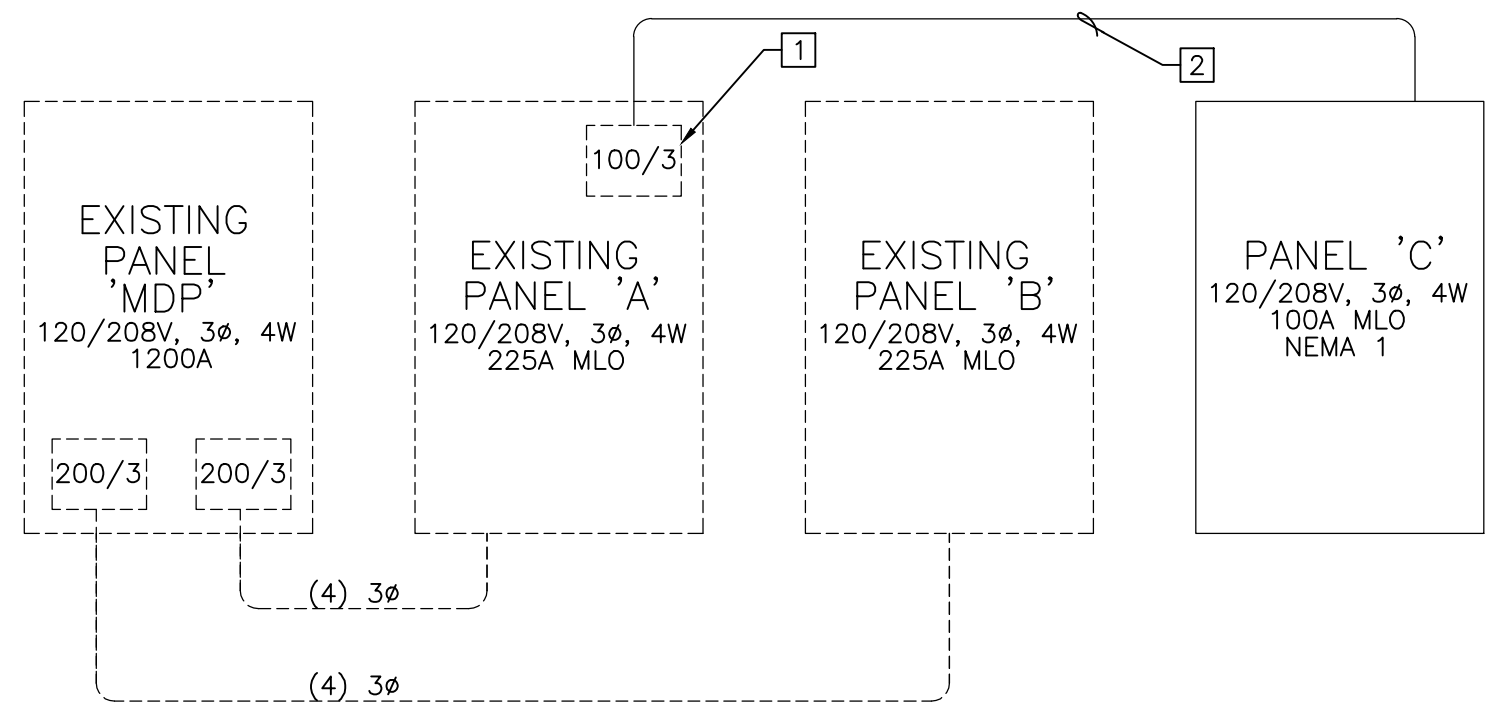
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**ELECTRICAL FLOOR PLANS**

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OF



**RISER DIAGRAM KEYED NOTES:**

- 1 CONNECT TO SPARE 100A/3P CIRCUIT BREAKER IN EXISTING PANEL.
- 2 (4) #2, #8 GND, 1-1/2" CONDUIT.

1 PARTIAL ELECTRICAL RISER DIAGRAM  
NO SCALE

**ELECTRICAL GENERAL NOTES:**

1. CONTRACTOR IS ADVISED TO VISIT PROJECT SITE PRIOR TO BID, TO FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS, AND ACCOUNT FOR THOSE CONDITIONS IN HIS PROPOSAL. NOTIFY ENGINEER OF ANY CONFLICTS, DISCREPANCIES, OR OMISSIONS PRIOR TO SUBMITTING PROPOSAL.
2. IT IS INTENDED FOR THE WORK INDICATED ON THESE DRAWINGS TO REPRESENT A COMPLETE, FUNCTIONAL SYSTEM. CONTRACTOR SHALL PROVIDE ALL MATERIAL AND LABOR REQUIRED, WHETHER SPECIFICALLY INDICATED OR NOT, FOR THE PROPER INSTALLATION AND FUNCTION OF THE SYSTEM.
3. ALL WORK SHALL MEET APPLICABLE CODES, STANDARDS, AND GOVERNMENT REGULATIONS. IN CASE OF CONFLICT BETWEEN THOSE REQUIREMENTS AND CONSTRUCTION DRAWINGS/SPECIFICATION, THE MOST STRINGENT REQUIREMENT SHALL TAKE PRECEDENCE.
4. ALL MATERIAL INTENDED TO BE REINSTALLED SHALL BE STORED AND PROTECTED FROM DAMAGE BY THE CONTRACTOR. ANY DAMAGED MATERIAL SHALL BE REPLACED BY CONTRACTOR.
5. WALL MOUNTED SWITCHES SHALL BE MOUNTED AT 46" AFF TO THE CENTER OF THE DEVICE, UNLESS NOTED OTHERWISE. COORDINATE MOUNTING HEIGHTS WITH ARCHITECT/ENGINEER PRIOR TO INSTALLATION.
6. ELECTRICAL DEVICES AND FACEPLATES SHALL BE IVORY TO MATCH EXISTING.
7. ALL WIRING WITHIN BUILDING SHALL BE INSTALLED IN EMT CONDUIT WITH COMPRESSION FITTINGS. MINIMUM CONDUIT SIZE SHALL BE 1/2".
8. FLEXIBLE CONDUIT IN LENGTHS NOT EXCEEDING 72" MAY BE UTILIZED FROM JUNCTION BOXES TO LIGHT FIXTURES AND EQUIPMENT ONLY.
9. ALL CIRCUITS SHALL BE RUN WITH AN INSULATED GROUNDING CONDUCTOR.
10. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH NEC 2008 - ARTICLE 517 - HEALTH CARE FACILITIES.
11. ALL ELECTRICAL PANELS AFFECTED BY THE WORK OF THIS CONTRACT SHALL HAVE THE PANEL SCHEDULES UPDATED. PANEL SCHEDULES SHALL BE TYPED OR COMPUTER GENERATED. HAND WRITTEN PANEL SCHEDULES ARE NOT ACCEPTABLE.
12. PROVIDE JUNCTION BOXES AND CONDUIT WITH PULLSTRING FOR THE INSTALLATION OF WALL MOUNTED FIRE ALARM DEVICES AND TELEPHONE/DATA OUTLETS.
13. ALL NEW FIRE ALARM DEVICES SHALL BE COMPATIBLE WITH AND INTEGRATED INTO EXISTING SILENT KNIGHT FIRE ALARM SYSTEM. INSTALLATION OF NEW DEVICES SHALL MEET NFPA 72 REQUIREMENTS.

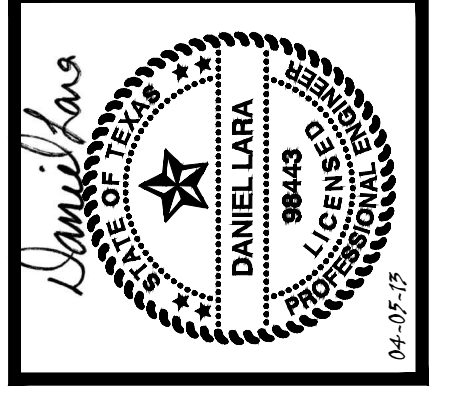
LIGHT FIXTURE SCHEDULE									
TYPE	CATALOG NUMBER	LAMPS	VOLTAGE	BALLAST	MOUNTING	COMMENTS			
A	LITHONIA #2RT5-28T5-MVOLT-GE955	2-28W T5	120	ELECTRONIC	RECESSED	2X4 FLUORESCENT VOLUMETRIC FIXTURE - STEP DIMMING			
AE	LITHONIA #2RT5-28T5-MVOLT-GE955-EL	2-28W T5	120	ELECTRONIC	RECESSED	2X4 FLUORESCENT VOLUMETRIC FIXTURE - STEP DIMMING, EMERGENCY BALLAST			
B	LITHONIA #2RT5-28T5-MVOLT-GE955	2-28W T5	120	ELECTRONIC	RECESSED	2X4 FLUORESCENT VOLUMETRIC FIXTURE			
BE	LITHONIA #2RT5-28T5-MVOLT-GE955-EL	2-28W T5	120	ELECTRONIC	RECESSED	2X4 FLUORESCENT VOLUMETRIC FIXTURE - EMERGENCY BALLAST			
EX	LITHONIA #LOM-S-W-3-R-120/277-ELN	LED	277	ELECTRONIC	SURFACE	LED EXIT LIGHT			

PANEL 'C'										100 AMP, M.L.O., 120/208 V, 3Ø, 4W S/N, FLUSH, NEMA 1, 10 KAIC		
CKT #	LOAD SERVED	LOAD	CONDUIT & WIRE SIZE	BKR SIZE	A	B	C	BKR SIZE	CONDUIT & WIRE SIZE	LOAD	LOAD SERVED	CKT #
1	LIGHTING	900	2#12, #12G, 1/2" C	20/1	A			20/1	2#12, #12G, 1/2" C	730	LIGHTING	2
3	EXAM RCPT	1440	2#12, #12G, 1/2" C	20/1	B			20/1	2#12, #12G, 1/2" C	540	NURSE STATION RCPT	4
5	UC REFRIGERATOR	800	2#12, #12G, 1/2" C	20/1		C		20/1	2#12, #12G, 1/2" C	1080	GENERAL RCPT	6
7	NURSE STATION RCPT	540	2#12, #12G, 1/2" C	20/1	A			20/1	2#12, #12G, 1/2" C	1440	EXAM RCPT	8
9	GENERAL RCPT	1080	2#12, #12G, 1/2" C	20/1		B		20/1	2#12, #12G, 1/2" C	900	OFFICE/STG RCPT	10
11	COPIER	1200	2#12, #12G, 1/2" C	20/1		C		20/1	2#12, #12G, 1/2" C	500	DOOR OPERATOR	12
13	DOOR OPERATOR	500	2#12, #12G, 1/2" C	20/1	A			20/1	-	-	SPARE	14
15	SPARE	-	-	20/1	B			20/1	-	-	SPARE	16
17	SPARE	-	-	20/1		C		-	-	-	SPARE	18
19	SPARE	-	-	20/1	A			20/1	-	-	SPARE	20
21	SPARE	-	-	20/1		B		20/1	-	-	SPARE	22
23	SPACE	-	-	-		C		-	-	-	SPACE	24
25	SPACE	-	-	-	A			-	-	-	SPACE	26
27	SPACE	-	-	-		B		-	-	-	SPACE	28
29	SPACE	-	-	-		C		-	-	-	SPACE	30

CONNECTED LOAD = 11,650 VA

PHASE A = 4,110 VA  
PHASE B = 3,960 VA  
PHASE C = 3,580 VA

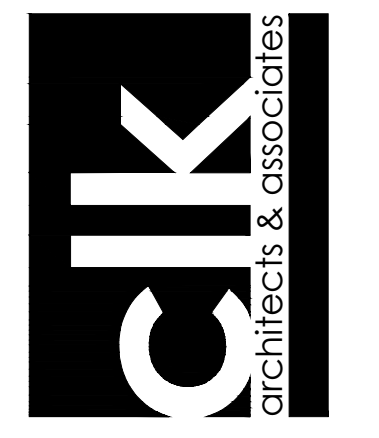
ELECTRICAL LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
A-1	HOMERUN TO CIRCUIT AND PANEL INDICATED	T	DOOR BELL/BUZZER TRANSFORMER
—	NEUTRAL CONDUCTOR	⊕	CAMERA
+	HOT CONDUCTOR	F	FIRE ALARM PULL STATION
⊥	GROUNDING CONDUCTOR	F	FIRE ALARM AUDIO/VISUAL SIGNAL
↔	TRAVELER	V	FIRE ALARM ADA VISUAL SIGNAL
⊥	SWITCH LEG	R	FIRE ALARM SHUT DOWN RELAY
(2)	NUMBER IN PARENTHESIS INDICATES CIRCUIT TO WHICH DEVICE IS CONNECTED	S	SMOKE DETECTOR
\$	TOGGLE SWITCH - 120/277V, 20A	S <sub>D</sub>	DUCT MTD. SMOKE DETECTOR
\$ <sub>3</sub>	THREEWAY SWITCH - 120/277V, 20A	H	HEAT DETECTOR
\$ <sub>4</sub>	FOURWAY SWITCH - 120/277V, 20A	F	FIRE ALARM PULL STATION W/STI 1100 STOPPER II W/HORN
\$ <sub>D</sub>	DIMMER SWITCH, WATTAGE AS SPECIFIED	TS	TAMPER SWITCH
\$ <sub>K</sub>	KEY SWITCH - 120/277V, 20A	FS	FLOW SWITCH
\$ <sub>M</sub>	MANUAL MOTOR STARTER/1Ø DISCONNECT	A	ANSUL SUPPRESSION SYSTEM
\$ <sub>OC</sub>	OCCUPANCY SENSOR - 120/277V, 20A	DR	FIRE ALARM DOOR RELEASE
\$ <sub>T</sub>	TIMER SWITCH - 120/277V, 20A	DC	DOOR CONTACTOR ROUGH-IN WITH 3/4" C TO ACCESSIBLE LOCATIONS ABOVE CEILING.
\$ <sub>P</sub>	TOGGLE SWITCH WITH PILOT LIGHT	GB	GLASS BREAK
⊕	DUPLEX RECEPTACLE - 125V,20A,1P	K	KEYPAD (ROUGH-IN W/3/4" C TO ACCESSIBLE LOCATIONS ABOVE CEILING)
⊕	GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE 125V,20A,1P	HD	HAND DRYER
⊕	ISOLATED GROUND RECEPTACLE - 125V,20A,1P	TWC	TWO-WAY COMMUNICATION INTERCOM
⊕	DUPLEX RECEPTACLE - 125V,20A,1P EMERGENCY POWER	⊕	DOOR BELL/BUZZER
⊕	GFI DUPLEX RECEPTACLE - 125V,20A,1P EMERGENCY POWER	AC	ABOVE COUNTER
⊕	SINGLE RECEPTACLE - 125V,20A,1P	EW	ELECTRIC WATER HEATER
⊕	ISOLATED GROUND SINGLE RECEPTACLE - 125V,20A,1P	E.C.	ELECTRICAL CONTRACTOR
⊕	SINGLE RECEPTACLE - 125V, 20A EMERGENCY POWER	NL	NIGHT LIGHT - ON 24 HOURS
⊕	SINGLE RECEPTACLE - 250V, AMPS PER PANEL SCHEDULE	⊕	120V, 1P EQUIPMENT CONNECTION
⊕	QUADRAPLEX RECEPTACLE - 125V,20A,1P	⊕	240V, 1P EQUIPMENT CONNECTION
⊕	ISOLATED GROUND QUADRAPLEX RECEPTACLE - 125V,20A,1P	⊕	240V, 3P EQUIPMENT CONNECTION
⊕	QUADPLEX RECEPTACLE - 125V,20A,1P EMERGENCY POWER	⊕	208V, 1P EQUIPMENT CONNECTION
⊕	DUPLEX RECEPTACLE - 125V,20A,1P (FLOOR MOUNTED)	⊕	208V, 3P EQUIPMENT CONNECTION
⊕	JUNCTION BOX, SIZED PER N.E.C.	⊕	277V, 1P EQUIPMENT CONNECTION
⊕	SPEAKER	⊕	480V, 3P EQUIPMENT CONNECTION
⊕	HUMIDIFIER OUTLET BOX WITH 3/4" C. TO ACCESSIBLE LOCATION ABOVE CEILING	⊕	480V, 1P EQUIPMENT CONNECTION
⊕	THERMOSTAT OUTLET BOX WITH 3/4" C. TO ACCESSIBLE LOCATION ABOVE CEILING	⊕	DISCONNECT SWITCH - SIZE AND POLE AS NOTED
⊕	CLOCK OUTLET	⊕	COMBINATION STARTER/DISCONNECT SWITCH
⊕	TELEPHONE OUTLET BOX WITH 3/4" C. TO ACCESSIBLE LOCATION ABOVE CEILING	⊕	STARTER
⊕	DATA/TELEPHONE OUTLET BOX WITH 3/4" C. TO ACCESSIBLE LOCATION ABOVE CEILING	⊕	PANELBOARD AS SPECIFIED
⊕	TELEVISION OUTLET BOX WITH 3/4" C. TO ACCESSIBLE LOCATION ABOVE CEILING	⊕	FACP
		⊕	FIRE ALARM CONTROL PANEL
		⊕	EXHAUST FAN
		⊕	PUSHBUTTON



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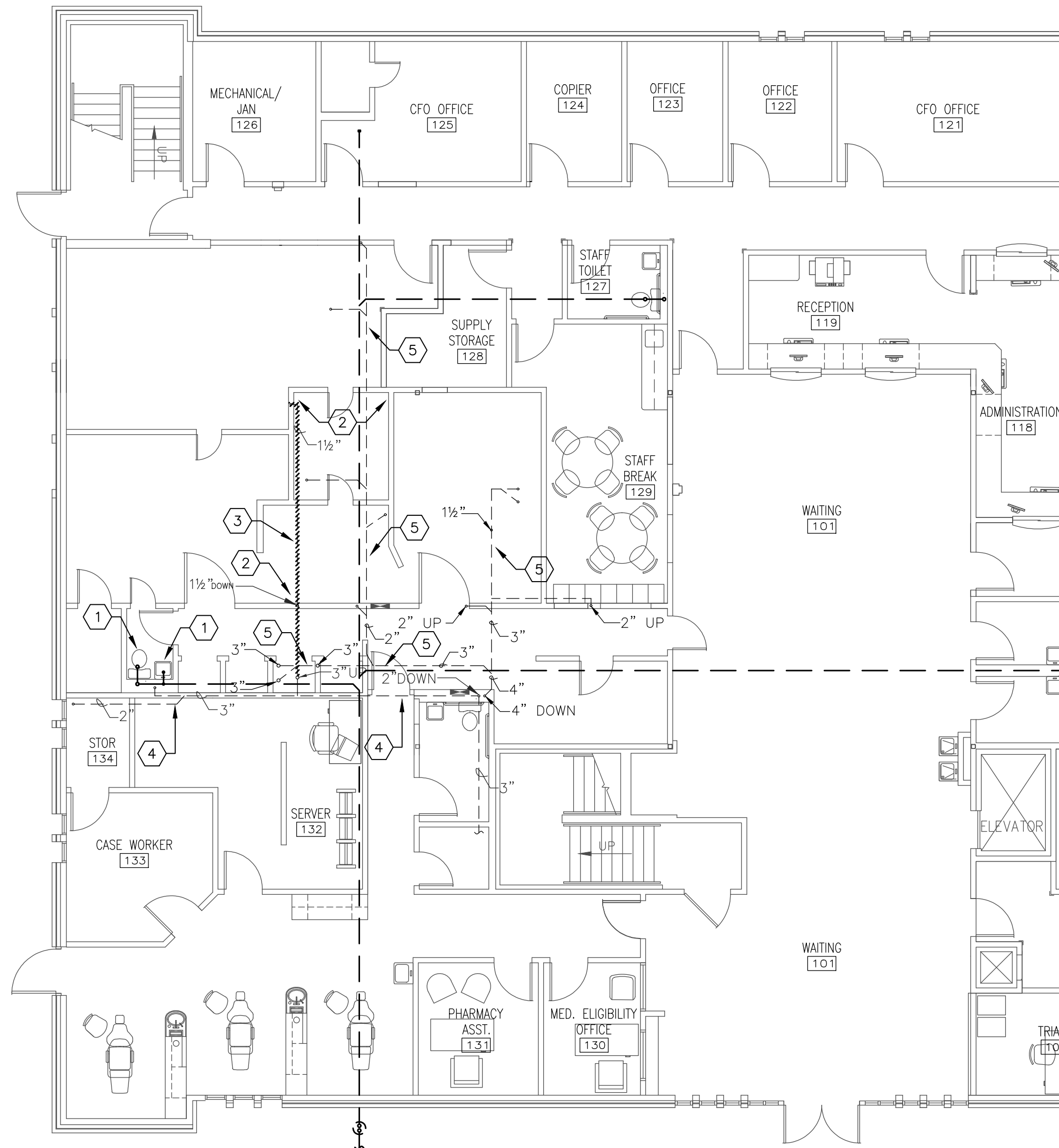
**AMISTAD COMMUNITY HEALTH CENTER  
RENOVATION OF EXISTING MEDICAL CLINIC**  
1533 BROWNLEE BLVD.  
CORPUS CHRISTI, TEXAS

**ELECTRICAL SCHEDULES AND RISER DIAGRAM**

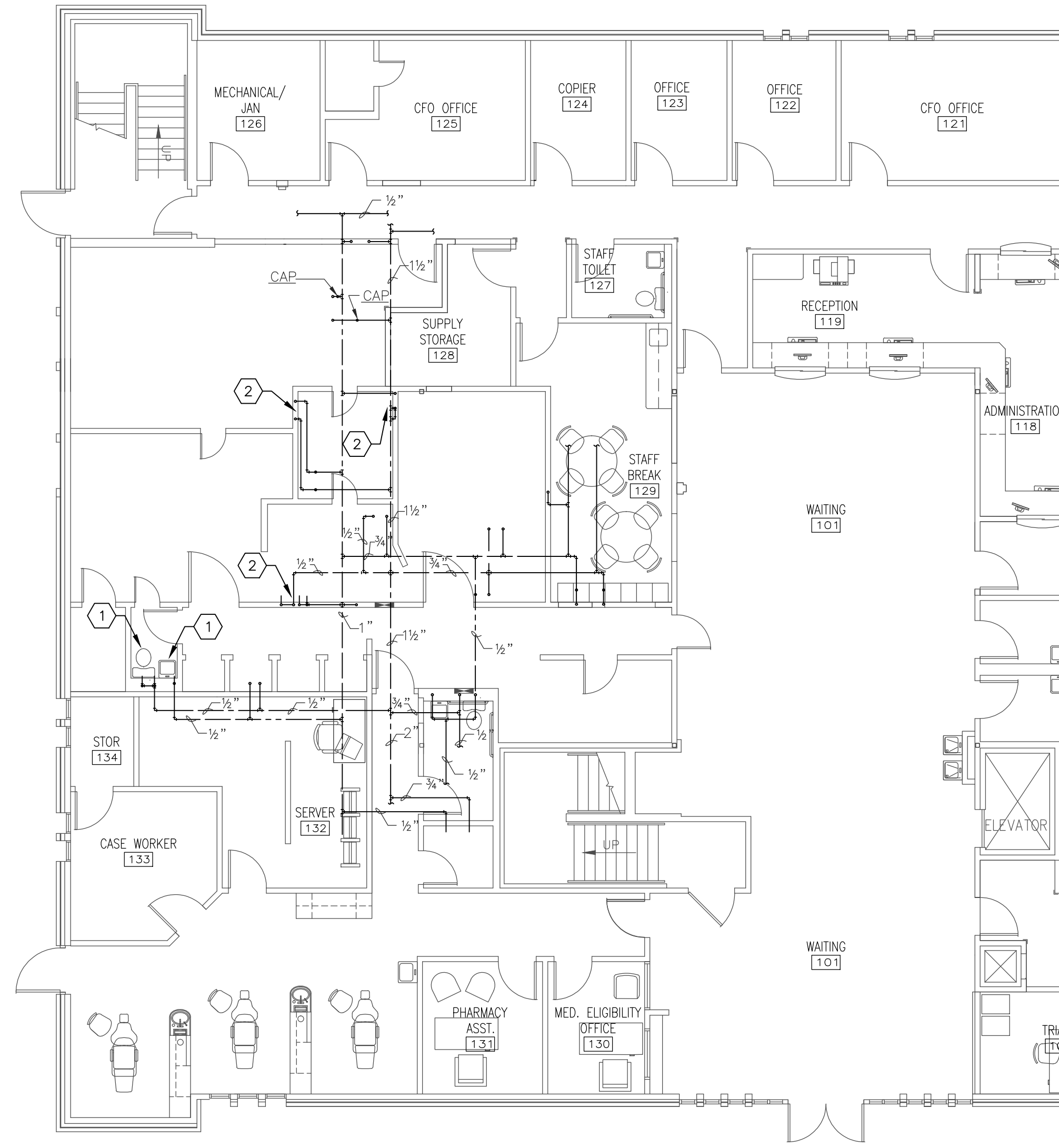
THIS SET OF ELECTRICAL SCHEDULES AND RISER DIAGRAMS IS PART OF THE CONTRACT DOCUMENTS FOR THE RENOVATION OF EXISTING MEDICAL CLINIC AT AMISTAD COMMUNITY HEALTH CENTER. THESE SCHEDULES AND RISER DIAGRAMS SHALL BE USED IN CONJUNCTION WITH THE ELECTRICAL SCHEDULES AND RISER DIAGRAMS PROVIDED BY THE ARCHITECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED BY THE ARCHITECT AND FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

JOB NO.: 201208  
DRN.BY: D.LARA  
CKD.BY: D.LARA  
DATE: 04-05-13  
REVISIONS:

SHEET NUMBER  
**E-3**  
OF



1 PLUMBING WASTE & VENT DEMOLITION PLAN  
1/8" = 1'-0"

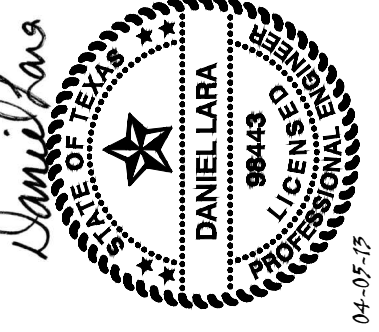


2 PLUMBING DOMESTIC WATER DEMOLITION PLAN  
1/8" = 1'-0"

**PLUMBING DEMOLITION KEYED NOTES:**

- 1 REMOVE EXISTING PLUMBING FIXTURE AND ASSOCIATED PLUMBING PIPING. SANITARY SEWER PIPING SHALL BE CAPPED BELOW SLAB AND WATER/VENT PIPING SHALL BE CAPPED ABOVE CEILING. PREPARE PLUMBING PIPING FOR EXTENSION TO NEW PLUMBING FIXTURES, IF APPLICABLE.
- 2 REMOVE EXISTING PLUMBING PIPING ASSOCIATED WITH PLUMBING FIXTURE THAT HAS ALREADY BEEN REMOVED. SANITARY SEWER PIPING SHALL BE CAPPED BELOW SLAB AND WATER/VENT PIPING SHALL BE CAPPED ABOVE CEILING. PREPARE PLUMBING PIPING FOR EXTENSION TO NEW PLUMBING FIXTURES, IF APPLICABLE.
- 3 REMOVE EXISTING SECTION OF VENT PIPING SHOWN HATCHED.
- 4 ALL EXISTING PVC VENT PIPING (WITHIN THE AREA OF WORK) INTENDED TO REMAIN SHALL BE INSULATED WITH 1 HR FIRE RATED FIRE BLANKET INSULATION.
- 5 ALL EXISTING PVC DRAINAGE PIPING (WITHIN THE AREA OF WORK) SERVING THE 2ND FLOOR PLUMBING FIXTURES SHALL BE INSULATED WITH 1 HR FIRE RATED FIRE BLANKET INSULATION.

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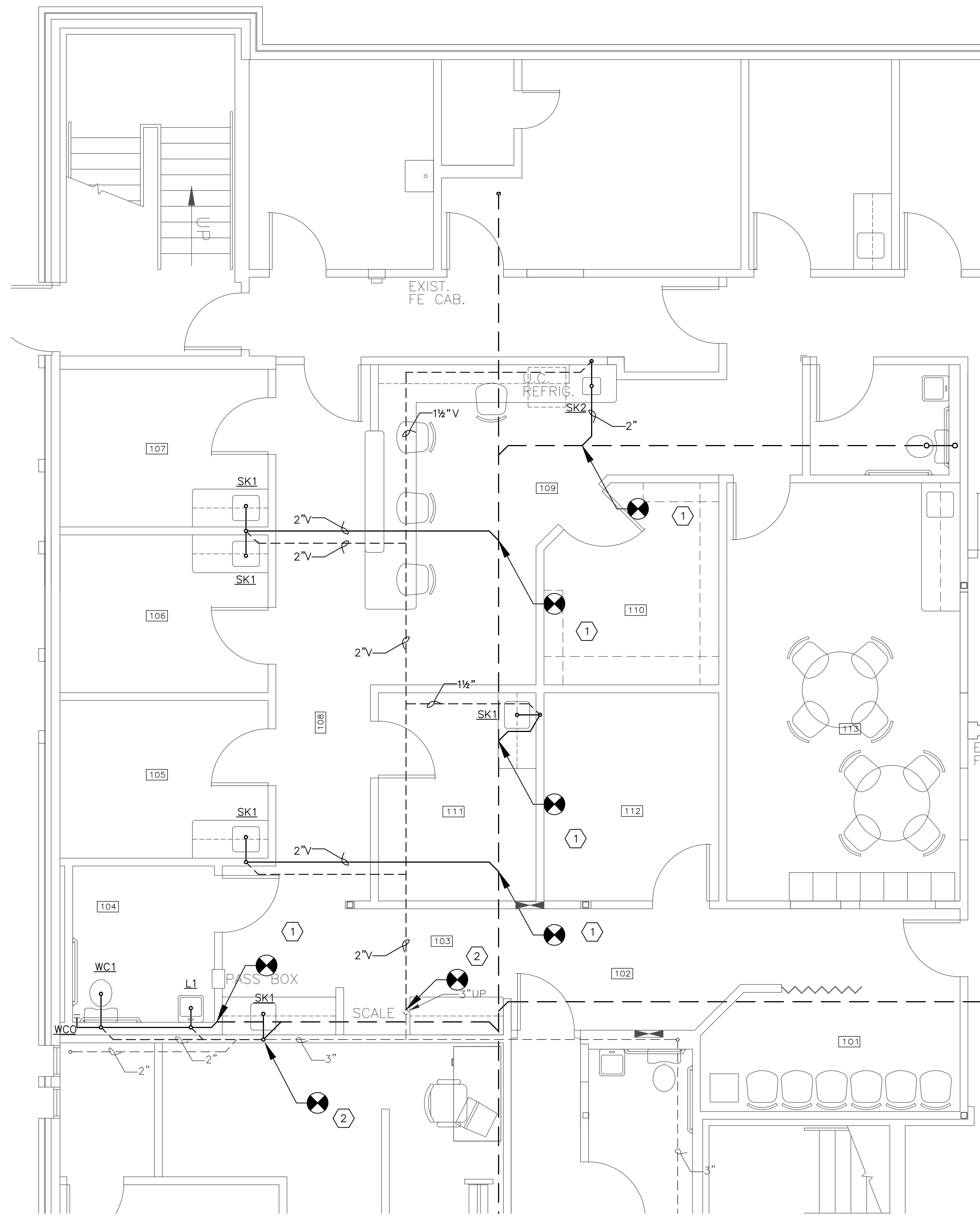
**AMISTAD COMMUNITY HEALTH CENTER  
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**PLUMBING DEMOLITION PLANS**

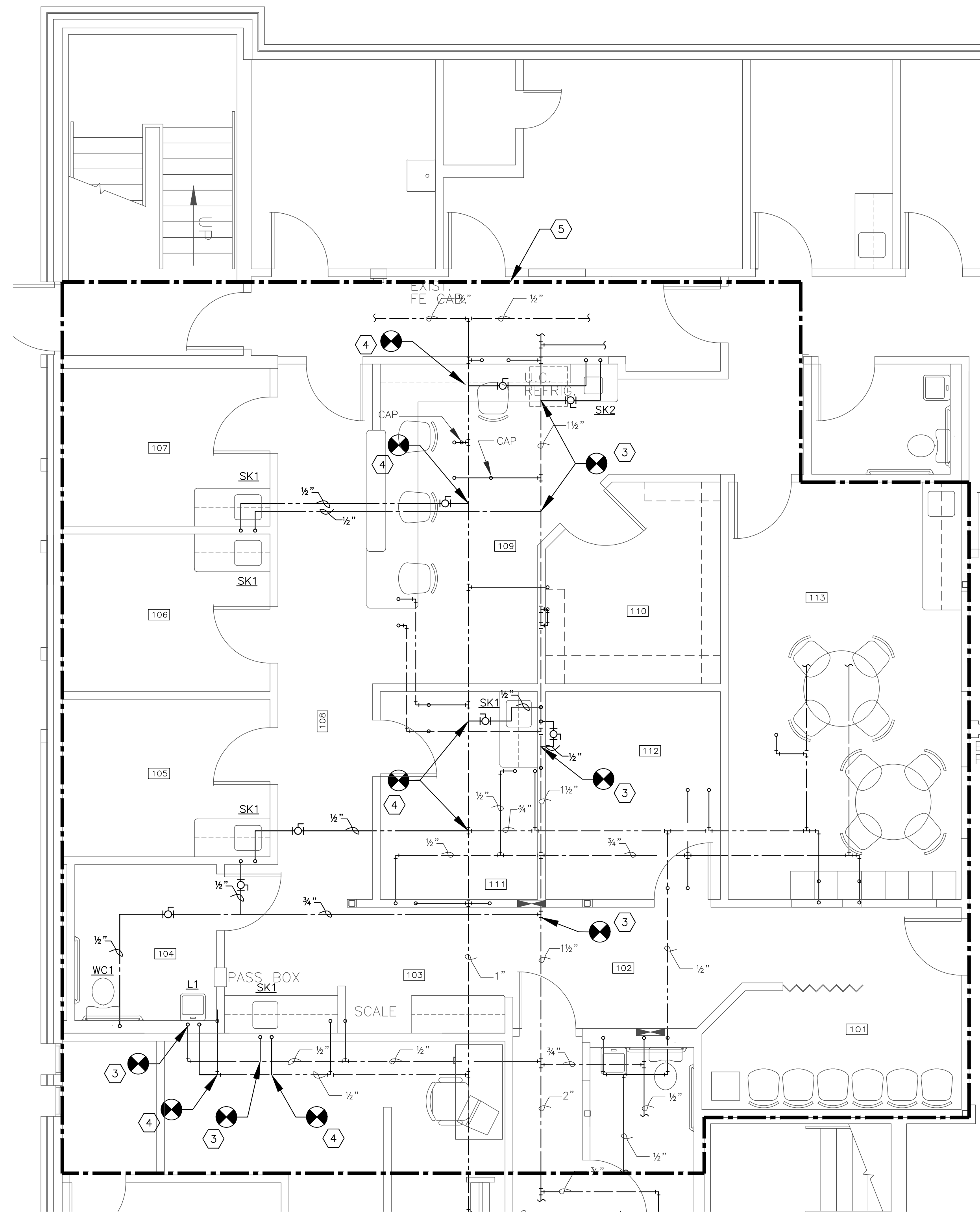
THIS PLAN IS A PART OF THE CONTRACT DOCUMENTS FOR THE RENOVATION OF EXISTING MEDICAL CLINIC AT AMISTAD COMMUNITY HEALTH CENTER. IT IS TO BE USED IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF ALL INFORMATION SHOWN ON THIS PLAN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INFORMATION FROM THE ARCHITECT AND ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INFORMATION FROM THE ARCHITECT AND ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INFORMATION FROM THE ARCHITECT AND ENGINEER.

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OF



1 PLUMBING WASTE & VENT FLOOR PLAN  
1/4" = 1'-0"

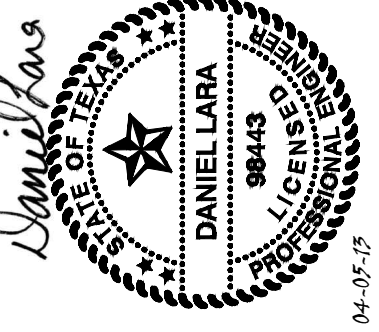


2 PLUMBING DOMESTIC WATER FLOOR PLAN  
1/4" = 1'-0"

**PLUMBING KEYED NOTES:**

- ① CONNECT TO EXISTING SANITARY SEWER PIPING. FIELD VERIFY LOCATION, SIZE, DEPTH, AND INVERT ELEVATION.
- ② CONNECT TO EXISTING VENT PIPING. FIELD VERIFY LOCATION AND SIZE.
- ③ CONNECT TO EXISTING COLD WATER PIPING
- ④ CONNECT TO EXISTING HOT WATER PIPING
- ⑤ ALL HOT WATER PIPING (NEW & EXISTING) WITHIN THE AREA OF WORK SHALL BE INSULATED PER SPECIFICATIONS.

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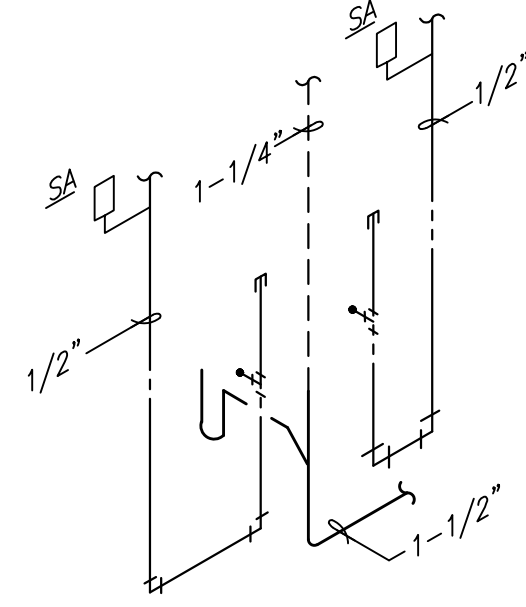
PLUMBING FLOOR PLANS

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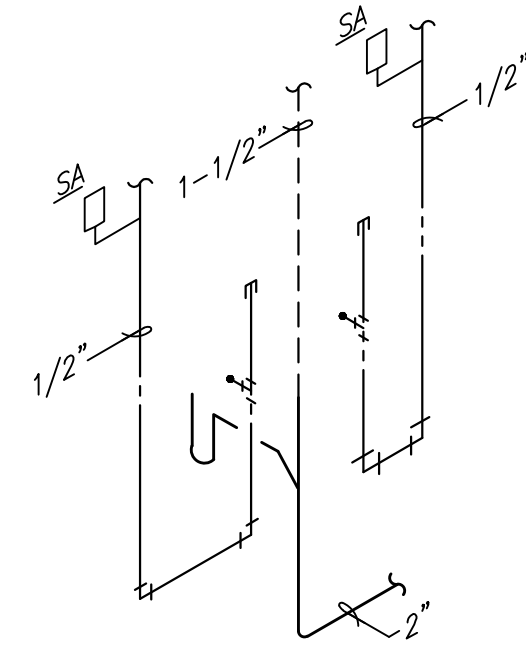
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**GENERAL NOTES:**

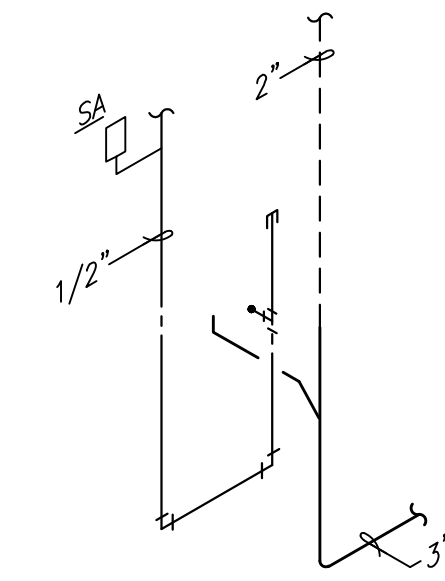
- A. THESE GENERAL NOTES APPLY TO ALL PLUMBING DRAWINGS.
- B. VERIFY FIELD CONDITIONS PRIOR TO BIDDING AND COMMENCEMENT OF ANY WORK. BID PROPOSAL SHALL INCLUDE ALLOWANCE FOR EXISTING CONDITIONS.
- C. FIELD VERIFY ALL SANITARY SEWER INVERTS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT OR ENGINEER IF EXISTING INVERT ELEVATION IS NOT OF ADEQUATE DEPTH TO ALLOW TIE-IN OF NEW SANITARY SEWER LINES.
- D. CAULK AND SEAL ALL FIXTURES AT WALLS AND FLOORS WATER TIGHT.
- E. INSULATE ALL HOT WATER PIPING WITH 1" FIBERGLASS INSULATION.
- F. THE CONTRACTOR SHALL ROUGH IN AND MAKE ALL FINAL CONNECTIONS FOR FIXTURES, TRIM, AND EQUIPMENT SUPPLIED BY OTHERS, INCLUDING P-TRAPS, CONTINUOUS WASTES, WATER SUPPLIES AND INDIRECT DRAINS. PROVIDE SHUT-OFF VALVES AND VACUUM BREAKERS WHERE REQUIRED BY CODE.
- G. ALL PLUMBING FIXTURES AND EQUIPMENT SHALL BE MOUNTED AT HEIGHTS INDICATED IN THE FIXTURE SCHEDULE AND THE ARCHITECTURAL DRAWINGS - OBTAIN EXACT ROUGH IN LOCATIONS AND HEIGHTS FROM SHOP DRAWINGS PROVIDED BY CONTRACTOR PRIOR TO INSTALLATION.
- H. PROVIDE 1/2" NEOPRENE INSULATION VAPORSEALED ON WASTE PIPING SERVING A/C DRAINS INCLUDING HUB DRAINS WITH P-TRAP & HORIZONTAL PIPE TO VERTICAL STACK.
- I. SLEEVE & CAULK ALL PIPING THRU FLOORS AND WALLS.
- J. ALL PIPING PENETRATIONS OF FIRE-RATED BARRIERS SHALL BE PROTECTED WITH FIRE BLOCKING MATERIAL PER SPECIFICATIONS.
- K. PROVIDE ACCESS TO ALL PLUMBING EQUIPMENT AND DEVICE SUCH AS TRAP-PRIMERS AND SHOCK ABSORBERS. INSTALL IN ACCESSIBLE CHASE OR ABOVE ACCESSIBLE CEILING OR PROVIDE ACCESS DOOR.



**LAVATORY RISER DIAGRAM**  
N.T.S.



**SINK RISER DIAGRAM**  
N.T.S.



**WATER CLOSET RISER DIAGRAM**  
N.T.S.

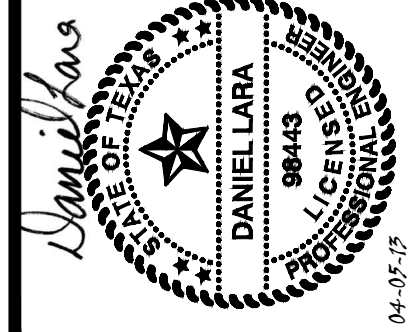
PLUMBING FIXTURE SCHEDULE		
DESIG.	DESCRIPTION	MANUFACTURER & CATALOG #
WC1	17" HIGH FLOOR MOUNTED BOTTOM OUTLET, TAS/ADA COMPLIANT, WHITE V.C., 1.1 GPF LOW CONSUMPTION WATER CLOSET WITH SIPHON ACTION, ELONGATED RIM, TANK TYPE, HEAVY DUTY WHITE PLASTIC OPEN FRONT SEAT LESS COVER, TRIP LEVER SHALL BE LOCATED ON THE LAVATORY SIDE OF WATER CLOSET.	AMERICAN STANDARD #2467.100 "CADET" CHURCH #9500NSSC SEAT
L1	WALL MOUNTED, V.C. LAVATORY, 19" X 17", CONCEALED ARMS, TAS/ADA COMPLIANT, SELF DRAINING DECK, FAUCET HOLES ON 4" CENTERS WITH OPEN GRID STRAINER, CENTERSET MIXING FAUCET; P-TRAP AND SUPPLY KIT.	AMERICAN STANDARD #0321.075 "DECLYN" FAUCET: AMERICAN STANDARD #2385.404 JOSAM 17100M LAVATORY CARRIER TRUBRO #103 LAV GUARD J.R. SMITH 2698 TRAP PRIMER
SK1	22" x 19" TAS/ADA SINGLE COMPARTMENT SINK WITH 6" DEEP BOWL, SELF RIMMING, 18 GA, TYPE 304 S.S., 4" O.C.; GOOSENECK AND WRIST BLADE HANDLES; MCGUIRE 8912 CAST BODY P-TRAP W/C.O.; MCGUIRE 2169CC C.P. SUPPLY KIT, ESCUTCHEONS.	ELKAY LRAD2219 FAUCET: T&S B-0892-0199-21 ELKAY LKJ-35 SINK DRAIN TRUBRO #102 LAV GUARD
SK2	15" x 17" TAS/ADA SINGLE COMPARTMENT SINK WITH 6" DEEP BOWL, SELF RIMMING, 18 GA, TYPE 304 S.S., 4" O.C.; GOOSENECK AND WRIST BLADE HANDLES; MCGUIRE 8912 CAST BODY P-TRAP W/C.O.; MCGUIRE 2169CC C.P. SUPPLY KIT, ESCUTCHEONS.	ELKAY LRAD1517 FAUCET: T&S B-0892-0199-21 ELKAY LKJ-35 SINK DRAIN TRUBRO #102 LAV GUARD
SA	SEAT CONNECTION, HYDRA-RESTER ENGINEERED WATER HAMMER ARRESTER.	SIoux ORIGINAL CHIEF
WCO	CAST IRON WALL CLEANOUT WITH S.S. COVER, CENTER SCREW, CLEANOUT TEE WITH NO HUB CONNECTION	JOSAM 58600-COT
FCO	LEVELEZE FLOOR CLEANOUT, C.I. BODY, NO HUB CONNECTION, NIKALLOY COVER AND ROUND TOP.	JOSAM 57008-Z-1

CONNECTION SCHEDULE				
FIXTURE	WASTE	VENT	CW	HW
WATER CLOSETS	3"	2"	1/2"	--
LAVATORYS	1-1/4"	1-1/2"	1/2"	1/2"
SINKS	1-1/2"	1-1/2"	1/2"	1/2"

NOTES:  
1. SIZES SHOWN ARE MINIMUM CONNECTION SIZES TO A SINGLE FIXTURE.  
2. ALL WASTE PIPING BELOW GRADE SHALL BE MINIMUM 2".

PLUMBING LEGEND	
— SS —	EXISTING SANITARY SEWER
-----	EXISTING DOMESTIC COLD WATER
-----	EXISTING DOMESTIC HOT WATER
-----	EXISTING DOMESTIC HOT WATER RETURN
— G —	EXISTING GAS LINE
-----	DOMESTIC COLD WATER
-----	DOMESTIC HOT WATER
-----	DOMESTIC HOT WATER RETURN
— SS —	SANITARY SEWER
— V —	SANITARY VENT
— G —	GAS LINE
⊗	POINT OF CONNECTION BETWEEN NEW AND EXISTING
SA	WATER HAMMER ARRESTOR

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