



State of Utah

GARY R. HERBERT
Governor

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Lt. Governor

Department of Administrative Services

KIMBERLY K. HOOD
Executive Director

Division of Facilities Construction and Management

DAVID G. BUXTON
Director

ADDENDUM NO. 2

Date: September 24, 2012

To: Contractors

From: Jim Russell – Project Manager

Reference: Building Consolidation – Utah State Hospital
Department of Human Services – Provo, Utah
DFCM Project No. 11065420

Subject: **Addendum No. 2**

Pages	Addendum Cover Sheet	1	pages
	<u>Architect's Alternate Clarification and Bid Package No. 1</u>	<u>135</u>	<u>pages</u>
	Total	136	pages

Note: *This Addendum shall be included as part of the Contract Documents. Items in this Addendum apply to all drawings and specification sections whether referenced or not involving the portion of the work added, deleted, modified, or otherwise addressed in the Addendum. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to Disqualification.*

While we contend that SB220 should only be potentially applicable to a contract issued after the effective date of said bill, this is to clarify that for purposes of this contract, regardless of the execution or effective dates of this contract, the status of Utah Law and remedies available to the State of Utah and DFCM, as it relates to any matter referred to or affected by said SB220, shall be the Utah law in effect at the time of the issuance of this Addendum.

2.1 SCHEDULE CHANGES: There are no Project Schedule changes.

2.2 GENERAL ITEMS: See attached Alternate Clarification and Architect's Bid Package No. 1.



**BID PACKAGE #1 ADDENDUM 1
(DFCM ADDENDUM #2)**

Project:	Utah State Hospital Consolidation 1300 East Center Street Provo, Utah	Addendum Number:	01
		Date:	9/20/2012
DFCM Proj #:	11065420 (Addendum #2)		
FFKR Proj #:	11111 (Addendum #1)		
Contractor:	TBD		

The Addendum is for all persons preparing Bids for the above named project; and, as such, shall be made a part of the Documents. Changes, corrections, and deletions enumerated herein shall be included in the Contractor's Bid. Bidders should acknowledge receipt of the Addendum in the space provided in the Contractor's Bid Form. Failure to do so may subject the Bidder to disqualification. In case of any conflict between the drawings, specifications, and this addendum, this addendum shall govern.

Summary: This Addendum describes changes to the Drawings and Project Manual for Bid Package #1.

Please note that a separate Addendum #1 was issued by the DFCM on August 22nd. The attached Addendum #1 is an addendum to the Bid Set dated and distributed to the short listed contractors on September 12th.



Make changes to Bid documents as follows

General:

- Keynote 04.43
remove weep vent spacing (refer to Specifications)

Specification Section - Description of change:

- **TABLE OF CONTENTS**

DIVISION 8 - OPENINGS

add Section

08 4226 - GLASS SHOWER DOORS

DIVISION 10 - SPECIALTIES

add Section

10 1400 - SIGNAGE

DIVISION 26 - ELECTRICAL

add Section

26 2923 - VARIABLE FREQUENCY MOTOR CONTROLLERS

DIVISION 32 - EXTERIOR IMPROVEMENTS

add Section

32 1726 - DETECTABLE WARNING PANELS

- **VOLUME 1**

- 01 2300.3.1

add

E. Alternate No. 5: Payne Building Exterior

1. Base Bid: Exterior concrete to be exposed and finished as specified.

2. Alternate: Exterior concrete to be finished smooth with additive integral pigment.

- 06 4166.2.1.A

add line

7. Johnson Brothers Planing Mill

- 06 4600.2.1.A

add line



8. Johnson Brothers Planing Mill

- 07 1326 2.2.A.1

revise to read

" ... with requirements, ~~approved in writing by Architect prior to bid~~, from one of the following manufactures: "

- 07 1326 2.3.A.1

add line

b. Meadows, W.R.,Inc; SealTight Mel-Rol Precon

- 07 1900 2.1.A.1

add line

g. Meadows, W.R.,Inc; Deck-O-Shield

- 07 2713 2.3.A.1

revise to read

" ... or one of the following: ~~approved in writing by Architect prior to bid~~: "

add lines

c. Polyguard Products, Inc.; Polyguard 300

d. Carlisle Coatings & Waterproofing Inc.; CCW-705

- 07 5419 - Polyvinyl-Chloride (PVC) Roofing

Section re-issued in its entirety.

See attached.

- 08 1113 2.2.1.A

add line

10. Curries Company, an Assa Abloy Group company.

- DIVISION 08 - OPENINGS

add Section

08 4226 - Glass Shower Doors

See attached

- 08 7100 3.3.G.3

reference attachment

for revisions from this section through section header Door Hardware Schedule (Payne Building)

change section header

Door Hardware Schedule (Payne Building)

to read

3.9 Door Hardware Schedule (Payne Building)



change section header
Door Hardware Schedule (Pediatric Facility)
to read
3.10 Door Hardware Schedule (Pediatric Facility)

- 08 7100 3.9 Door Hardware Schedule (Payne Building)

HW Set: 12

change line from

1 PROX READER AND POWER SUPPLY BY DIVISION 28

to

2 PROX READER AND POWER SUPPLY BY DIVISION 28

- 08 7100 3.9 Door Hardware Schedule (Payne Building)

HW Set: 15.2

delete lines

1 EA PASSAGE SET L9010 18A 626 SCH

1 EA SURFACE CLOSER 4010 MC TBWMS 689 LCN

add line

1 EA PASSAGE SET L9010 06A 626 SCH

1 EA SURFACE CLOSER 4111 EDA TBWMS 689 LCN

- 08 7100 3.9 Door Hardware Schedule (Payne Building)

HW Set: AL-05

add line

1 REMOTE RELEASE BY DIVISION 26

- VOLUME 2

- 09 5416 2.3.A

revise paragraph to read

" ... , provide ~~Luminous canopy by Armstrong World Industries, Inc.~~ **Varia produced from Ecoresin sheet by 3form, Inc.** or equivalent product, ... "

- 09 5416 2.3.B

change line 3 to read:

" Gauge: ~~5/8 inch~~ **3/8 inch.** "

change line 4 to read:

" Light Transmitting Plastic: ~~Channeled Polycarbonate, 0.50 psf~~ **Engineered polyester resin.** "

- 09 5416 3.3 - Installation

add lines:



- G. Manufacturer’s shop to fabricate items to the greatest degree possible.
- H. Utilize fasteners, adhesives and bonding agents recommended by manufacturer for type of installation indicated. Material that is chipped, warped, hazed or discolored as a result of installation or fabrication methods will be rejected.
- I. Install components plumb, level and rigid, scribed to adjacent finishes, in accordance with approved shop drawings and product data.
- J. Form field joints using manufacturer’s recommended procedures. Locate seams in panels so that they are not directly in line with seams in substrates.

- 09 5426 2.3

Delete Section 2.3 in its entirety.

- 09 6816 2.1.A.1.a, 09 6816 2.1.A.2.a, 09 6816 2.1.A.3.a, and 09 6816 2.1.A.4.a change from

~~Contact: Certified Sales and Services
Attn: Gordon Todd
801 529 7928~~

to

**Contact: Wall 2 Wall Commercial Floor Covering:
State Carpet Contract #MA 2097
Attn: Dave Mellus
801 694 6375**

DIVISION 10 - SPECIALTIES

add Section

10 1400 Signage

See attached.

- VOLUME 3

DIVISION 26 - ELECTRICAL

add Section

26 2923 - VARIABLE FREQUENCY MOTOR CONTROLLERS

See attached

DIVISION 32 - EXTERIOR IMPROVEMENTS

add Section

32 1726 - DETECTABLE WARNING PANELS

See attached

SECTION 07 5419 - POLYVINYL-CHLORIDE (PVC) ROOFING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Fully adhered PVC membrane roofing system over insulation.
2. Roof insulation of thicknesses required to achieve R-30 rating unless otherwise noted.
3. Walkway pads to all roof mounted equipment from roof access points.
4. **20** year NDL warranty.

B. **Construct roof free** of non-draining areas, with positive slope to drain, under all conditions. Acceptance by the manufacturer of such standing water areas, low spots, wrinkles or other conditions that retain water under their existing guidelines shall have no bearing on the Architect or Owner's requirements to accept conditions that are deemed not to be acceptable. Such defects that create areas not suited to free drainage shall be cause for rejection of the installation until corrected.

1. Factory fabricated components may require modification to achieve positive drainage, to comply with specific project requirements for dimensional limitations and slopes to drain.

C. Related Sections include the following:

1. Section 06 1053 "Miscellaneous Rough Carpentry" for wood nailers, curbs, and blocking.
2. Section 07 2100 "Thermal Insulation" for insulation beneath the roof deck.
3. Section 07 6200 "Sheet Metal Flashing and Trim" for metal roof penetration flashings, flashings, and counterflashings and rain drainage as work of this Section.
4. Section 07 9200 "Joint Sealants."

1.2 DEFINITIONS

A. Roofing Terminology: Refer to ASTM D 1079 and glossary of NRCA's "The NRCA Roofing and Waterproofing Manual" for definition of terms related to roofing work in this Section.

B. Design Uplift Pressure: The uplift pressure, calculated according to procedures in SPRI's "Wind Load Design Guide for Fully Adhered and Mechanically Fastened Roofing Systems," before multiplication by a safety factor.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

B. LEED Submittals:

1. Product Data for Credit SS 7.2: For roof materials, documentation indicating that roof materials comply with Solar Reflectance Index requirement.
 2. Product Data for Credit IEQ 4.1: For adhesives and sealants used inside the weatherproofing system, documentation including printed statement of VOC content.
- C. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other Work.
1. Base flashings and membrane terminations.
 2. Tapered insulation, including slopes.
 3. Insulation fastening patterns.
 4. Roof sump detail showing coordination with roof drains.
- D. Samples for Verification: For the following products:
1. 12-by-12-inch square of sheet roofing, of color specified, including T-shaped side and end lap seam.

1.4 INFORMATIONAL SUBMITTALS

- A. Installer Certificates: Signed by roofing system manufacturer certifying that Installer is approved, authorized, or licensed by manufacturer to install roofing system.
1. **Submit pre-installation notice from manufacture prior to start of Work. Include the following:**
 - a. **Confirmation that membrane and accessories comply with specifications.**
 - b. **Confirmation that scope of Work is in accordance with published technical data as per manufacture.**
 - c. **Confirmation that warranty has been requested and will be issued on DFCM manufacture warranty form at completion of roofing.**
- B. Manufacturer Certificates: Signed by roofing manufacturer certifying that roofing system complies with requirements specified in "Performance Requirements" Article.
1. Submit evidence of meeting performance requirements.
- C. Qualification Data: For Installer and manufacturer.
- D. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for components of roofing system.
- E. Research/Evaluation Reports: For components of membrane roofing system.
- F. Inspection Report: Copy of roofing system manufacturer's inspection report of completed roofing installation.

1.5 CLOSEOUT SUBMITTALS

- A. Warranties: Special warranties specified in this Section.
- B. Maintenance Data: For roofing system to include in maintenance manuals.
- C. DFCM Required Roofing Closeout Documents: Require Installer to submit the following documents (**available from DFCM**) to project manager at completion of roofing Work. Project manager shall submit these documents to the roofing program manager. Keep copy of these documents in project file and delivered to agency.
 - 1. DFCM Manufacture Roofing Warranty
 - 2. DFCM 5-year Contractor Warranty – Required on all roofing projects.
 - 3. DFCM Roofing History Record.
 - 4. Roof Warranty Sign – See Roofing Design Requirements for details.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's warranty prior to receipt of bids.
 - 1. A minimum of 15 years experience is required on similar sized projects.
- B. **Manufacturer Qualifications: A qualified firm listed in NRCA's low slope roofing materials guide, with a 10-year successful history as a roofing manufacture, that is approved by DFCM and that can show documented proof of how they intend to meet warranty obligations. Must be provided in contractor's submittal package.**
 - 1. **Manufacture must agree to and be willing to sign indicated State of Utah (DFCM) manufactures warranty for the roof system. The DFCM warranty, not the manufactures standard warranty, will be required at project completion.**
 - 2. **Manufacture must have a certified installer/contractor program. This program must include continuing education for the contractor.**
 - 3. **Manufacture must have a history of meeting Warranty obligations.**
 - 4. **Manufacture is required to release all inspection reports concerning warranted roof system to contractor to submit to architect.**
- C. Testing Agency Qualifications: An independent testing agency with the experience and capability to conduct the testing indicated, as documented according to ASTM E 548.
- D. Source Limitations: Obtain components for membrane roofing system from or approved by roofing membrane manufacturer.
- E. Observation and Documentation: Roofing application is to be observed, a minimum of 2 visits per month, by the roof membrane manufacturer or consultant trained and approved by the membrane manufacturer. Observations are to include documentation of correct installation of the roof assembly.

1. An employee of the roof installer will not qualify to conduct project monitoring.
 2. Monitoring expenses are to be included in the roof installation cost.
 3. **Require manufacture to provide, at no additional cost to owner, start up meeting, progress inspections, and a final warranty inspection at project completion by a full time technical representative.**
- F. Exterior Fire-Test Exposure: ASTM E 108, Class A; for application and roof slopes indicated, as determined by testing identical membrane roofing materials by a qualified testing agency. Materials shall be identified with appropriate markings of applicable testing agency.
- G. Preliminary Roofing Conference: Before starting roof deck construction, conduct conference at Project site. Review methods and procedures related to roof deck construction and roofing system including, but not limited to, the following:
1. Meet with Owner, DFCM Roofing Program Manager, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, and installers whose work interfaces with or affects roofing including installers of roof accessories and roof-mounted equipment.
 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
 3. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 4. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
 5. Review conditions of sloped deck and tapered insulation to confirm that no flat spots exist in the installation.
 6. Review structural loading limitations of roof deck during and after roofing.
 7. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
 8. Review requirements of existing membrane to maintain warranty in effect at time of work.
 9. Review governing regulations and requirements for insurance and certificates if applicable.
 10. Review temporary protection requirements for roofing system during and after installation.
 11. Review roof observation and repair procedures after roofing installation.
- H. Preinstallation Conference: Conduct conference at Project site. Comply with requirements in Division 01 Section "Project Management and Coordination." Review methods and procedures related to roofing system including, but not limited to, the following:
1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, and installers whose work interfaces with or affects roofing including installers of roof accessories and roof-mounted equipment.
 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
 3. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.

4. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
5. Review structural loading limitations of roof deck during and after roofing.
6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
7. Review governing regulations and requirements for insurance and certificates if applicable.
8. Review temporary protection requirements for roofing system during and after installation.
9. Review roof observation and repair procedures after roofing installation.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, and directions for storing and mixing with other components.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
 1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. **Store elevated off ground or roof deck. Do not use factory wrap as protective cover material.** Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
- D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

1.8 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

1.9 WARRANTY

- A. Special Warranty: DFCM standard Single Ply Warranty form, (attached to the end of this section) without NDL monetary limitation, in which manufacturer agrees to repair or replace components of membrane roofing system that fail in materials or workmanship within specified warranty period.

1. **Special warranty includes roofing membrane, base flashings, roofing membrane accessories, roof insulation, fasteners, walkway products, and other components of membrane roofing system. Warranty shall specify minimum 90 mile per hour wind speed coverage.**
 2. Warranty Period: **20** years from date of Substantial Completion.
- B. Special Project Warranty: DFCM's standard Roofing Contractor's Warranty form, obtained from DFCM and signed by Installer, covering the Work of this Section, including all components of membrane roofing system, for the following warranty period:**
1. **Warranty Period: Five years from date of Substantial Completion.**

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. General: Provide installed roofing membrane and base flashings that remain watertight; do not permit the passage of water; and resist specified uplift pressures, thermally induced movement, and exposure to weather without failure.
1. **Where manufacturer's standards show one or more possible approaches for compliance with standards, provide the most stringent approach.**
 2. **If discrepancies exist between or within the contract documents, the more stringent requirement will be enforced.**
 3. **Comply with ASTM D 4434 for minimum standard linear dimensional change and for heat aging.**
 4. **Comply with ASTM D 5635 minimum standard for dynamic impact resistance.**
 5. **Comply with ASTM D 2136 minimum standard for low temperature flexibility.**
- B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by roofing membrane manufacturer based on testing and field experience.
- C. Fire-Test-Response Characteristics: Provide membrane roofing materials with the fire-test-response characteristics indicated as determined by testing identical products per test method below by UL, FMG, or another testing and inspecting agency acceptable to authorities having jurisdiction. Materials shall be identified with appropriate markings of applicable testing and inspecting agency.
1. All products to comply with UL P717 or other 1 hr UL roof assembly pre-approved prior to bid.
 2. Exterior Fire-Test Exposure: Class A; ASTM E 108, for application and roof slopes indicated.
 3. Fire-Resistance Ratings: ASTM E 119, for fire-resistance-rated roof assemblies of which roofing system is a part.
 4. **Do not use materials that contain asbestos.**

- D. FMG Listing: Provide roofing membrane, base flashings, and component materials that comply with requirements in FMG 4450 and FMG 4470 as part of a membrane roofing system and that are listed in FMG's "Approval Guide" for Class 1 or noncombustible construction, as applicable. Identify materials with FMG markings.
 - 1. Fire/Windstorm Classification: Class 1A-90.
 - 2. **Design roofing for 90 m.p.h. minimum wind speed.**
- E. Solar Reflectance Index: Not less than 78 when calculated according to ASTM E 1980, based on testing identical products by a qualified testing agency.
- F. **Energy Star Listing: Provide roofing system that is listed on the DOE's ENERGY STAR "Roof Products Qualified Product List" for low-slope roof products.**

2.2 MANUFACTURES AND INSTALLERS

- A. Consult current DFCM list of approved Manufacturers and Installers.

2.3 ROOFING MEMBRANE

- A. PVC Sheet: ASTM D 4434, Type III, ~~liquid coated, acrylic coated~~, fabric reinforced, **sheets with stable or low-migrating plasticizers and minimum of 10 year successful performance on projects similar in scope. Minor formulation changes are acceptable as long as the membrane has a successful history.** ~~Membrane must be manufactured by the company supplying the warranty (no private labeling) with a minimum 20 yr successful track record in the same geographical area.~~
 - 1. **Use membrane with low-wicking scrim.**
 - 2. **Provide balanced membrane with scrim near center of membrane and with no less than 27 mils polymer above scrim.**
- B. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work. Only manufacturers that can comply with ALL of the following material performance descriptions will be considered. Manufacturers must be able to prove conformance to the performance criteria on each item or they will be rejected.
 - 1. Thickness: **60 mils, nominal, but not less than 57 mils actual thickness.** ~~with a minimum of 46 mils above reinforcing layer and a 30 year membrane warranty~~
 - 2. Exposed Face Color: White.

2.4 AUXILIARY MATERIALS

- A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with membrane roofing.
 - 1. Liquid-type auxiliary materials shall meet VOC limits of authorities having jurisdiction.

2. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the following limits for VOC content:
 - a. Plastic Foam Adhesives: 50 g/L.
 - b. Gypsum Board and Panel Adhesives: 50 g/L.
 - c. Multipurpose Construction Adhesives: 70 g/L.
 - d. Single-Ply Roof Membrane Adhesives: 250 g/L.
 - e. PVC Welding Compounds: 510 g/L.
 - f. Adhesive Primer for Plastic: 650 g/L
 - g. Single-Ply Roof Membrane Sealants: 450 g/L.
 - h. Nonmembrane Roof Sealants: 300 g/L.
 - i. Sealant Primers for Nonporous Substrates: 250 g/L.
 - j. Sealant Primers for Porous Substrates: 775 g/L.
 - k. Other Adhesives and Sealants: 250 g/L.

- B. Sheet Flashing: Manufacturer's standard sheet flashing of same material, type, reinforcement, , and color as sheet membrane.
 1. Thickness may only be modified as required to turn 90 degree corners with membrane without crazing or cracking the face of the membrane
- C. Bonding Adhesive: Manufacturer's standard bonding adhesive for membrane, and solvent-based bonding adhesive for base flashings.
- D. Metal Termination Bars: Manufacturer's standard predrilled stainless-steel or aluminum bars, approximately 1 by 1/8 inch thick; with anchors.
- E. Metal Battens: Manufacturer's standard aluminum-zinc-alloy-coated or zinc-coated steel sheet, approximately 1 inch wide by 0.05 inch thick, prepunched.
- F. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FMG 4470, designed for fastening membrane to substrate, and acceptable to membrane roofing system manufacturer.
- G. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, termination reglets, cover strips, and other accessories.

2.5 ROOF INSULATION

- A. General: Provide preformed roof insulation boards that comply with requirements and referenced standards, **that are covered under the DFCM manufacture warranty, and** selected from manufacturer's standard sizes and of thicknesses indicated.
 1. **Provide insulation approved and documented as UL rated assembly that meets code requirements of building roofing system.**
 2. **Provide insulation with Long Term Thermal Resistance (LTTR) that meets current code and requirements of the building.**

- B. Polyisocyanurate Board Insulation: ASTM C 1289, Type II, felt or glass-fiber mat facer on both major surfaces.
 - 1. Available Manufacturers include the following:
 - a. Atlas Roofing Corporation.
 - b. Carlisle SynTec Incorporated.
 - c. Firestone Building Products Company.
 - d. Hunter Panels, LLC.
 - e. Johns Manville International, Inc.
- C. Tapered Insulation: Provide factory-tapered insulation boards fabricated to a minimum slope of 3/8 inch per 12 inches. **Do not use EPS.**
- D. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes at double the slope of main field of roof, where indicated for sloping to drain. Fabricate to slopes indicated.

2.6 INSULATION ACCESSORIES

- A. General: Roof insulation accessories recommended by insulation manufacturer for intended use and compatible with membrane roofing.
- B. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FMG 4470, designed for fastening roof insulation to substrate, and acceptable to roofing system manufacturer.
- C. Insulation Adhesive: Insulation manufacturer's recommended cold-applied adhesive formulated to attach roof insulation to substrate or to another insulation layer.
- D. **Cover Board: One of the following:**
 - 1. **ASTM C 1177/C 1177M, glass-mat, water-resistant gypsum substrate, 5/8 inch thick, factory primed.**
 - a. **Products: Subject to compliance with requirements, provide one of the following:**
 - 1) **CertainTeed Corporation; GlasRoc Sheathing.**
 - 2) **Georgia-Pacific Corporation; Dens Deck.**
 - 3) **National Gypsum Company; Gold Bond eXP Extended Exposure Sheathing.**
 - 4) **USG Corporation; Securock Glass Mat Roof Board.**
 - 2. **ASTM C 1278/C 1278M, cellulosic-fiber-reinforced, water-resistant gypsum substrate, 1/2 inch thick.**

- a. **Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:**

1) **USG Corporation; Securock Gypsum-Fiber Roof Board.**

- E. Protection Mat: Woven or nonwoven polypropylene, polyolefin, or polyester fabric, water permeable and resistant to UV degradation, type and weight as recommended by roofing system manufacturer for application.
- F. Slip Sheet: Manufacturer's recommended slip sheet, of type required for application to separate membrane from insulating substrate

2.7 WALKWAYS

- A. Flexible Walkways: Factory-formed, nonporous, heavy-duty, slip-resisting, open-grid, surface-textured, flexible PVC walkway mat, approximately 9/16 inch thick, and acceptable to membrane roofing system manufacturer. To be installed from roof access points to all roof mounted equipment, surrounding each roof mounted component and routed between all pieces of roof mounted equipment.
1. Color: Gray.
 2. Size: 24 x 24 squares or 3 foot wide by 33 feet long rolls.
 3. Design Standard: Design Standards are used to establish a level of quality for the work. Premium products equal in quality of acceptable manufacturers may be used. The use of a Design Standard is not to be construed as a limit of competition or a constraint of trade.
 - a. Sarnafil Crossgrip Walkway Mat.
 - b. Carlisle ECO NOVA

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:
1. Verify that roof openings and penetrations are in place and set and braced and that roof drains are securely clamped in place.
 2. Verify that pressure treated wood blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
 3. Verify that surface plane flatness and fastening of steel roof deck comply with requirements in Division 5 Section "Steel Deck."
 4. Verify that membrane shows no signs of abrasion, discoloration, or defects.
 5. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- C. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.
- D. Employ roofer for repairing existing roof membrane as approved by the manufacturer, where warranties are still in effect for the existing assembly.
- E. **If specified requirements do not meet manufacture's requirements, install per manufacture requirements at no additional cost to Owner. Where any portion of the specifications exceeds manufacture minimum requirements, install according to specifications rather than manufacture minimum requirements.**

~~3.3 VAPOR RETARDER INSTALLATION~~

- ~~A. Self Adhering Sheet: Place self adhering sheet in a single layer over area to receive vapor retarder, side lapping each sheet a minimum of 3 inches.
 - ~~1. Continuously seal side and end laps by rolling with roller to ensure adhesion to substrate~~~~
- ~~B. Completely seal vapor retarder at terminations, obstructions, and penetrations to prevent air movement into membrane roofing system.~~

3.4 INSULATION INSTALLATION

- A. Coordinate installing membrane roofing system components so insulation is not exposed to precipitation or left exposed at the end of the workday.
- B. Comply with membrane roofing system manufacturer's written instructions for installing roof insulation.
- C. Install tapered insulation under area of roofing to conform to slopes indicated.
- D. Install multiple layers of insulation, joints staggered **in both directions**, under area of roofing to achieve required thickness.
- E. Trim surface of insulation where necessary at roof drains so completed surface is flush and does not restrict flow of water.

- F. Field trim factory formed units where required to provide slopes in crickets and drains.
- G. Install insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 2.7 inches or greater, install two or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches in each direction.
- H. Mechanically Fastened Insulation: Install each layer of insulation and secure to deck using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to deck type. Offset joints between layers.
 - 1. Fasten first layer of insulation to resist uplift pressure at corners, perimeter, and field of roof.
 - 2. Set each subsequent layer of insulation in a solid mopping of hot roofing asphalt, applied within plus or minus 25 deg F of equiviscous temperature.
 - 3. Set each subsequent layer of insulation in adhesive, firmly pressing and maintaining insulation in place.
- I. **Install cover boards over insulation with long joints in continuous straight lines with end joints staggered between rows. Offset joints of insulation below a minimum of 6 inches in each direction. Loosely butt cover boards together and fasten to roof deck.**
 - 1. **Fasten cover boards according to requirements in FM Global's "RoofNav" for specified Windstorm Resistance Classification.**
 - 2. **Fasten cover boards to resist uplift pressure at corners, perimeter, and field of roof.**

3.5 ADHERED MEMBRANE ROOFING INSTALLATION

- A. Adhere membrane roofing over area to receive roofing and install according to membrane roofing system manufacturer's written instructions.
 - 1. Install sheet according to ASTM D 5036.
- B. Start installation of membrane roofing in presence of membrane roofing system manufacturer's technical personnel.
- C. Accurately align membrane roofing and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- D. Bonding Adhesive: Apply to substrate and underside of membrane roofing at rate required by manufacturer and allow to partially dry before installing membrane roofing. Do not apply to splice area of membrane roofing.
- E. In addition to adhering, mechanically fasten membrane roofing securely at terminations, penetrations, and perimeter of roofing.
- F. Apply membrane roofing with side laps shingled with slope of roof deck where possible.

- G. Seams: Clean seam areas, overlap membrane roofing, and hot-air weld side and end laps of membrane roofing and sheet flashings according to manufacturer's written instructions to ensure a watertight seam installation.
 - 1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of sheet membrane.
 - 2. Verify field strength of seams a minimum of twice daily and repair seam sample areas.
 - 3. Repair tears, voids, and lapped seams in roofing that does not comply with requirements.

- H. Roof Drains: Completely prime the lead drain flashing and allow to dry prior to installation. Set 36-by-36-inch 4# lead flashing in bed of asphalt roofing cement or approved adhesive. Cover metal flashing with a second ply of roofing membrane and extend a minimum of 6 inches beyond edge of metal flashing onto field of single ply roofing membrane. Terminate the second ply to extend beneath the clamping ring of the drain. Clamp roofing membrane, metal flashing, and second ply into roof-drain clamping ring.
 - 1. Install stripping according to roofing system manufacturer's written instructions.

3.6 BASE FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories and adhere to substrates according to membrane roofing system manufacturer's written instructions.
- B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate and allow to partially dry. Do not apply bonding adhesive to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with sheet flashing.
- D. Clean seam areas and overlap and firmly roll sheet flashings into the adhesive. Weld side and end laps to ensure a watertight seam installation.
- E. Extend sheet flashings up and over parapet caps and secure to continuous nailer. Provide transitions at horizontal to vertical to support membrane and avoid any line that could craze or crack under foot traffic at the parapet
- F. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.

3.7 WALKWAY MAT INSTALLATION

- A. Flexible Walkway Mats: Install walkway mat products in locations indicated, from hatches to roof-top mounted equipment. Secure to roofing membrane according to roofing system and walkway mat manufacturers' written instructions.

3.8 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to perform roof tests and inspections and to prepare test reports.
- B. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion and submit report to Architect.
 - 1. Notify Architect or Owner 48 hours in advance of date and time of inspection.
- C. Repair or remove and replace components of membrane roofing system where test results or inspections indicate that they do not comply with specified requirements.
- D. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.9 PROTECTING AND CLEANING

- A. Protect membrane roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.
- B. Correct deficiencies in or remove membrane roofing system that does not comply with requirements, repair substrates, and repair or reinstall membrane roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 07 5419

SECTION 08 4226 - GLASS SHOWER DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Swinging glass shower doors.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for glass system.
- B. Shop Drawings: For glass shower doors.
 - 1. Include plans, elevations, and sections.
 - 2. Include details of fittings and glazing, including isometric drawings of patch fittings.
 - 3. Door hardware locations, mounting heights, and installation requirements.
- C. Samples: For each type of exposed finish indicated.
- D. Fabrication Sample: Patch fitting at sill on pivot side only, made from 12-inch lengths of full-size components and showing details of the following:
 - 1. Joinery.
 - 2. Anchorage.
 - 3. Glazing.
- E. Shower Door Hardware Schedule: Prepared by or under supervision of supplier, detailing fabrication and assembly of shower door hardware, as well as procedures and diagrams. Coordinate final shower door hardware schedule with doors and related work to ensure proper size, thickness, hand, function, and finish of shower door hardware.
- F. Delegated-Design Submittal: For glass systems indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Product Test Reports: For glass shower door system, for tests performed by a qualified testing agency.
- C. Sample Warranty: For special warranty.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For glass systems to include in maintenance manuals.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.
- B. Product Options: Information on Drawings and in Specifications establishes requirements for aesthetic effects and performance characteristics of assemblies. Aesthetic effects are indicated by dimensions, arrangements, alignment, and profiles of components and assemblies as they relate to sightlines, to one another, and to adjoining construction.
 - 1. Do not change intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If changes are proposed, submit comprehensive explanatory data to Architect for review.

1.7 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of glass shower doors that do not comply with requirements or that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - b. Failure of operating components.
 - 2. Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, as defined in Section 01 4000 "Quality Requirements," to design glass shower doors.
- B. General Performance: Comply with performance requirements specified, as determined by testing of glass shower doors representing those indicated for this Project without failure due to defective manufacture, fabrication, installation, or other defects in construction.
- C. Structural Loads:
 - 1. Deflection Limits: Deflection normal to glazing plane is limited to 1/175 of clear span or 3/4 inch, whichever is smaller.
- D. Seismic Performance: Glass shower doors shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.

2.2 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Alpha Door & Rail, Inc.
 - 2. Arch Aluminum & Glass Co., Inc.
 - 3. Avanti Systems, Inc.
 - 4. Blumcraft of Pittsburgh; C.R. Laurence Co, Inc.
 - 5. Oldcastle BuildingEnvelope.

2.3 METAL COMPONENTS

- A. Fitting Configuration:
 - 1. Manual-Swinging, Glass Shower Doors: Patch fittings at head and sill on pivot side only.
- B. Patch Fittings: Stainless-steel-clad aluminum.
- C. Accessory Fittings: Match patch-fitting metal and finish for the following:
 - 1. Vinyl or polyethylene angle doorstop.
- D. Anchors and Fastenings: Concealed.
- E. Wipes, Seals, and Thresholds: Sized for shower door and designed to completely stop water at door edges when door is closed.

F. Materials:

1. Aluminum: ASTM B 221, with strength and durability characteristics of not less than Alloy 6063-T5.
2. Stainless-Steel Cladding: ASTM A 666, Type 304.
 - a. Finish: No. 4 directional satin finish.

2.4 GLASS

- A. Glass: ASTM C 1048, Kind FT (fully tempered), Condition A (uncoated surfaces), Type I (transparent), tested for surface and edge compression per ASTM C 1048 and for impact strength per 16 CFR 1201 for Category II materials.
1. Class 1: Clear monolithic.
 - a. Thickness: As required to meet performance requirements, but not less than 1/2 inch.
 - b. Locations: As indicated.
 2. Exposed Edges: Machine ground and flat polished.

2.5 SHOWER DOOR HARDWARE

- A. General: Heavy-duty shower door hardware units in sizes, quantities, and types recommended by manufacturer for glass shower doors indicated. For exposed parts, match metal and finish of patch fittings.
- B. Concealed Floor and Top Pivots: Center hung; BHMA A156.4, Grade 1; including cases, bottom arms, top walking beam pivots, plates, and accessories required for complete installation.
1. Swing: Single acting.
 - a. Positive Dead Stop: Coordinated with hold-open angle if any, or at angle selected.
 2. Opening-Force Requirements:
 - a. Swinging Shower Doors: Not more than 5 lbf to fully open door.
- C. Push-Pull Set: As selected from manufacturer's full range.

2.6 FABRICATION

- A. Provide holes and cutouts in glass to receive hardware, fittings, and accessory fittings before tempering glass. Do not cut, drill, or make other alterations to glass after tempering.

1. Fully temper glass using horizontal (roller-hearth) process, and fabricate so that when glass is installed, roll-wave distortion is parallel with bottom edge of door or lite.
- B. Factory assemble components and factory install hardware and fittings to greatest extent possible.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install glass systems and associated components according to manufacturer's written instructions.
- B. Set units level, plumb, and true to line, with uniform joints.
- C. Maintain uniform clearances between adjacent components.
- D. Lubricate hardware and other moving parts according to manufacturer's written instructions.

3.3 ADJUSTING AND CLEANING

- A. Adjust glass shower doors and hardware to produce smooth operation and tight fit at contact points and weather stripping.
- B. Remove excess sealant and glazing compounds and dirt from surfaces.

END OF SECTION 08 4226

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Steel Doors and Frames: For surface applied door hardware, drill and tap doors and frames according to ANSI/SDI A250.6.
- B. Wood Doors: Comply with DHI WDHS.5 "Recommended Hardware Reinforcement Locations for Mineral Core Wood Flush Doors."

3.3 INSTALLATION

- A. Mounting Heights: Mount door hardware units at heights to comply with the following unless otherwise indicated or required to comply with governing regulations.
 - 1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
 - 2. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
- B. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing. Do not install surface-mounted items until finishes have been completed on substrates involved.
 - 1. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
 - 2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
- C. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than the number recommended by manufacturer for application indicated or one hinge for every 30 inches of door height, whichever is more stringent, unless other equivalent means of support for door, such as spring hinges or pivots, are provided.

- D. Intermediate Offset Pivots: Where offset pivots are indicated, provide intermediate offset pivots in quantities indicated in door hardware schedule but not fewer than one intermediate offset pivot per door and one additional intermediate offset pivot for every 30 inches of door height greater than 90 inches.
- E. Lock Cylinders: Install construction cores to secure building and areas during construction period.
 - 1. Replace construction cores with permanent cores as directed by Owner.
 - 2. Furnish permanent cores to Owner for installation.
- F. Key Control System: Tag keys and place them on markers and hooks in key control system cabinet, as determined by final keying schedule.
- G. Low-Energy Power Door Operator Installation Standard: Comply with BHMA A156.19 for installation.
 - 1. Install complete automatic door operator system, including activation and safety devices, control wiring, and remote power units.
 - 2. Automatic Door Operators: Install door operator system, including control wiring, as follows:
 - a. Refer to Division 26 Sections for connection to electrical power distribution system.
 - 3. Activation and Safety Devices: Install devices and wiring, including connections to automatic door operators, according to BHMA A156.10 and as follows:
 - a. Infrared-Scanner Presence Detectors: Install scanners on approach side of each door indicated to receive automatic door operators.
 - b. Wall Switches: Provide push plates on both sides of each opening indicated to receive automatic door operators.
 - 4. Connect wiring according to Division 16 Section "Conductors and Cables."
- H. Boxed Power Supplies: Locate power supplies as indicated or, if not indicated, above accessible ceilings. Verify location with Architect.
 - 1. Configuration: Provide least number of power supplies required to adequately serve doors with electrified door hardware.
- I. Thresholds: Set thresholds for exterior doors and other doors indicated in full bed of sealant complying with requirements specified in Section 07 9200 "Joint Sealants."
- J. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they will impede traffic.
- K. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.

- L. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.
 - 1. Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.

3.4 FIELD QUALITY CONTROL

- A. Independent Architectural Hardware Consultant: Owner will engage a qualified independent Architectural Hardware Consultant to perform inspections and to prepare inspection reports.
 - 1. Independent Architectural Hardware Consultant will inspect door hardware and state in each report whether installed work complies with or deviates from requirements, including whether door hardware is properly installed and adjusted.

3.5 ADJUSTING

- A. Initial Adjustment at installation: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.
 - 1. Spring Hinges: Adjust to achieve positive latching when door is allowed to close freely from an open position of 30 degrees.
 - 2. Electric Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt.
 - 3. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.
- B. Occupancy Adjustment: Approximately six months after date of Substantial Completion, Installer's Architectural Hardware Consultant shall examine and readjust each item of door hardware, including adjusting operating forces, as necessary to ensure function of doors, door hardware, and electrified door hardware.

3.6 CLEANING AND PROTECTION

- A. Clean adjacent surfaces soiled by door hardware installation.
- B. Clean operating items as necessary to restore proper function and finish.
- C. Provide final protection and maintain conditions that ensure that door hardware is without damage or deterioration at time of Substantial Completion.

3.7 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain door hardware and door hardware finishes. Refer to Section 01 7900 "Demonstration and Training."
- B. Provide hardware either from manufacture's scheduled or equivalent compatible products as selected from list of manufacturers specified herein and approved by architect prior to bidding.

3.8 MAINTENANCE SERVICE

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.
- B. Maintenance Service: Beginning at Substantial Completion, provide six months' full maintenance by skilled employees of door hardware Installer. Include quarterly preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper door and door hardware operation. Provide parts and supplies that are the same as those used in the manufacture and installation of original products.

3.9 DOOR HARDWARE SCHEDULE (**PAYNE BUILDING**)

HW SET: 01 Payne Building

6	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
2	EA	MANUAL FLUSH BOLT	FB458	626	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	STOREROOM LOCK	LV9080R 06A EV 29	626	SCH
1	EA	ASTRAGAL	139A	600	NGP
2	EA	SURFACE CLOSER	4111 SHCUSH MC TBWMS	689	LCN
1	SET	SEALS	700SA (DO NOT CUT AROUND CLOSER BRACKET)	AL	NGP
2	EA	DOOR SWEEP	C627A	AL	NGP
1	EA	THRESHOLD	425HD	AL	NGP
2	EA	DOOR POSITION SWITCH	679-05		SCE
1	EA	MOTION DETECTOR	SCAN II-B (REQUEST TO EXIT)	BLK	SCE

INSTALL WEATHERSTRIP FIRST. DO NOT CUT AROUND CLOSER BRACKET. DOOR POSITION IS MONITORED BY ACCESS CONTROL SYSTEM. MOTION DETECTOR IS REX.

SECTION 10 1400 - SIGNAGE

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Plaques.
2. Panel signs.
3. Building name lettering

1.2 DEFINITIONS

A. ADA-ABA Accessibility Guidelines: U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines."

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Shop Drawings shall be produced in Full Color and Show fabrication and installation details for signs.

1. Show sign mounting heights, locations of supplementary supports to be provided by others, and accessories.
2. Provide message list, timesteps, graphic elements, including tactile characters and Braille, and layout for each sign.
3. Coordinate all uses of the University Logo with University branding standards.
4. Coordinate all room numbers, room names and text on signage.

C. Samples: For each sign type and for each color and texture required.

1.4 QUALITY ASSURANCE

A. Regulatory Requirements: Comply with applicable provisions in ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Aluminum Castings: ASTM B 26/B 26M, of alloy and temper recommended by sign manufacturer for casting process used and for use and finish indicated.
- B. Aluminum Sheet and Plate: ASTM B 209, alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with at least the strength and durability properties of Alloy 5005-H32.
- C. Aluminum Extrusions: ASTM B 221, alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with at least the strength and durability properties of Alloy 6063-T5.
- D. Steel:
 - 1. Stainless-Steel Sheet: ASTM A 240/A 240M or ASTM A 666, Type 304, stretcher-leveled standard of flatness.
 - 2. Steel Members Fabricated from Plate or Bar Stock: ASTM A 529/A 529M or ASTM A 572/A 572M, 42,000-psi minimum yield strength.
 - 3. For steel exposed to view on completion, provide materials having flat, smooth surfaces without blemishes. Do not use materials whose surfaces exhibit pitting, seam marks, roller marks, rolled trade names, or roughness.
- E. Fiberglass Sheet: Molded, seamless, thermosetting, glass-fiber-reinforced polyester panels with a minimum tensile strength of 15,000 psi when tested according to ASTM D 638 and with a minimum flexural strength of 30,000 psi when tested according to ASTM D 790.
- F. Acrylic Sheet: ASTM D 4802, Category A-1 (cell-cast sheet), Type UVA (UV absorbing).
- G. Polycarbonate Sheet: Of thickness indicated, manufactured by extrusion process, coated on both surfaces with abrasion-resistant coating:
 - 1. Impact Resistance: 16 ft-lbf/in. per ASTM D 256, Method A.
 - 2. Tensile Strength: 9000 lbf/sq. in. per ASTM D 638.
 - 3. Flexural Modulus of Elasticity: 340,000 lbf/sq. in. per ASTM D 790.
 - 4. Heat Deflection: 265 deg F at 264 lbf/sq. in. per ASTM D 648.
 - 5. Abrasion Resistance: 1.5 percent maximum haze increase for 100 revolutions of a Taber abraser with a load of 500 g per ASTM D 1044.
- H. Applied Vinyl: Die-cut characters from vinyl film of nominal thickness of 3 mils with pressure-sensitive adhesive backing, suitable for interior and exterior applications.

2.2 DIMENSIONAL CHARACTERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. ACE Sign Systems, Inc.
 2. Advance Corporation; Braille-Tac Division.
 3. A. R. K. Ramos.
 4. ASI-Modulex, Inc.
 5. Bunting Graphics, Inc.
 6. Charleston Industries, Inc.
 7. Gemini Incorporated.
 8. Grimco, Inc.
 9. Innerface Sign Systems, Inc.
 10. Metal Arts; Div. of L&H Mfg. Co.
 11. Mills Manufacturing Company.
 12. Mohawk Sign Systems.
 13. Nelson-Harkins Industries.
 14. Signature Signs, Incorporated.
 15. Southwell Company (The).
- B. Cast Characters: Produce characters with smooth flat faces, sharp corners, and precisely formed lines and profiles, free of pits, scale, sand holes, and other defects. Cast lugs into back of characters and tap to receive threaded mounting studs. Alloy and temper recommended by sign manufacturer for casting process used and for use and finish indicated. Comply with the following requirements.
1. Character Material: Aluminum.
 2. Thickness: As indicated.
 3. Color(s): As selected by Architect from manufacturer's full range.
 4. Mounting: Tamper Resistant Concealed studs, non-corroding for substrates encountered.

2.3 PANEL SIGNS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. YESCO: 2401 South Foothill Drive, Salt Lake City, Utah 84109, (801)-464-4600
 2. Allotech: 2300 S 3600 W, West Valley City, Utah 84119, (888)-420-5388
- B. Interior Panel Signs: Provide smooth sign panel surfaces constructed to remain flat under installed conditions within a tolerance of plus or minus 1/16 inch measured diagonally from corner to corner, complying with the following requirements:
1. Aluminum Sheet.
 2. Laminated, Aluminum Faced Sheet: aluminum sheet laminated to each side of, acrylic backing.

3. Laminated, Polycarbonate Faced Sheet: polycarbonate face sheet laminated to each side of phenolic backing.
 4. Acrylic Sheet:
 5. High-Pressure Decorative Laminate: 0.048 inch thick.
 6. Phenolic-Backed Photopolymer Sheet: Provide light-sensitive, water-wash photopolymer face layer bonded to a phenolic base layer to produce a composite sheet with overall, face layer, and base-layer thicknesses, respectively, of 0.160, 0.040, and 0.120 inch.
 7. Laminated Sheet: High-pressure engraved stock with contrasting color face laminated to acrylic core as selected by Architect from manufacturer's full range.
 8. Laminated, Etched Photopolymer: Raised graphics with Braille 1/32 inch above surface with contrasting colors in finishes and color combinations indicated and laminated to acrylic back.
 9. Laminated, Sandblasted Polymer: Raised graphics with Braille 1/32 inch above surface with contrasting colors in finishes and color combinations indicated and laminated to acrylic back.
 10. Corner Condition: Square.
 11. Mounting:
 - a. Wall mounted with concealed anchors.
 - b. Manufacturer's standard non-corroding anchors for substrates encountered.
 - c. Tamper Resistant.
 12. Color: As selected by Architect from manufacturer's full range.
 13. Tactile Characters: Characters and Grade 2 Braille raised 1/32 inch above surface with contrasting colors.
- C. Exterior Panel Signs: Provide smooth sign panel surfaces constructed to remain flat under installed conditions within a tolerance of plus or minus 1/16 inch measured diagonally from corner to corner, complying with the following requirements:
1. Aluminum Sheet: at least .050 inches thick
 2. Acrylic Sheet: at least 0.060 inch thick.
 3. Fiberglass Sheet: at least 0.090-inch- thick sheet.
 4. Edge Condition: Square cut.
 5. Corner Condition: Square.
 6. Mounting: Unframed.
 - a. Wall mounted.
 - b. Manufacturer's standard non-corroding anchors for substrates encountered.
 7. Color: As indicated.
- D. Brackets: Fabricate brackets and fittings for bracket-mounted signs from extruded aluminum to suit panel sign construction and mounting conditions indicated. Factory paint brackets in color matching background color of panel sign .
- E. Panel Sign Frames:
1. Extruded-Aluminum Frames: Mitered with concealed anchors.

- a. Color: As indicated.
 - b. Depth: As indicated in details.
 - c. Profile: Square.
 - d. Corner Condition: Square.
 - e. Mounting:
 - 1) Wall mounted with concealed anchors.
 - 2) Manufacturer's standard non-corroding anchors for substrates encountered.
 - 3) Tamper Resistant.
2. Metal Frames:
- a. Stainless-Steel Sheet: Not less than 0.050 inch thick for face and 0.031 inch thick for returns.
 - b. Depth: As indicated.
 - c. Corner Condition: Square.
 - d. Mounting:
 - 1) Wall mounted with concealed anchors.
 - 2) Manufacturer's standard non-corroding anchors for substrates encountered.
 - 3) Tamper Resistant.
- F. Changeable Message Inserts: Fabricate signs to allow insertion of changeable messages in the form of transparent covers with paper inserts printed by Owner and changeable panel inserts for use in fixed frames.
1. Furnish insert material and software for creating text and symbols for PC-Windows computers for Owner production of paper inserts.
 2. Furnish insert material cut-to-size for changeable message insert.
- G. Tactile and Braille Sign: Manufacturer's standard process for producing text and symbols complying with ADA-ABA Accessibility Guidelines and with ICC/ANSI A117.1. Text shall be accompanied by Grade 2 Braille. Produce precisely formed characters with square-cut edges free from burrs and cut marks; Braille dots with domed or rounded shape.
1. Panel Material: Opaque acrylic sheet or Clear acrylic sheet with opaque color coating, subsurface applied.
 2. Raised-Copy Thickness: Not less than 1/32 inch.
- H. Applied Vinyl: Die-cut characters from vinyl film of nominal thickness of 3 mils with pressure-sensitive adhesive backing. Apply copy to exposed face of panel sign glass doors wall surfaces.
1. Panel Material: Opaque acrylic sheet or Clear acrylic sheet with opaque color coating, subsurface applied.

2.4 ACCESSORIES

- A. Anchors and Inserts: Provide nonferrous-metal or hot-dip galvanized anchors and inserts for exterior installations and elsewhere as required for corrosion resistance. Use toothed steel or lead expansion-bolt devices for drilled-in-place anchors. Furnish inserts, as required, to be set into concrete or masonry work.

2.5 ALUMINUM FINISHES

- A. Clear Anodic Finish: Manufacturer's standard Class 1 clear anodic coating, 0.018 mm or thicker, over a satin (directionally textured) mechanical finish, complying with AAMA 611.

2.6 STAINLESS-STEEL FINISHES

- A. Remove tool and die marks and stretch lines or blend into finish. Grind and polish surfaces to produce uniform, directionally textured, polished finish indicated, free of cross scratches. Run grain with long dimension of each piece.
- B. Directional Satin Finish: No. 4 finish.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Locate signs and accessories where indicated, using mounting methods of types described and complying with manufacturer's written instructions.
 - 1. Install signs level, plumb, and at heights indicated, with sign surfaces free of distortion and other defects in appearance.
 - 2. Interior Wall Signs: Install signs on walls adjacent to latch side of door where applicable. Where not indicated or possible, such as double doors, install signs on nearest adjacent walls. Locate to allow approach within 3 inches of sign without encountering protruding objects or standing within swing of door.
- B. Wall-Mounted Signs:
 - 1. Concealed Mechanical Fasteners: Use tamper proof mechanical fasteners and attach signs with anchors suitable for secure attachment to substrate. All fasteners shall be Tamper Resistant.
 - 2. Signs Mounted on Glass: Provide matching opaque plate on opposite side of glass to conceal mounting materials.
 - 3. Silicone-Adhesive Mounting: Attach signs to irregular, porous, or vinyl-covered surfaces.

- C. Ceiling Mounted Signs: Provide manufacturer's standard brackets, fittings, and hardware for mounting signs from ceilings. Attach brackets and fittings securely to ceilings with concealed fasteners and anchoring devices to comply with manufacturer's written instructions
- D. Bracket-Mounted Signs: Provide manufacturer's standard brackets, fittings, and hardware for mounting signs that project at right angles from walls and ceilings. Attach brackets and fittings securely to walls and ceilings with concealed fasteners and anchoring devices to comply with manufacturer's written instructions.
- E. Dimensional Characters: Mount characters using standard fastening methods to comply with manufacturer's written instructions for character form, type of mounting, wall construction, and condition of exposure indicated. Provide heavy paper template to establish character spacing and to locate holes for fasteners.
 - 1. Flush Mounting: Mount characters with backs in contact with wall surface.
 - 2. Projected Mounting: Mount characters at projection distance from wall surface indicated.

END OF SECTION 10 1400

SECTION 262923 - VARIABLE-FREQUENCY MOTOR CONTROLLERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes separately enclosed, pre-assembled, combination VFCs, rated 600 V and less, for speed control of three-phase, squirrel-cage induction motors.

1.3 DEFINITIONS

- A. BAS: Building automation system.
- B. CPT: Control power transformer.
- C. EMI: Electromagnetic interference.
- D. IGBT: Insulated-gate bipolar transistor.
- E. LAN: Local area network.
- F. LED: Light-emitting diode.
- G. MCP: Motor-circuit protector.
- H. NC: Normally closed.
- I. NO: Normally open.
- J. OCPD: Overcurrent protective device.
- K. PCC: Point of common coupling.
- L. PID: Control action, proportional plus integral plus derivative.
- M. PWM: Pulse-width modulated.
- N. RFI: Radio-frequency interference.
- O. TDD: Total demand (harmonic current) distortion.
- P. THD(V): Total harmonic voltage demand.
- Q. VFC: Variable-frequency motor controller.

1.4 PERFORMANCE REQUIREMENTS

- A. Seismic Performance: VFCs shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.
 - 1. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified and the unit will be fully operational after the seismic event."

1.5 SUBMITTALS

- A. Product Data: For each type and rating of VFC indicated. Include features, performance, electrical ratings, operating characteristics, shipping and operating weights, and furnished specialties and accessories.
- B. LEED Submittals:
 - 1. Product Data for Credit EA 5: For continuous metering equipment for energy consumption.
- C. Shop Drawings: For each VFC indicated. Include dimensioned plans, elevations, and sections; and conduit entry locations and sizes, mounting arrangements, and details, including required clearances and service space around equipment.
 - 1. Show tabulations of installed devices, equipment features, and ratings. Include the following:
 - a. Each installed unit's type and details.
 - b. Factory-installed devices.
 - c. Enclosure types and details.
 - d. Nameplate legends.
 - e. Short-circuit current (withstand) rating of enclosed unit.
 - f. Features, characteristics, ratings, and factory settings of each VFC and installed devices.
 - g. Specified modifications.
 - 2. Schematic and Connection Wiring Diagrams: For power, signal, and control wiring.
- D. Qualification Data: For qualified testing agency.
- E. Seismic Qualification Certificates: For VFCs, accessories, and components, from manufacturer.
 - 1. Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.
 - 2. Dimensioned Outline Drawings of Equipment Unit: Identify center of gravity and locate and describe mounting and anchorage provisions.
 - 3. Detailed description of equipment anchorage devices on which the certification is based, and their installation requirements.
- F. Product Certificates: For each VFC, from manufacturer.
- G. Source quality-control reports.
- H. Field quality-control reports.
- I. Operation and Maintenance Data: For VFCs to include in emergency, operation, and maintenance manuals. In addition to items specified in Division 01 Section "Operation and Maintenance Data," include the following:
 - 1. Manufacturer's written instructions for testing and adjusting thermal-magnetic circuit breaker and MCP trip settings.

2. Manufacturer's written instructions for setting field-adjustable overload relays.
3. Manufacturer's written instructions for testing, adjusting, and reprogramming microprocessor control modules.
4. Manufacturer's written instructions for setting field-adjustable timers, controls, and status and alarm points.

- J. Load-Current and List of Settings of Adjustable Overload Relays: Compile after motors have been installed and arrange to demonstrate that switch settings for motor-running overload protection suit actual motors to be protected.

1.6 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Comply with NFPA 70.
- C. IEEE Compliance: Fabricate and test VFC according to IEEE 344 to withstand seismic forces defined in Division 26 Section "Vibration and Seismic Controls for Electrical Systems."

1.7 DELIVERY, STORAGE, AND HANDLING

- A. If stored in space that is not permanently enclosed and air conditioned, remove loose packing and flammable materials from inside controllers.

1.8 PROJECT CONDITIONS

- A. Environmental Limitations: Rate equipment for continuous operation, capable of driving full load without derating, under the following conditions unless otherwise indicated:
 1. Ambient Temperature: Not less than 14 deg F (minus 10 deg C) and not exceeding 104 deg F (40 deg C).
 2. Ambient Storage Temperature: Not less than minus 4 deg F (minus 20 deg C) and not exceeding 140 deg F (60 deg C)
 3. Humidity: Less than 95 percent (noncondensing).
 4. Altitude: Not exceeding 6600 feet (2010 m).

1.9 COORDINATION

- A. Coordinate features of motors, load characteristics, installed units, and accessory devices to be compatible with the following:
 1. Torque, speed, and horsepower requirements of the load.
 2. Ratings and characteristics of supply circuit and required control sequence.
 3. Ambient and environmental conditions of installation location.
- B. Coordinate sizes and locations of concrete bases with actual equipment provided. Cast anchor-bolt inserts into bases.

1.10 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace VFCs that fail in materials or workmanship within specified warranty period.
 1. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURED UNITS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. ABB.
 2. Baldor Electric Company.
 3. Danfoss Inc.; Danfoss Drives Div.
 4. Eaton Electrical Inc.; Cutler-Hammer Business Unit.
 5. General Electric Company; GE Consumer & Industrial - Electrical Distribution.
 6. Mitsubishi, Inc.
 7. Rockwell Automation, Inc.; Allen-Bradley Brand.
 8. Siemens Energy & Automation, Inc.
 9. Square D; a brand of Schneider Electric.
 10. Toshiba International Corporation.
 11. Yaskawa Electric America, Inc; Drives Division.
- B. General Requirements for VFCs: Comply with NEMA ICS 7, NEMA ICS 61800-2, and UL 508C.
- C. Application: Variable torque.
- D. VFC Description: Variable-frequency power converter (rectifier, dc bus, and IGBT, PWM inverter) factory packaged in an enclosure, with integral disconnecting means and overcurrent and overload protection; listed and labeled by an NRTL as a complete unit; arranged to provide self-protection, protection, and variable-speed control of one or more three-phase induction motors by adjusting output voltage and frequency.
1. Units suitable for operation of NEMA MG 1, Design A and Design B motors as defined by NEMA MG 1, Section IV, Part 30, "Application Considerations for Constant Speed Motors Used on a Sinusoidal Bus with Harmonic Content and General Purpose Motors Used with Adjustable-Voltage or Adjustable-Frequency Controls or Both."
 2. Listed and labeled for integrated short-circuit current (withstand) rating by an NRTL acceptable to authorities having jurisdiction.
- E. Design and Rating: Match load type, such as fans, blowers, and pumps; and type of connection used between motor and load such as direct or through a power-transmission connection.
- F. Output Rating: Three-phase; 10 to 66 Hz, with torque constant as speed changes; maximum voltage equals input voltage.
- G. Unit Operating Requirements:
1. Input AC Voltage Tolerance: Plus 10 and minus 10 percent of VFC input voltage rating.
 2. Input AC Voltage Unbalance: Not exceeding 3 percent.
 3. Input Frequency Tolerance: Plus or minus 3 percent of VFC frequency rating.
 4. Minimum Efficiency: 97 percent at 60 Hz, full load.
 5. Minimum Displacement Primary-Side Power Factor: 98 percent under any load or speed condition.
 6. Ambient Temperature Rating: Not less than 14 deg F (minus 10 deg C) and not exceeding 104 deg F (40 deg C).
 7. Ambient Storage Temperature Rating: Not less than minus 4 deg F (minus 20 deg C) and not exceeding 140 deg F (60 deg C)
 8. Humidity Rating: Less than 95 percent (noncondensing).
 9. Altitude Rating: Not exceeding 6600 feet (2010 m).

10. Vibration Withstand: Comply with IEC 60068-2-6.
 11. Overload Capability: 1.1 times the base load current for 60 seconds; minimum of 1.8 times the base load current for three seconds.
 12. Starting Torque: Minimum 100 percent of rated torque from 3 to 60 Hz.
 13. Speed Regulation: Plus or minus 5 percent.
 14. Output Carrier Frequency: Selectable; 0.5 to 15 kHz.
 15. Stop Modes: Programmable; includes fast, free-wheel, and dc injection braking.
- H. Inverter Logic: Microprocessor based, 32 bit, isolated from all power circuits.
- I. Isolated Control Interface: Allows VFCs to follow remote-control signal over a minimum 40:1 speed range.
1. Signal: Electrical.
- J. Internal Adjustability Capabilities:
1. Minimum Speed: 5 to 25 percent of maximum rpm.
 2. Maximum Speed: 80 to 100 percent of maximum rpm.
 3. Acceleration: 0.1 to 999.9 seconds.
 4. Deceleration: 0.1 to 999.9 seconds.
 5. Current Limit: 30 to minimum of 150 percent of maximum rating.
- K. Self-Protection and Reliability Features:
1. Input transient protection by means of surge suppressors to provide three-phase protection against damage from supply voltage surges 10 percent or more above nominal line voltage.
 2. Loss of Input Signal Protection: Selectable response strategy, including speed default to a percent of the most recent speed, a preset speed, or stop; with alarm.
 3. Under- and overvoltage trips.
 4. Inverter overcurrent trips.
 5. VFC and Motor Overload/Overtemperature Protection: Microprocessor-based thermal protection system for monitoring VFCs and motor thermal characteristics, and for providing VFC overtemperature and motor overload alarm and trip; settings selectable via the keypad; NRTL approved.
 6. Instantaneous line-to-line and line-to-ground overcurrent trips.
 7. Loss-of-phase protection.
 8. Reverse-phase protection.
 9. Short-circuit protection.
 10. Motor overtemperature fault.
- L. Power-Interruption Protection: To prevent motor from re-energizing after a power interruption until motor has stopped, unless "Bidirectional Autospeed Search" feature is available and engaged.
- M. Bidirectional Autospeed Search: Capable of starting VFC into rotating loads spinning in either direction and returning motor to set speed in proper direction, without causing damage to drive, motor, or load.
- N. Torque Boost: Automatically varies starting and continuous torque to at least 1.5 times the minimum torque to ensure high-starting torque and increased torque at slow speeds.
- O. Motor Temperature Compensation at Slow Speeds: Adjustable current fall-back based on output frequency for temperature protection of self-cooled, fan-ventilated motors at slow speeds.

- P. Integral Input Disconnecting Means and OCPD: NEMA AB 1, instantaneous-trip circuit breaker.
 - 1. Disconnect Rating: Not less than 115 percent of NFPA 70 motor full-load current rating or VFC input current rating, whichever is larger.
 - 2. Auxiliary Contacts: NO/NC, arranged to activate before switch blades open.
 - 3. NC alarm contact that operates only when circuit breaker has tripped.

2.2 CONTROLS AND INDICATION

- A. Status Lights: Door-mounted LED indicators displaying the following conditions:
 - 1. Power on.
 - 2. Run.
 - 3. Overvoltage.
 - 4. Line fault.
 - 5. Overcurrent.
 - 6. External fault.
- B. Panel-Mounted Operator Station: Manufacturer's standard front-accessible, sealed keypad and plain-English language digital display; allows complete programming, program copying, operating, monitoring, and diagnostic capability.
 - 1. Keypad: In addition to required programming and control keys, include keys for HAND, OFF, and AUTO modes.
 - 2. Security Access: Provide electronic security access to controls through identification and password with at least three levels of access: View only; view and operate; and view, operate, and service.
 - a. Control Authority: Supports at least four conditions: Off, local manual control at VFC, local automatic control at VFC, and automatic control through a remote source.
- C. Historical Logging Information and Displays:
 - 1. Running log of total power versus time.
 - 2. Total run time.
 - 3. Fault log, maintaining last four faults with time and date stamp for each.
- D. Indicating Devices: Digital display mounted flush in VFC door and connected to display VFC parameters including, but not limited to:
 - 1. Output frequency (Hz).
 - 2. Motor speed (rpm).
 - 3. Motor status (running, stop, fault).
 - 4. Motor current (amperes).
 - 5. Motor torque (percent).
 - 6. Fault or alarming status (code).
 - 7. PID feedback signal (percent).
 - 8. DC-link voltage (V dc).
 - 9. Set point frequency (Hz).
 - 10. Motor output voltage (V ac).
- E. Control Signal Interfaces:
 - 1. Electric Input Signal Interface:
 - a. A minimum of two programmable analog inputs: 0- to 10-V dc.
 - b. A minimum of six multifunction programmable digital inputs.
 - 2. Remote Signal Inputs: Capability to accept any of the following speed-setting input signals from the BAS or other control systems:
 - a. 0- to 10-V dc.
 - b. 4- to 20-mA dc.

- c. Potentiometer using up/down digital inputs.
 - d. Fixed frequencies using digital inputs.
 - 3. Output Signal Interface: A minimum of one programmable analog output signal(s) (0- to 10-V dc), which can be configured for any of the following:
 - a. Output frequency (Hz).
 - b. Output current (load).
 - c. DC-link voltage (V dc).
 - d. Motor torque (percent).
 - e. Motor speed (rpm).
 - f. Set point frequency (Hz).
 - 4. Remote Indication Interface: A minimum of two programmable dry-circuit relay outputs (120-V ac, 1 A) for remote indication of the following:
 - a. Motor running.
 - b. Set point speed reached.
 - c. Fault and warning indication (overtemperature or overcurrent).
 - d. PID high- or low-speed limits reached.
- F. BAS Interface: Factory-installed hardware and software to enable the BAS to monitor, control, and display VFC status and alarms and energy usage. Allows VFC to be used with an external system within a multidrop LAN configuration; settings retained within VFC's nonvolatile memory.
 - 1. Network Communications Ports: Ethernet and RS-422/485.
 - 2. Embedded BAS Protocols for Network Communications: ASHRAE 135 BACnet and Johnson Metasys N2; protocols accessible via the communications ports.

2.3 OPTIONAL FEATURES

- A. Sleep Function: Senses a minimal deviation of a feedback signal and stops the motor. On an increase in speed-command signal deviation, VFC resumes normal operation.

2.4 ENCLOSURES

- A. VFC Enclosures: NEMA 250, to comply with environmental conditions at installed location.
 - 1. Dry and Clean Indoor Locations: Type 1.
 - 2. Outdoor Locations: Type 3R.
 - 3. Other Wet or Damp Indoor Locations: Type 4.
 - 4. Indoor Locations Subject to Dust, Falling Dirt, and Dripping Noncorrosive Liquids: Type 12.
- B. Plenum Rating: UL 1995; NRTL certification label on enclosure, clearly identifying VFC as "Plenum Rated."

2.5 ACCESSORIES

- A. Control Relays: Auxiliary and adjustable solid-state time-delay relays.
- B. Phase-Failure, Phase-Reversal, and Undervoltage and Overvoltage Relays: Solid-state sensing circuit with isolated output contacts for hard-wired connections. Provide adjustable undervoltage, overvoltage, and time-delay settings.
 - 1. Current Transformers: Continuous current rating, basic impulse insulating level (BIL) rating, burden, and accuracy class suitable for connected circuitry. Comply with IEEE C57.13.
- C. Supplemental Digital Meters:
 - 1. Elapsed-time meter.

2. Kilowatt meter.
3. Kilowatt-hour meter.

- D. Cooling Fan and Exhaust System: For NEMA 250, Type 1; UL 508 component recognized: Supply fan, with stainless steel intake and exhaust grills and filters; 120-V ac; obtained from integral CPT.

2.6 SOURCE QUALITY CONTROL

- A. Testing: Test and inspect VFCs according to requirements in NEMA ICS 61800-2.
1. Test each VFC while connected to a motor that is comparable to that for which the VFC is rated.
 2. Verification of Performance: Rate VFCs according to operation of functions and features specified.
- B. VFCs will be considered defective if they do not pass tests and inspections.
- C. Prepare test and inspection reports.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas, surfaces, and substrates to receive VFCs, with Installer present, for compliance with requirements for installation tolerances, and other conditions affecting performance.
- B. Examine VFC before installation. Reject VFCs that are wet, moisture damaged, or mold damaged.
- C. Examine roughing-in for conduit systems to verify actual locations of conduit connections before VFC installation.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Coordinate layout and installation of VFCs with other construction including conduit, piping, equipment, and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.
- B. Wall-Mounting Controllers: Install VFCs on walls with tops at uniform height and with disconnect operating handles not higher than 79 inches (2000 mm) above finished floor unless otherwise indicated, and by bolting units to wall or mounting on lightweight structural-steel channels bolted to wall. For controllers not on walls, provide freestanding racks complying with Division 26 Section "Hangers and Supports for Electrical Systems."
- C. Floor-Mounting Controllers: Install VFCs on 4-inch (100-mm) nominal thickness concrete base.
1. Install dowel rods to connect concrete base to concrete floor. Unless otherwise indicated, install dowel rods on 18-inch (450-mm) centers around the full perimeter of concrete base.
 2. For supported equipment, install epoxy-coated anchor bolts that extend through concrete base and anchor into structural concrete floor.

3. Place and secure anchorage devices. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
 4. Install anchor bolts to elevations required for proper attachment to supported equipment.
- D. Seismic Bracing: Comply with requirements specified in Division 26 Section "Vibration and Seismic Controls for Electrical Systems."
- E. Temporary Lifting Provisions: Remove temporary lifting eyes, channels, and brackets and temporary blocking of moving parts from enclosures and components.
- F. Install fuses in control circuits if not factory installed. Comply with requirements in Division 26 Section "Fuses."
- G. Install heaters in thermal-overload relays. Select heaters based on actual nameplate full-load amperes after motors have been installed.
- H. Install, connect, and fuse thermal-protector monitoring relays furnished with motor-driven equipment.
- I. Comply with NECA 1.

3.3 IDENTIFICATION

- A. Identify VFCs, components, and control wiring. Comply with requirements for identification specified in Division 26 Section "Identification for Electrical Systems."
1. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs.
 2. Label each VFC with engraved nameplate.
 3. Label each enclosure-mounted control and pilot device.

3.4 CONTROL WIRING INSTALLATION

- A. Install wiring between VFCs and remote devices. Comply with requirements in Division 26 Section "Control-Voltage Electrical Power Cables."
- B. Bundle, train, and support wiring in enclosures.
- C. Connect selector switches and other automatic control devices where applicable.
1. Connect selector switches to bypass only those manual- and automatic control devices that have no safety functions when switches are in manual-control position.
 2. Connect selector switches with control circuit in both manual and automatic positions for safety-type control devices such as low- and high-pressure cutouts, high-temperature cutouts, and motor overload protectors.

3.5 FIELD QUALITY CONTROL

- A. Perform tests and inspections.
1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.
- B. Acceptance Testing Preparation:

1. Test insulation resistance for each VFC element, bus, component, connecting supply, feeder, and control circuit.
2. Test continuity of each circuit.

C. Tests and Inspections:

1. Inspect VFC, wiring, components, connections, and equipment installation. Test and adjust controllers, components, and equipment.
2. Test insulation resistance for each VFC element, component, connecting motor supply, feeder, and control circuits.
3. Test continuity of each circuit.
4. Verify that voltages at VFC locations are within 10 percent of motor nameplate rated voltages. If outside this range for any motor, notify Architect and Owner before starting the motor(s).
5. Test each motor for proper phase rotation.
6. Perform each electrical test and visual and mechanical inspection stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
7. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.
8. Perform the following infrared (thermographic) scan tests and inspections and prepare reports:
 - a. Initial Infrared Scanning: After Substantial Completion, but not more than 60 days after Final Acceptance, perform an infrared scan of each VFC. Remove front panels so joints and connections are accessible to portable scanner.
 - b. Follow-up Infrared Scanning: Perform an additional follow-up infrared scan of each VFC 11 months after date of Substantial Completion.
 - c. Instruments and Equipment: Use an infrared scanning device designed to measure temperature or to detect significant deviations from normal values. Provide calibration record for device.
9. Test and adjust controls, remote monitoring, and safeties. Replace damaged and malfunctioning controls and equipment.

D. VFCs will be considered defective if they do not pass tests and inspections.

E. Prepare test and inspection reports, including a certified report that identifies the VFC and describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations made after remedial action.

3.6 STARTUP SERVICE

- A. Engage a factory-authorized service representative to perform startup service.
 1. Complete installation and startup checks according to manufacturer's written instructions.

3.7 ADJUSTING

- A. Program microprocessors for required operational sequences, status indications, alarms, event recording, and display features. Clear events memory after final acceptance testing and prior to Substantial Completion.
- B. Set the taps on reduced-voltage autotransformer controllers.
- C. Set field-adjustable circuit-breaker trip ranges as specified in Division 26 Section "Overcurrent Protective Device Coordination Study."
- D. Set field-adjustable pressure switches.

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3.8 PROTECTION

- A. Temporary Heating: Apply temporary heat to maintain temperature according to manufacturer's written instructions until controllers are ready to be energized and placed into service.
- B. Replace VFCs whose interiors have been exposed to water or other liquids prior to Substantial Completion.

3.9 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, reprogram, and maintain VFCs.

END OF SECTION 262923

SECTION 32 1726 - DETECTABLE WARNING PANELS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Concrete detectable warning panels set in mortar setting beds.

B. Related Sections:

1. Section 32 1313 "Cement Concrete Pavement" for concrete base under detectable warning panels.

1.2 PRECONSTRUCTION TESTING

A. Preconstruction Adhesion and Compatibility Testing: Submit to latex-additive manufacturer, for testing as indicated below, samples of paving materials that will contact or affect mortar and grout that contain latex additives.

1. Use manufacturer's standard test methods to determine whether mortar and grout materials will obtain optimum adhesion with, and will be nonstaining to, installed panels and other materials constituting panel installation.

1.3 ACTION SUBMITTALS

A. Product Data: For the following:

1. Detectable warning panels.
2. Mortar and grout materials.

B. LEED Submittals:

1. Product Certificates for Credit MR 5: For products and materials required to comply with requirements for regional materials, certificates indicating location of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include statement indicating distance to Project, cost for each regional material, and fraction by weight that is considered regional.

C. Adhesion and Compatibility Test Reports: From latex-additive manufacturer for mortar and grout containing latex additives.

D. Samples: For the following:

1. Each type of detectable warning panel indicated.
2. Joint materials involving color selection.

1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain each type of detectable warning panel, joint material, and setting material from single source with resources to provide materials and products of consistent quality in appearance and physical properties.
- B. Engage an experienced installer, trained and certified by manufacturer, who has completed tactile warning surface installations similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store panels on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. Do not double stack pallets.
- B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- C. Store liquids in tightly closed containers protected from freezing.

1.6 PROJECT CONDITIONS

- A. Cold-Weather Protection: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen subgrade or setting beds. Remove and replace detectable warning panel work damaged by frost or freezing.
- B. Weather Limitations for Mortar and Grout:
 1. Cold-Weather Requirements: Comply with cold-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.
 2. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602. Provide artificial shade and windbreaks and use cooled materials as required. Do not apply mortar to substrates with temperatures of 100 deg F and higher.
 - a. When ambient temperature exceeds 100 deg F, or when wind velocity exceeds 8 mph and ambient temperature exceeds 90 deg F, set panels within 1 minute of spreading setting-bed mortar.

1.7 WARRANTY

- A. Provide warranty in writing from tactile warning surface unit manufacturer that warrants wet set tactile warning surface units against defective work, breakage, deformation, fading, and loosening of tactile warning surface material.
 - 1. Guarantee Period: Five (5) years from date of Contract's final completion.
- B. Manufacturer warrants and certifies that the reverse profile of tactile warning surface units will not change in any way for a minimum of 10 years, ensuring full product interchangeability.

PART 2 - PRODUCTS

2.1 DETECTABLE WARNING PANELS

- A. Regional Materials: Provide detectable warning panels that have been manufactured within 500 miles of Project site from aggregates and cement that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles of Project site.
- B. Detectable Warning Panels: Solid precast concrete units made with high strength concrete, enhanced with microsilica and reinforced with structural fibrillating monofilament fibers.
- C. Basis of Design Product: Subject to compliance with requirements, provide **CASTinTACT® 3 Warning Panels** as provided by **Masons Supply Company**, or an equivalent product approved by Architect.
 - 1. Thickness: 0.9 inch.
 - 2. Face Size and Shape: As indicated.
 - 3. Truncated Domes: Square grid pattern, truncated domes of following dimensions:
 - a. Height: 0.2 inches nominal height above surface of unit.
 - b. Diameter: 0.91 inches at base and 0.45 inches at top of dome.
 - c. Spacing: 2.35 inches from center to center in both grid directions.
 - 4. Color: Integral uniform color and UV stabilization contrasting with surrounding concrete, as selected by Architect from manufacturer's full range.

2.2 MORTAR SETTING-BED MATERIALS

- A. Regional Materials: Provide aggregate, cement, and lime for mortar that has been extracted, harvested, or recovered, as well as manufactured, within 500 miles of Project site.
- B. Portland Cement: ASTM C 150, Type I or Type II.
- C. Hydrated Lime: ASTM C 207, Type S.

- D. Sand: ASTM C 144.
- E. Latex Additive: Manufacturer's standard acrylic resin or styrene-butadiene-rubber water emulsion, serving as replacement for part or all of gaging water, of type specifically recommended by latex-additive manufacturer for use with field-mixed portland cement and aggregate mortar bed, and not containing a retarder.
- F. Water: Potable.
- G. Grout Mix: Manufacturer's standard, single component, bonding and void filling compound consisting of a premix blend of Portland cement and graded sand.

2.3 MORTAR MIXES

- A. General: Comply with referenced standards and with manufacturers' written instructions for mix proportions, mixing equipment, mixer speeds, mixing containers, mixing times, and other procedures needed to produce setting-bed and joint materials of uniform quality and with optimum performance characteristics. Discard mortars and grout if they have reached their initial set before being used.
- B. Latex-Modified, Portland Cement Setting-Bed Mortar: Proportion and mix portland cement, sand, and latex additive for setting bed to comply with written instructions of latex-additive manufacturer and as necessary to produce stiff mixture with a moist surface when bed is ready to receive panels.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas indicated to receive panels, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Remove substances from concrete substrates that could impair mortar bond, including curing and sealing compounds, form oil, and laitance.
- B. Sweep concrete substrates to remove dirt, dust, debris, and loose particles.

3.3 INSTALLATION, GENERAL

- A. Do not use detectable warning panels with chips, cracks, voids, discolorations, or other defects that might be visible or cause staining in finished work.

- B. Cut units with motor-driven saw equipment only, designed to cut tactile warning units with clean, sharp, unchipped edges. Cut tactile warning units as required to provide the pattern shown and to fit adjoining work neatly. Use full tactile warning units without cutting wherever possible. Where cutting is required, use largest tactile warning unit possible with no cutting through raised domes.
- C. Tolerances: Do not exceed 1/16-inch unit-to-unit offset from flush (lippage) nor 1/8 inch in 24 inches and 1/4 inch in 10 feet from level, or indicated slope, for finished surface of paving.

3.4 MORTAR SETTING-BED APPLICATIONS

- A. Saturate concrete subbase with clean water several hours before placing setting bed. Remove surface water about one hour before placing setting bed. Assure that concrete below panels is a minimum of 1 inch thick.
- B. Set units according to tactile warning surface manufacturer's written instructions and in pattern shown on Contract Drawings with varying joint widths as necessary to align the centerlines of joints with a 1 foot module and with the centerlines of concrete scoring joints, concrete construction joints, concrete control joints, and concrete expansion joints.
- C. Apply mortar-bed bond coat over surface of concrete subbase about 15 minutes before placing mortar bed. Limit area of bond coat to avoid its drying out before placing setting bed. Do not exceed 1/16-inch thickness for bond coat.
- D. Apply mortar bed over bond coat; spread and screed mortar bed to uniform thickness at subgrade elevations required for accurate setting of panels to finished grades indicated.
- E. Mix and place only that amount of mortar bed that can be covered with panels before initial set. Before placing panels, cut back, bevel edge, and remove and discard setting-bed material that has reached initial set.
- F. Place panels before initial set of cement occurs. Immediately before placing panels on mortar bed, apply uniform 1/16-inch- thick bond coat to mortar bed or to back of each panel with a flat trowel.
- G. Tamp or beat panels with a wooden block or rubber mallet to obtain full contact with setting bed and to bring finished surfaces within indicated tolerances. Set each panel in a single operation before initial set of mortar; do not return to areas already set or disturb panels for purposes of realigning finished surfaces or adjusting joints.

3.5 REPAIRING, POINTING, AND CLEANING

- A. Remove and replace detectable warning panels that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Provide new units to match adjoining units and install in same manner as original units, with same joint treatment and with no evidence of replacement.

- B. Pointing: During tooling of joints, enlarge voids or holes and completely fill with grout. Point joints at sealant joints to provide a neat, uniform appearance, properly prepared for sealant application.

END OF SECTION 32 1726



Sheet / Detail - Description of change:

Payne Building

Sheet G101 - Life Safety

- Complete One Hour fire rating at east wall of Room 122A - Soiled Holding

Sheet AS103

- add 3 signs type: Detail A2/AF501
- add 8 signs type: Detail A3/AF501 (4 each)

Sheet AS501

- revise detail tactile warning panel detail
See attached.

Sheet A101 - Level 1 Floor Plan

- add two concrete bollards at ambulance entry
See detail C5/AS501

Sheet A111 - Reflected Ceiling Plan

- wood slat ceiling revised to flat veneer panels as shown
See attached

Sheet A201 - Exterior Elevations

- add control joints at Details A1, B2, C2, AND D1
- add Signage detail A1
See attached.

Sheet A302 - Wall Sections

- Details A5, B1, and B2
add keynote **03.15**

Sheet A303 - Wall Sections

- Detail B3
change note at Concrete Reveal from 4"x16" to **3/4"x16"**
- Details A2, A5, and B1
add keynote **07.10**
- Detail A5
See attached.
- Detail A4
add keynote **03.15**



Sheet A620 - Door and Frame Schedule

- change Door Number 110.2 - Leaf 1 Type from ' P00 ' to ' P30 '
- change Door Number 110.2 - Glazing Type from ' - ' to ' GL-07 '

Sheet A704

- add Signage , change wood paneling detail A1
- add Signage , change wood paneling detail A3

Sheet AF501 and AF502 - Signage Details

- add sheets
See attached.

Sheet AF601 - Door Room Signage Schedule

- add sheets
See attached.

Sheet G160 - Mock-Up

- Details 1A, 2A, 1E, and 2E
masonry anchors and 'z' clips added
See attached

REFERENCE NOTES

- 06.35 SUSPENDED TRANSLUCENT PLASTIC PANEL
- 11.05 CEILING MOUNTED PROJECTOR BY OWNER
- 11.07 RECESSED MOTORIZED PROJECTION SCREEN
- 23.06 LINEAR DIFFUSER, RE MECHANICAL DRAWINGS

CEILING LEGEND

ROOM NAME	RM NO.	HT	C	PNT
C = CEILING TYPE				
PNT = CEILING FINISH				

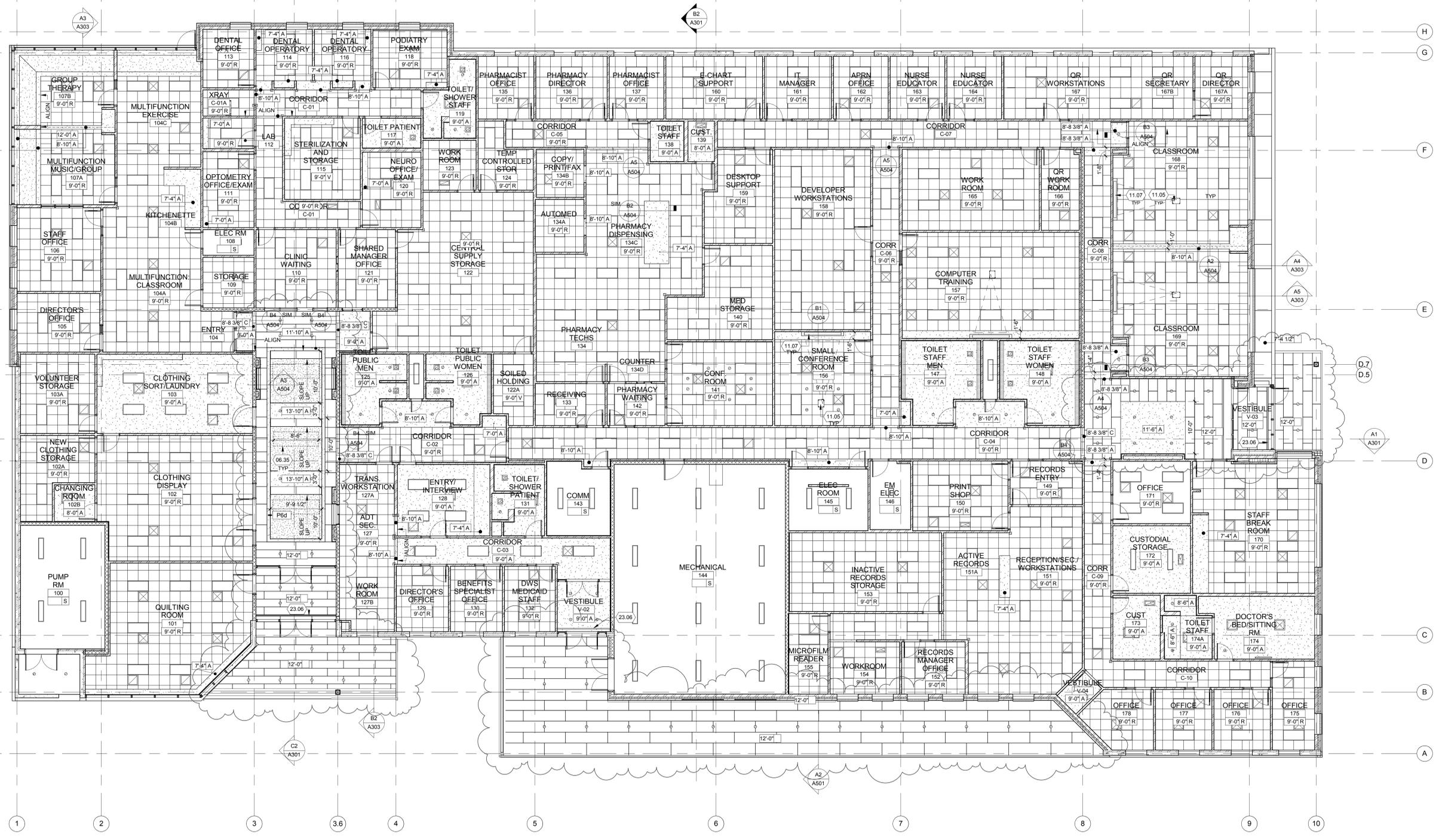
CEILING TYPE
A GYPSUM BOARD
C CMU
R ACOUSTICAL PANEL - REVEAL EDGE
V ACOUSTICAL PANEL - VINYL LAMINATED
S - OPEN TO STRUCTURE
W WOOD (VENEER PANELS)

FORM APPROVAL STAMP

FFKR
ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

• 801-521-6186
• 801-539-1916
ffkr.com



A1 MAIN FLOOR REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"

Mark I. Payne Building
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UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

DATE	REVISION
1 2012 09 20	ADDENDUM #1

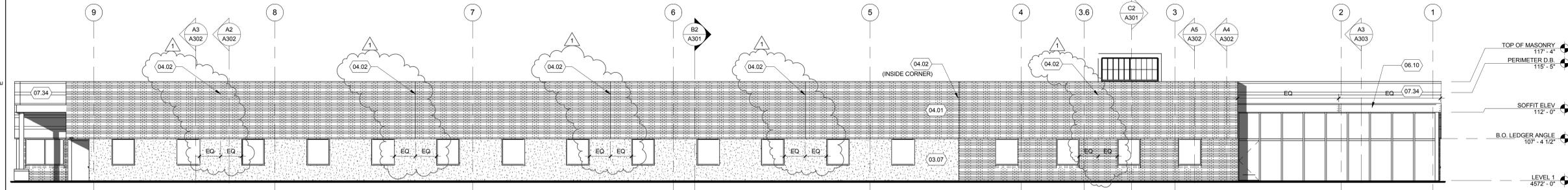
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FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	FFKR
SCALE	As indicated

REFLECTED CEILING PLAN

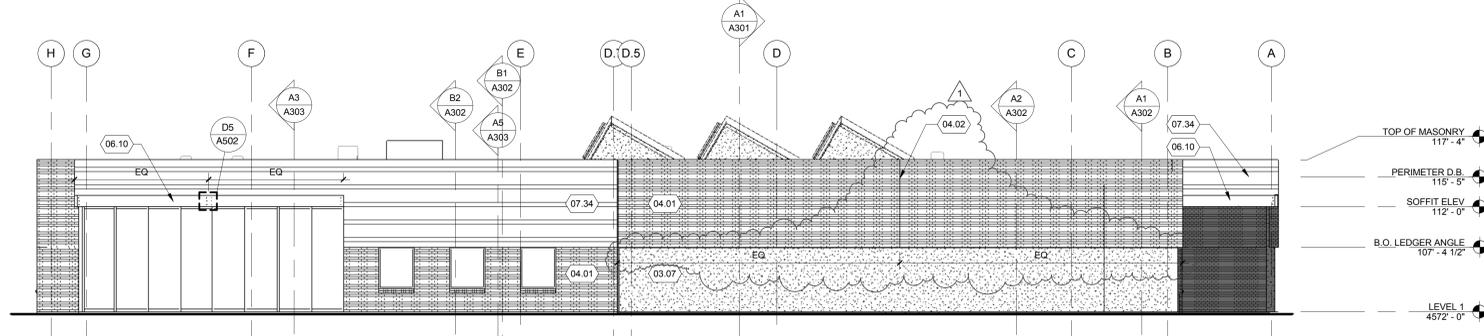
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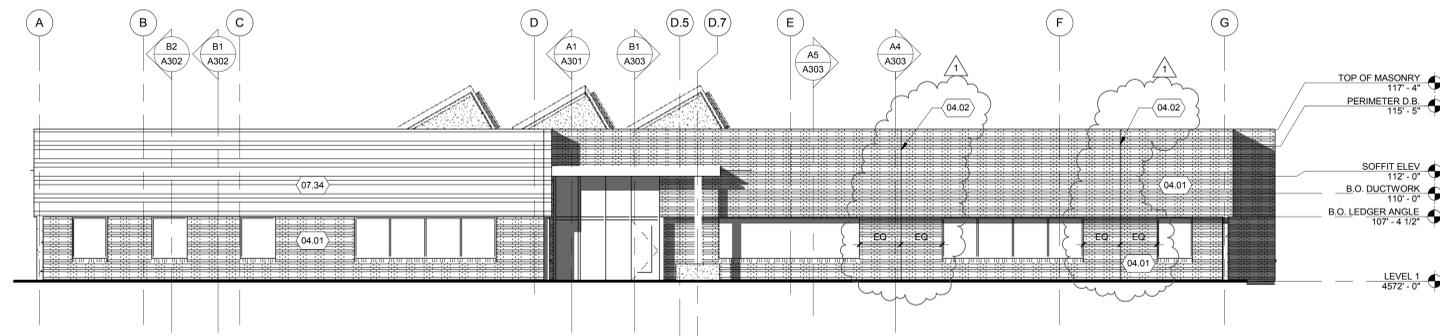
- 02.30 PRECAST CONCRETE RELIEF PANEL SALVAGED FROM MS BUILDING
- 03.07 ARCHITECTURAL CONCRETE
- 04.01 BRICK VENEER
- 04.02 BRICK VENEER CONTROL JOINT
- 06.10 4" X 16" HEAVY TIMBER THROUGH-BOLT TO 3/4" PLYWD BACKING.
- 07.34 METAL PANEL, 4" RIB TO RIB
- 10.06 SIGN - SEE DETAIL D1/AF502
- 10.15 SIGN - SEE DETAIL C1/AF502



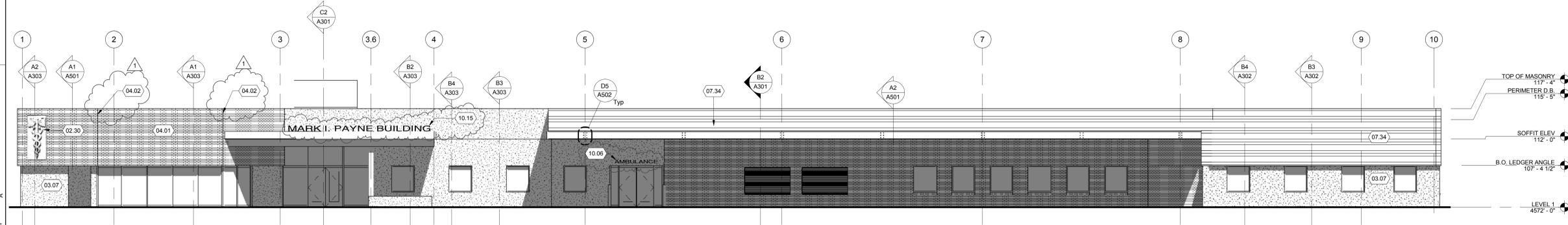
E1 EAST
SCALE: 1/8" = 1'-0"



C3 NORTH
SCALE: 1/8" = 1'-0"



B3 SOUTH
SCALE: 1/8" = 1'-0"



A1 WEST
SCALE: 1/8" = 1'-0"

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DATE	REVISION
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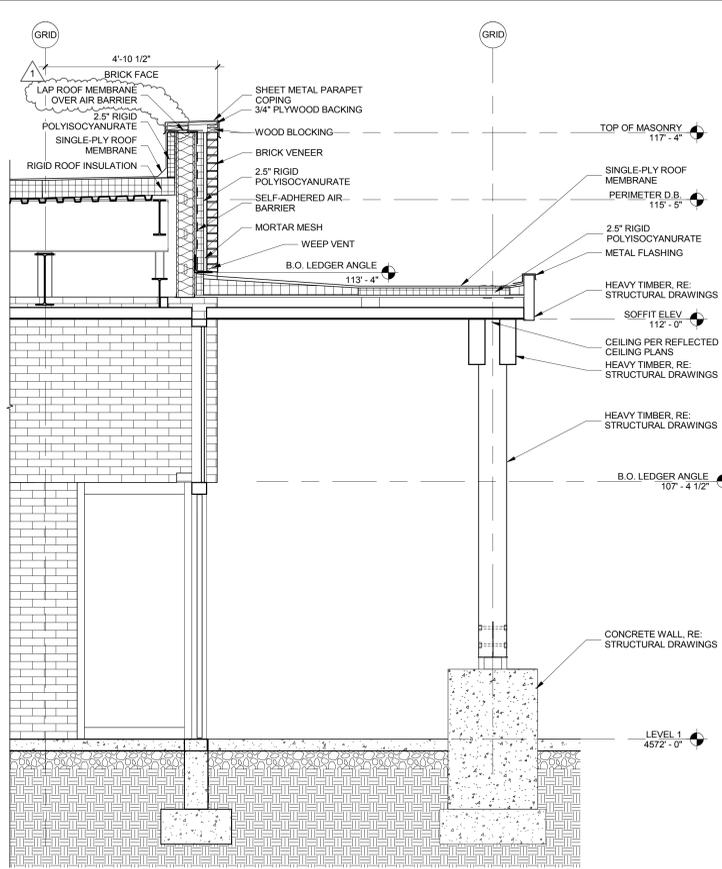
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FILE 11111 USH Payne
DRAWN BY FFKR
CHECKED BY FFKR
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EXTERIOR ELEVATIONS

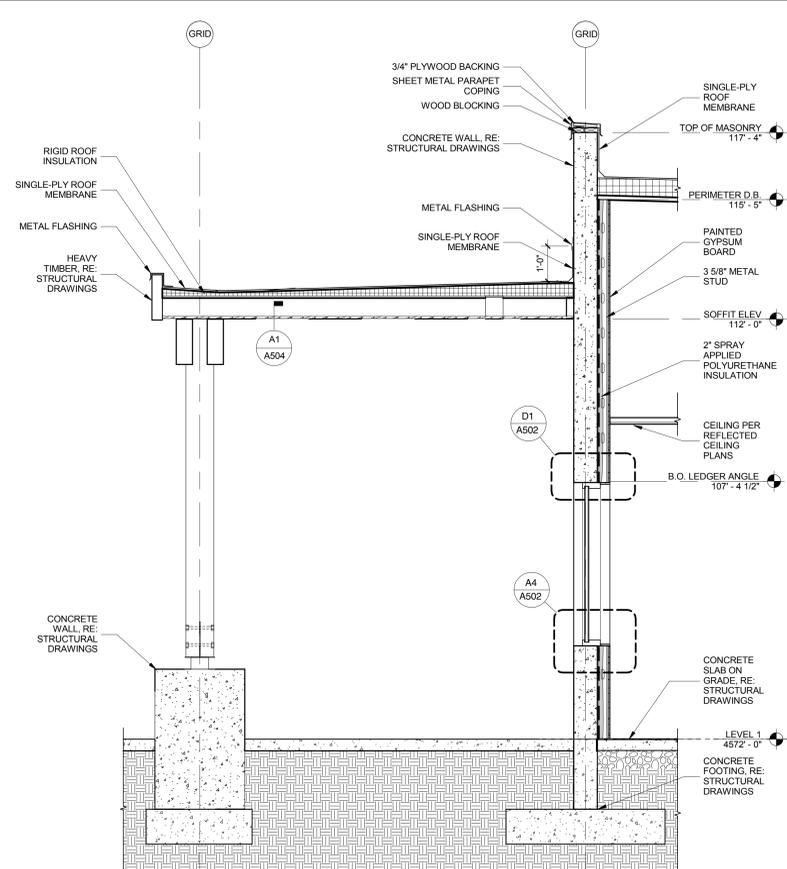
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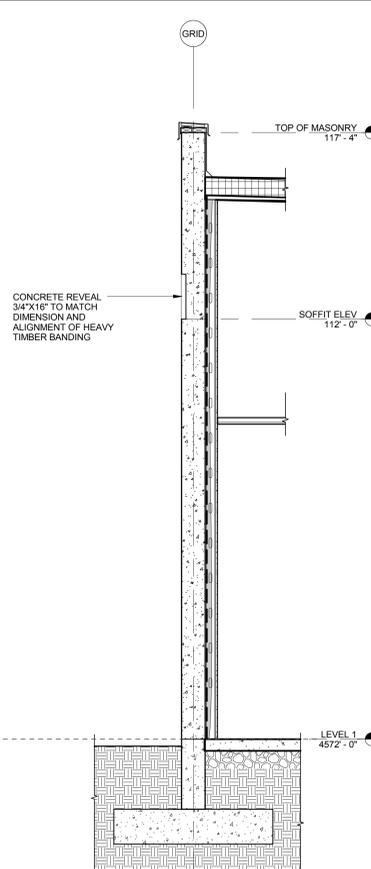
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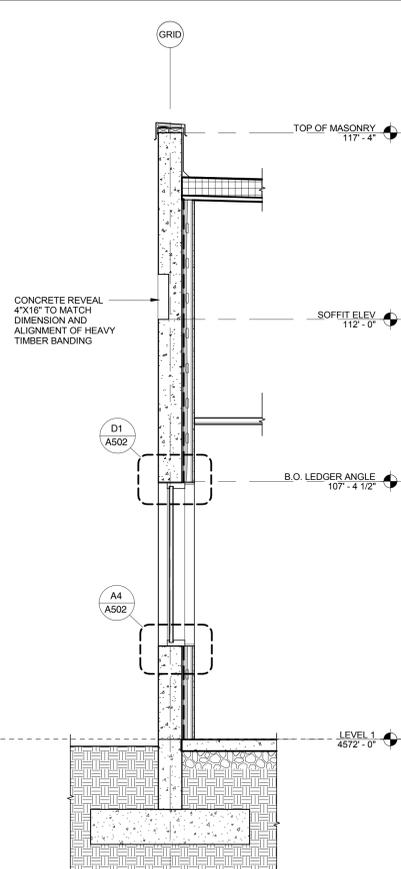
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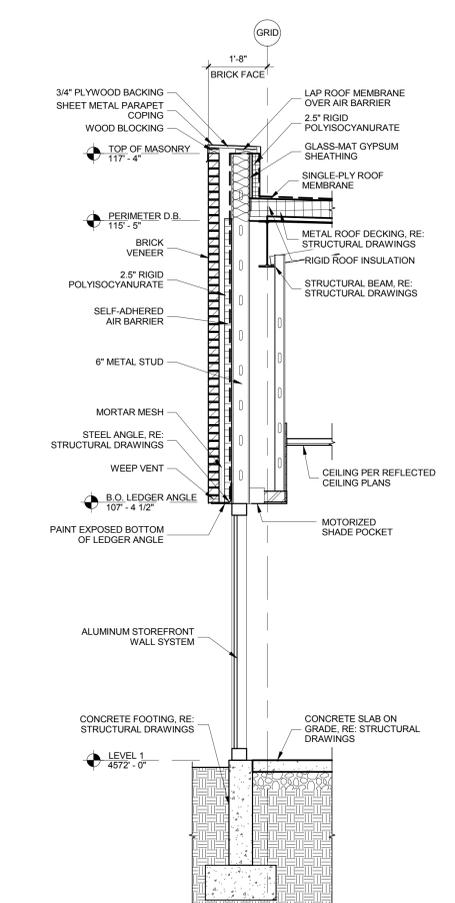
B2 WALL SECTION
SCALE: 1/2" = 1'-0"



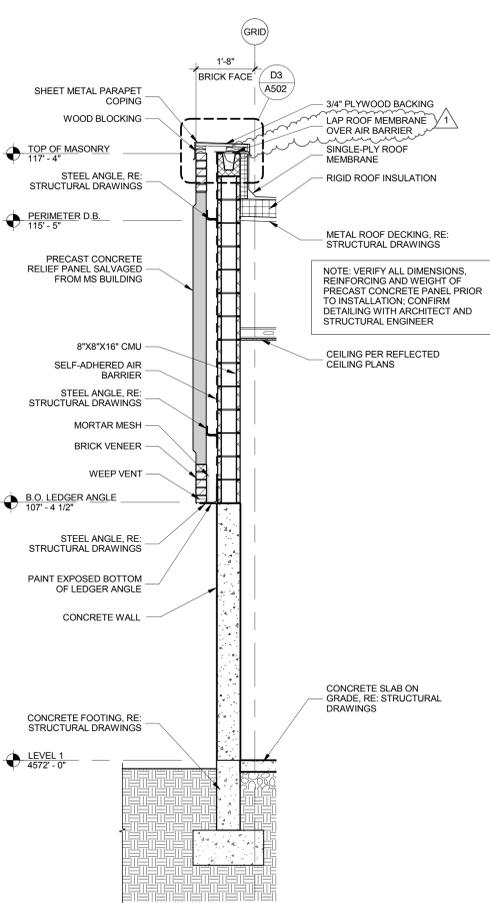
B3 WALL SECTION
SCALE: 1/2" = 1'-0"



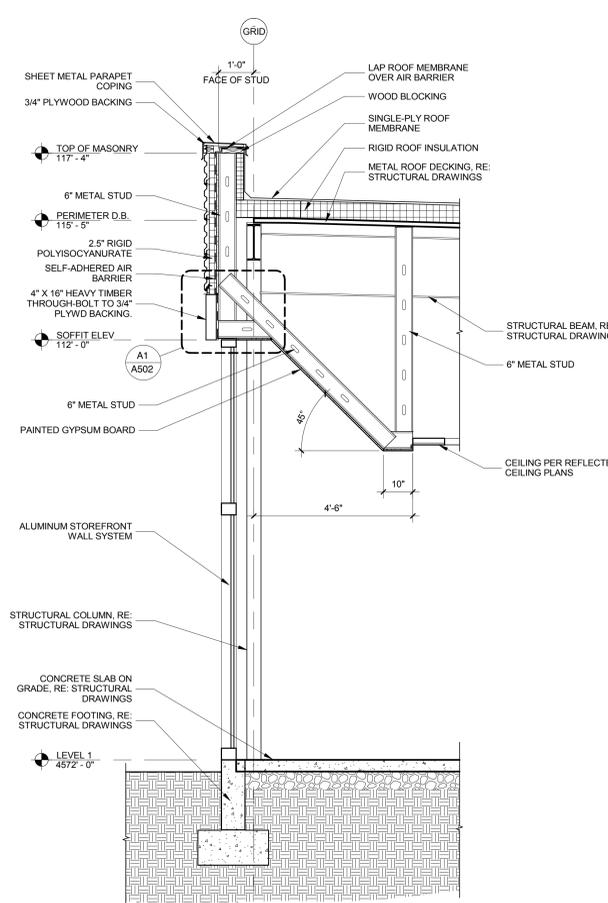
B4 WALL SECTION
SCALE: 1/2" = 1'-0"



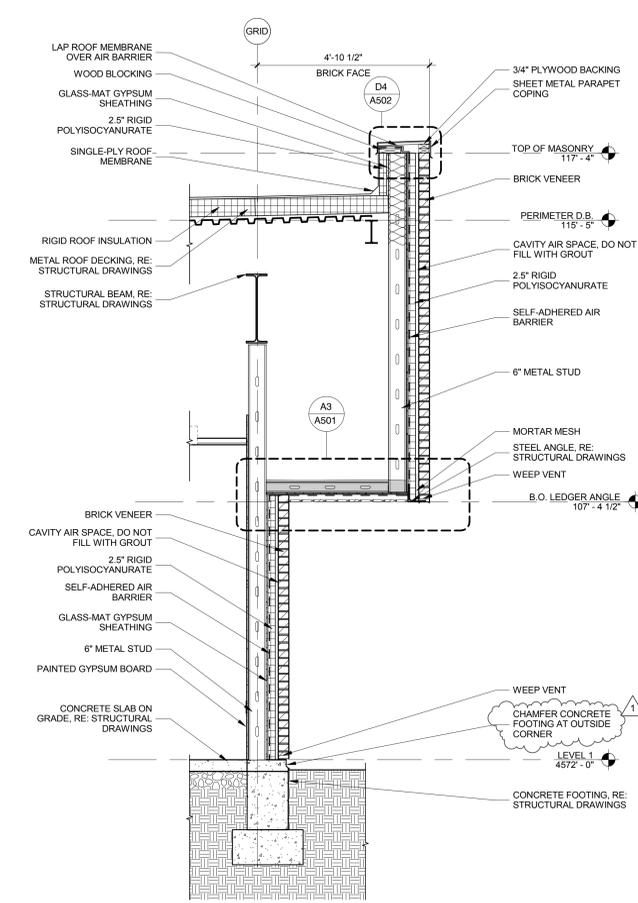
A1 WALL SECTION
SCALE: 1/2" = 1'-0"



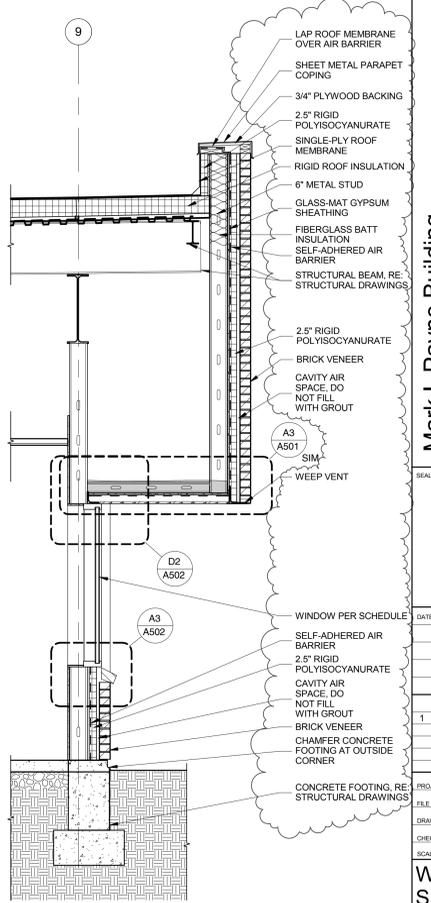
A2 WALL SECTION
SCALE: 1/2" = 1'-0"



A3 WALL SECTION
SCALE: 1/2" = 1'-0"



A4 WALL SECTION
SCALE: 1/2" = 1'-0"



A5 WALL SECTION
SCALE: 1/2" = 1'-0"

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DATE	REVISION
1 2012 09 20	ADDENDUM #1

WALL SECTIONS

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REFERENCE NOTES

GENERAL NOTES

- ALL SIGNS TO BE MOUNTED WITH TAMPER PROOF HARDWARE WALL MOUNTS.
- ALL EXPOSED FASTENERS ARE TO BE TAMPER RESISTANT TYPE PER SPECIFICATION.
- ALL SIGNS TO COMPLY WITH ICC A117.1 AND ALL OTHER RELEVANT CODES AND REQUIREMENTS.

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DATE STATUS

DATE	REVISION
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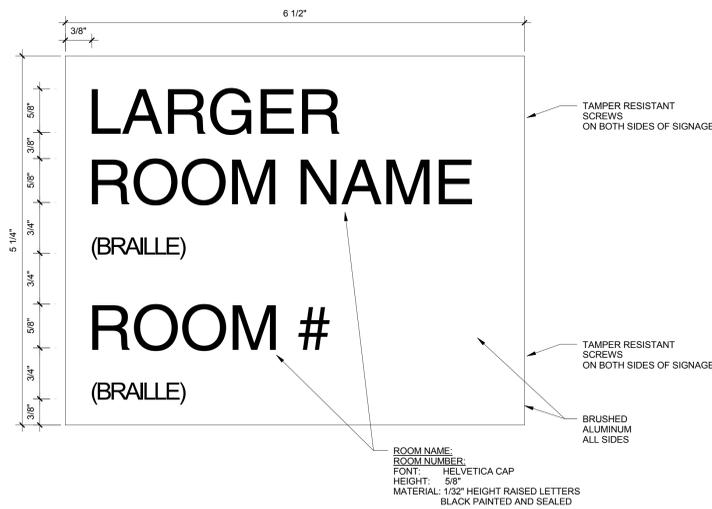
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DRAWN BY	Author
CHECKED BY	Checker
SCALE	As indicated

DATE	REVISION
1 2012 09 20	ADDENDUM #1

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FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	Checker
SCALE	As indicated

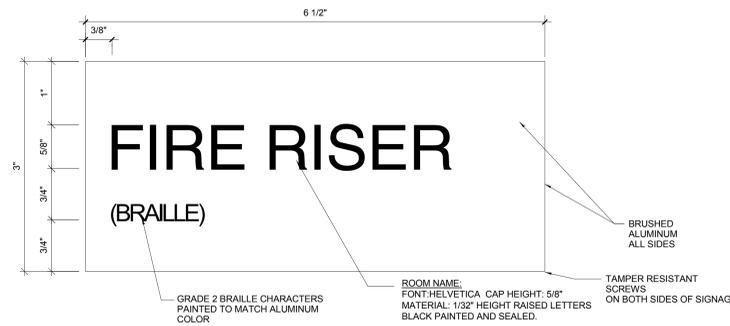
SIGNAGE DETAILS

AF501



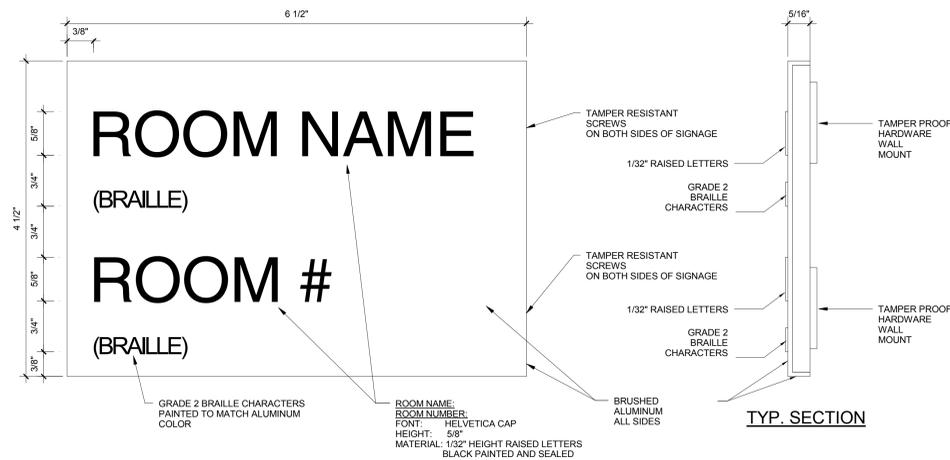
D1 LARGE ROOM SIGNAGE

SCALE: 12" = 1'-0"



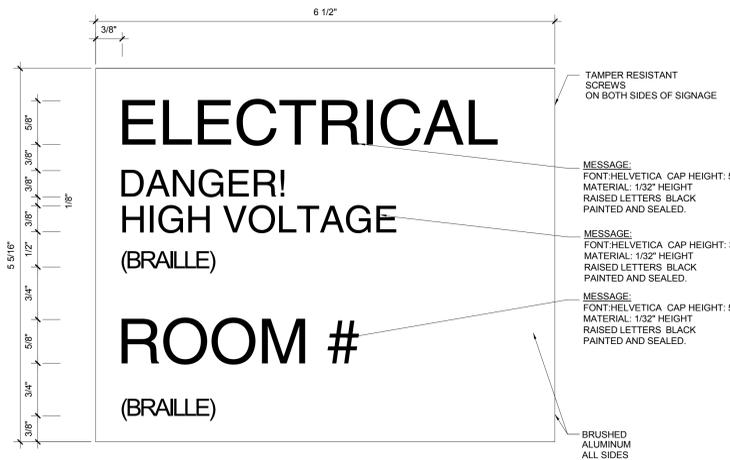
D2 FIRE RISER

SCALE: 12" = 1'-0"



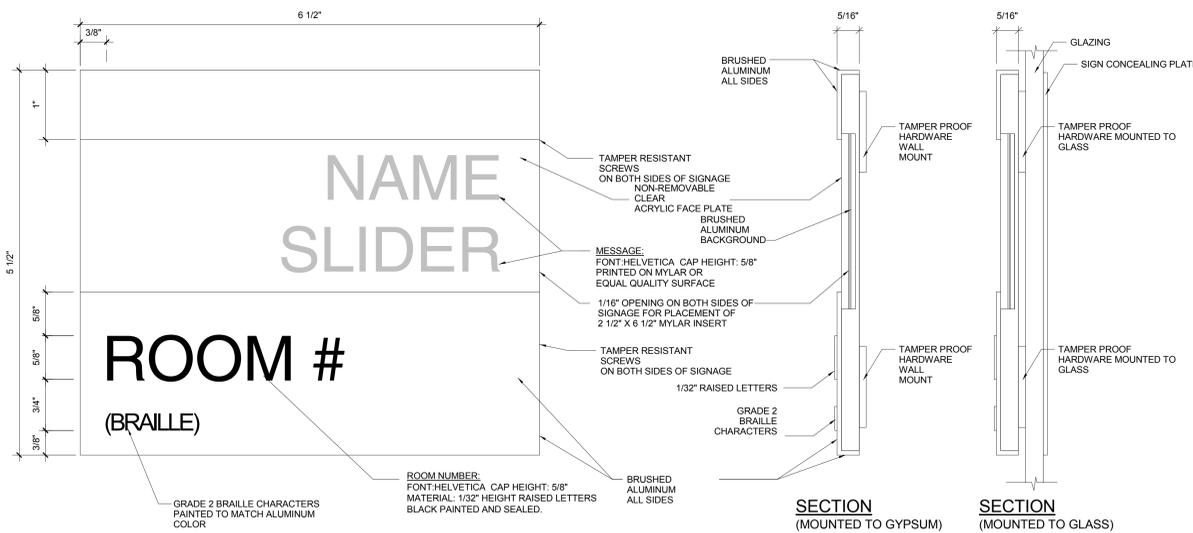
C1 ROOM SIGNAGE

SCALE: 12" = 1'-0"



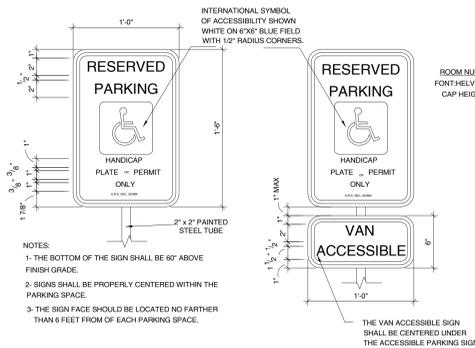
C2 ELECTRICAL SIGNAGE

SCALE: 12" = 1'-0"



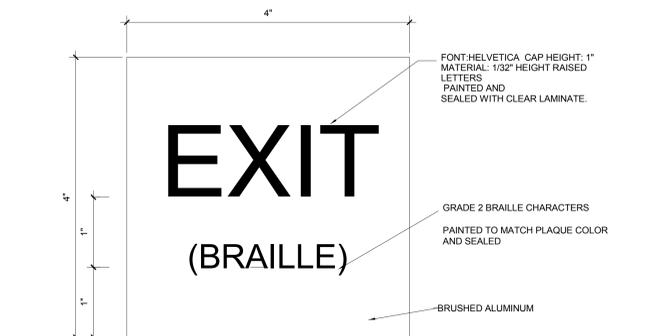
A1 ROOM SLIDER SIGNAGE

SCALE: 12" = 1'-0"



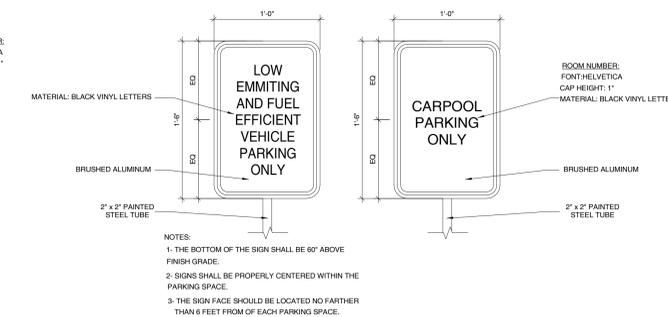
A2 ADA PARKING

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



B3 EXIT SIGN

SCALE: 12" = 1'-0"



A3 LEED PARKING SIGNAGE

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

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ADULT ADMISSIONS

NOTE: INDIVIDUAL CAST BRUSHED ALUMINUM LETTERS ON STAND OFF HIDDEN MECHANICAL FASTENERS
 FONT: HELVETICA
 HEIGHT: 6"

F1 WALL SIGN
 SCALE: N.T.S.

MEDICAL RECORDS

NOTE: INDIVIDUAL CAST BRUSHED ALUMINUM LETTERS ON STAND OFF HIDDEN MECHANICAL FASTENERS
 FONT: HELVETICA
 HEIGHT: 4"

E1 WALL SIGN
 SCALE: N.T.S.

ADMISSIONS

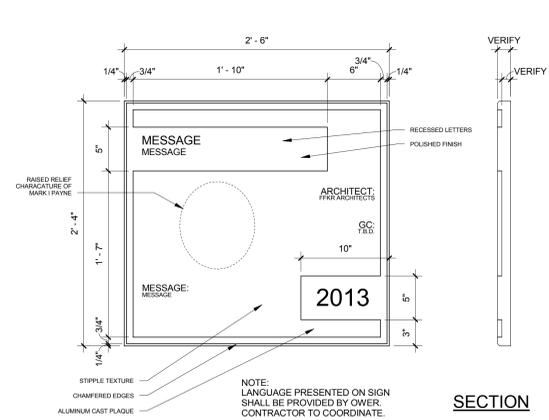
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 FONT: HELVETICA
 HEIGHT: 8"

D1 EXTERIOR BUILDING SIGN
 SCALE: N.T.S.

MARK I. PAYNE BUILDING

NOTE: INDIVIDUAL CAST SEALED STAINLESS STEEL LETTERS MOUNTED ON VERTICAL PINS AT TOP FACE OF CANOPY LEDGER BEAM
 FONT: HELVETICA
 HEIGHT: 12"

C1 EXTERIOR CANOPY SIGN
 SCALE: N.T.S.



D2 ARCHITECTURAL CAST PLAQUE
 SCALE: 3/4" = 1'-0"

CLINICS

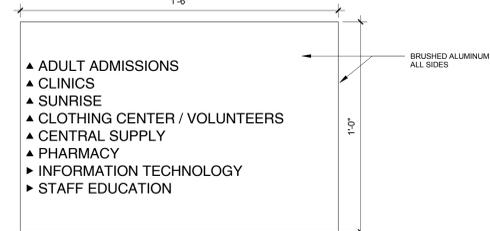
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 HEIGHT: 12"

C2 WALL SIGN
 SCALE: N.T.S.

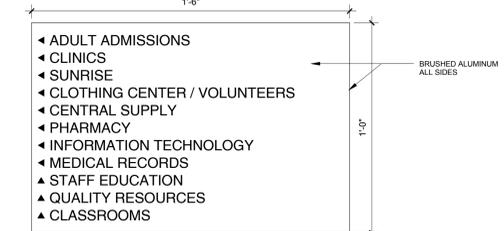
PHARMACY

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 HEIGHT: 4"

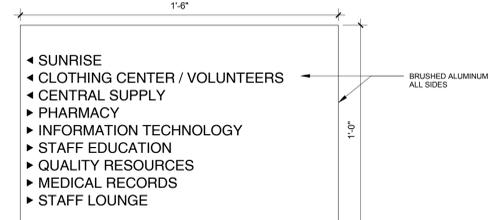
C3 WALL SIGN
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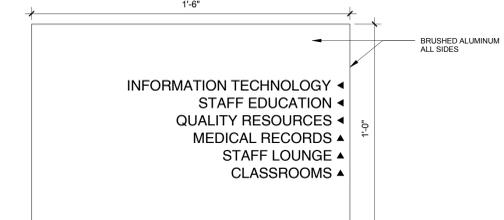
E4 WAYFINDING SIGN
 SCALE: N.T.S.



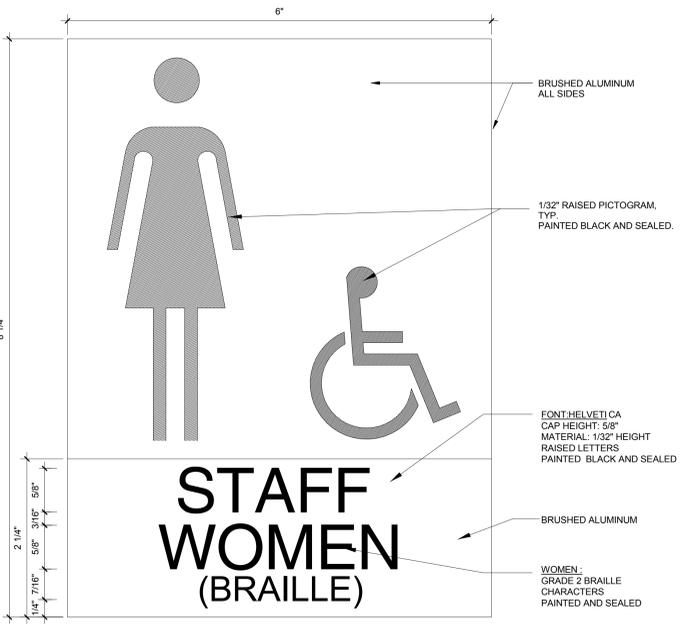
E5 WAYFINDING SIGN
 SCALE: N.T.S.



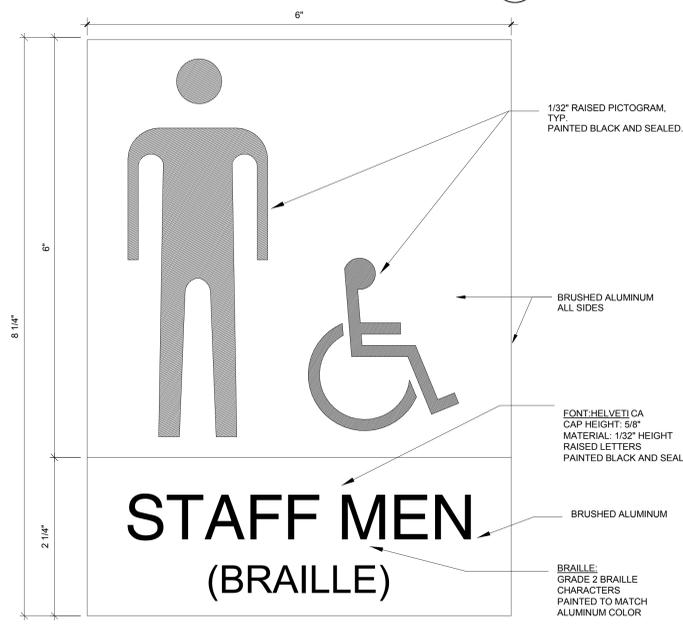
C4 WAYFINDING SIGN
 SCALE: N.T.S.



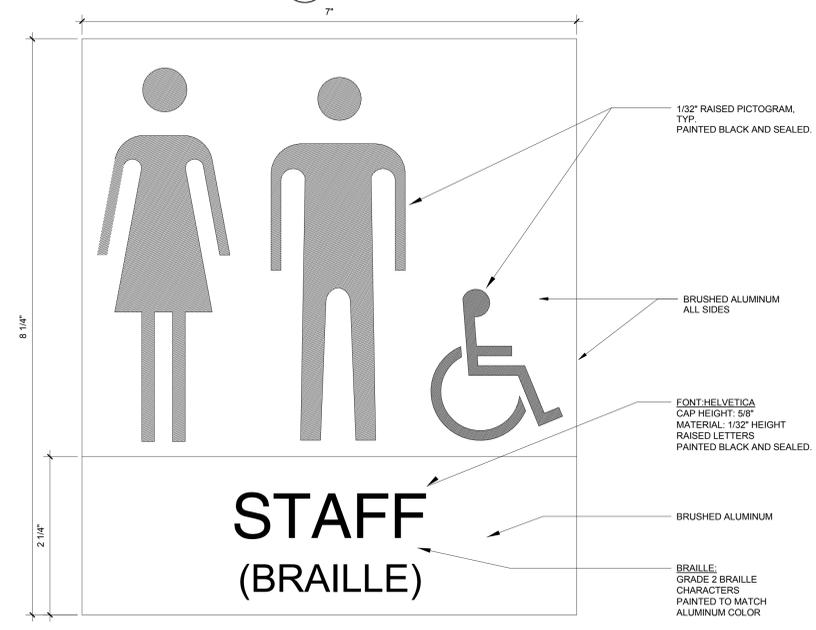
C5 WAYFINDING SIGN
 SCALE: N.T.S.



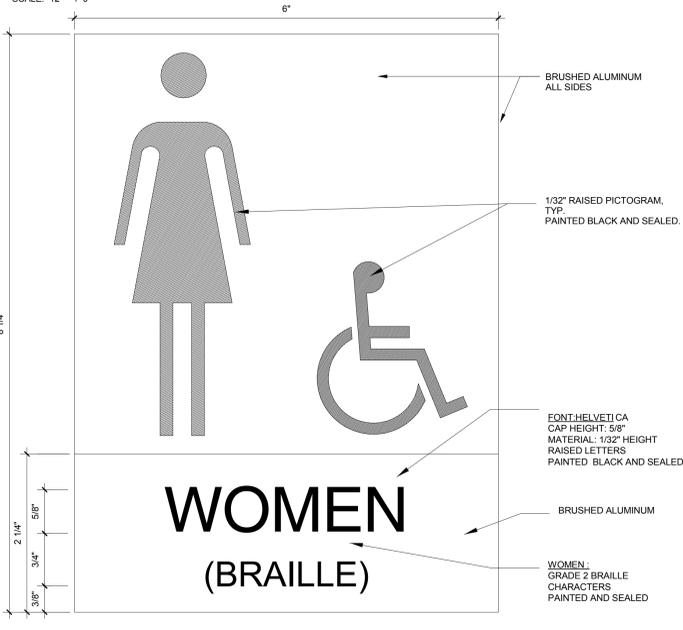
B1 RESTROOM SIGN
 SCALE: 12" = 1'-0"



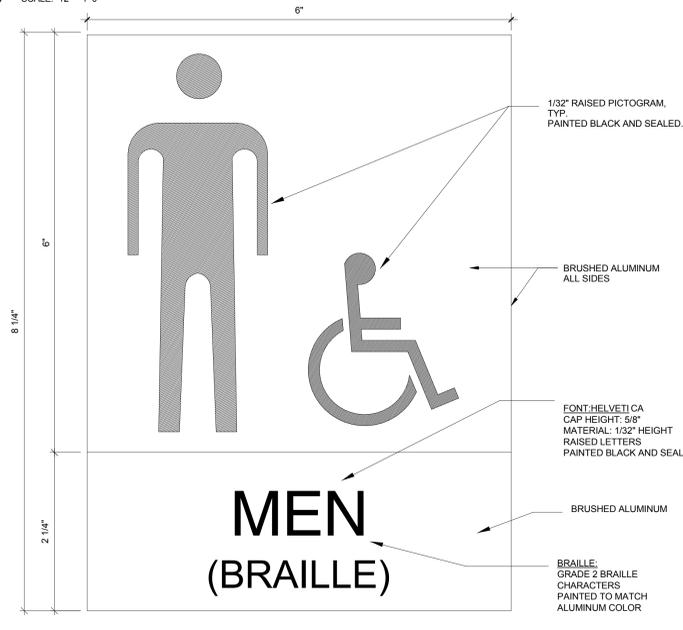
B2 RESTROOM SIGN
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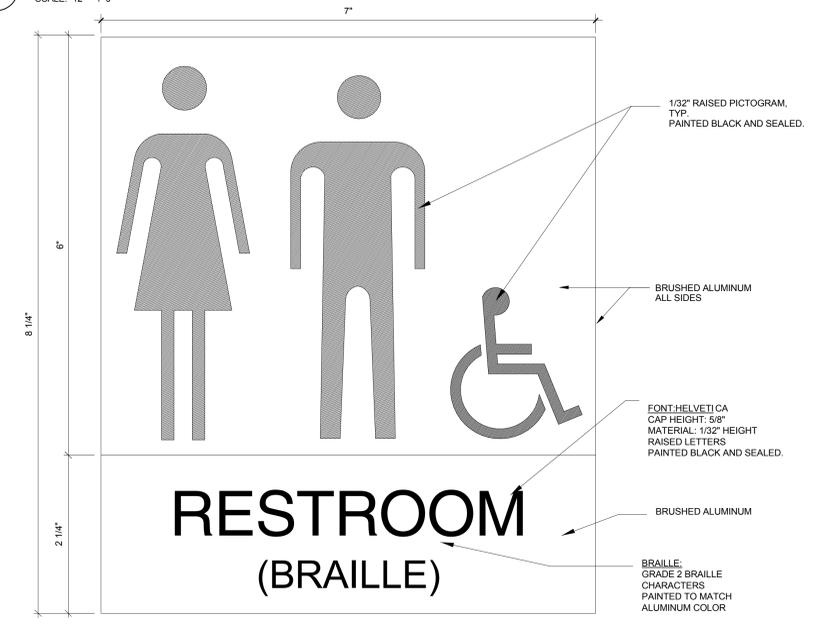
B3 RESTROOM SIGN
 SCALE: 12" = 1'-0"



A1 RESTROOM SIGN
 SCALE: 12" = 1'-0"



A2 RESTROOM SIGN
 SCALE: 12" = 1'-0"



A3 RESTROOM SIGN
 SCALE: 12" = 1'-0"

FORM APPROVAL STAMP

FFKR
 ARCHITECTS

bogue building
 730 pacific avenue
 salt lake city
 Utah 84104
 • 801-521-6186
 • 801-539-1916
 fkr.com

REFERENCE NOTES

GENERAL NOTES

- ALL SIGNS TO BE MOUNTED WITH TAMPER PROOF HARDWARE WALL MOUNTS.
- ALL EXPOSED FASTENERS ARE TO BE TAMPER RESISTANT TYPE PER SPECIFICATION.
- ALL SIGNS TO COMPLY WITH ICC A117.1 AND ALL OTHER RELEVANT CODES AND REQUIREMENTS.

Mark I. Payne Building
 1300 East Center St. Provo, Utah
 UTAH STATE HOSPITAL CONSOLIDATION
 BID DOCUMENTS - 09/12/2012

DATE	REVISION
1 2012 09 20	ADDENDUM #1

PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	Author
CHECKED BY	Checker
SCALE	As indicated

SIGNAGE DETAILS

AF502

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ADDENDUM #1

DATE: September 20, 2012

PROJECT NO: 11542

PROJECT: Utah State Hospital - Payne

DIVISION – 22 & 23

GENERAL

1. Steam, condensate, water and soft water, and associated support in tunnels are shown on civil drawings.

DRAWINGS

SHEET - M401

1. Refer to B1. Provide and install double wall duct on both 42/26 flat oval supply ducts from AH-1. Double wall duct to start from Air Handler-1 duct connections and terminate 20 feet downstream.

SPECIFICATIONS

SECTION - 232113 - Hydronic Piping and Accessories

1. Add the following subparagraphs to 2.4.N
 - A. Rigid Type: Coupling housings with offsetting, angle-pattern bolt pads shall be used to provide system rigidity and support and hanging in accordance with ANSI B31.1, B31.9, and NFPA 13. 2" (DN50) through 8" (DN200): Installation ready rigid coupling for direct stab installation without field disassembly. Gasket shall be Grade "EHP" EPDM compound with red color code designed for operating temperatures from -30 deg F (-34 deg C) to +250 deg F (+120 deg C).
 - B. Flexible Type: Use in locations where vibration attenuation and stress relief are required. Flexible couplings may be used in lieu of flexible connectors at equipment connections. Three couplings, for each connector, shall be placed in close proximity to the vibration source. 2" (DN50) through 8" (DN200): Installation ready flexible coupling for direct stab installation without field disassembly. Gasket shall be Grade "EHP" EPDM compound with red color code designed for operating temperatures from -30 deg F (-34 deg C) to +250 deg F (+120 deg C).
 - C. Quality Assurance: To assure uniformity and compatibility of piping components in grooved end piping systems, all grooved products utilized shall be supplied by a single manufacturer. A factory trained representative (direct employee) shall provide on-site training for contractor's field personnel in the use of grooving tools, application of groove, and product installation. A factory representative shall periodically visit the job site and review installation. Contractor shall remove and replace any improperly installed products.

PRIOR APPROVALS

The following manufacturers, trade names and products are allowed to bid on a name brand only basis with the provision that they completely satisfy all and every requirement of the drawings, specifications and all addenda shall conform to the design, quality and standards specified, established and required for the complete and satisfactory installation and performance of the building and all its respective parts.

<u>Item</u>	<u>Manufacturer</u>	<u>Comments</u>
Air Handling Units	York	Not Approved
Air Handling Units	Pace	Approved
Air Cooled VSD Screw Chiller	York	Approved
Roof Top Units	York	Approved
Split System Air-Conditioners	York	Approved
Plate and Frame Heat Exchanger	Sondex	Approved
Custom Air Handlers	Scott Springfield	Approved
Multipurpose / Triple Duty Valve	Taco	Approved
Steam Traps	Watson McDaniel	Not Approved
Pump Traps	Watson McDaniel	Not Approved
Packaged Pump Trap & HX	Watson McDaniel	Not Approved
Steam Specialties	Watson McDaniel	Not Approved
Thermometers	Miljoco	Approved
Flex Connectors	Twin City House	Approved
Pressure Reducing Valves	Conbraco	Approved
Reduced Pressure Backflow Preventer	Conbraco	Approved
Strainers	Conbraco	Approved
Strainers	Titan	Approved
Wafer Check Valves	Titan	Approved
Swing Check Valves	Nibco	Approved
Manual/Fire / FS / SD	United Air	Approved
Manual/Fire / FS / SD	Air Balance	Approved
Roof Hoods	Air Rite	Approved
Flex Duct	Hart & Cooley	Approved
Rooftop Units 237310	AnnexAir	Approved
Vibration Isolation Roof Curb Rails	Thybar, Micrometl	Approved
Calibrated Balancing Valves	Danfoss	Approved
Automatic Flow Control Valves	Danfoss, Hays	Approved
Remote Operated Zone Dampers	Greenheck, Young Regulator	Approved
Diffusers, Registers & Grilles	Titus	Approved
Louvers & Vents	Greenheck	Approved
Kitchen Hoods	Greenheck	Approved
Chillers	McQuay, Lennox, Greenheck	Approved
Rooftop Units	McQuay, Lennox, Greenheck	Approved
Custom Air Handling Units	Temtrol, Governair	Approved
Split System A/C Units	Daikin	Approved
Fan Coil Units	Williams, McQuay	Approved
Unit Heaters	Beacon Morris, Sigma	Approved
Air Cooled Condensing Units	Lennox, McQuay	Approved
Calibrated Balance Valve	Nexus Valve	Approved
Air Separator	Patterson Pump Company	Not Approved
Expansion Tanks	Patterson Pump Company	Not Approved
Pump Suction Diffusers	Patterson Pump Company	Not Approved
Flexible Connectors	Patterson Pump Company	Not Approved
HVAC Pumps	Patterson Pump Company	Not Approved
Shell & Tube Heat Exchanger	Patterson Pump Company	Not Approved
Unit Heater	Sigma Corporation	Approved
Power Ventilators	Twin City	Approved
Duct free Split Systems	LG	Approved
Gravity Hoods	Air Rite Mfg	Approved
Louvers and Vents	Potorff	Approved

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GENERAL SHEET NOTES

- LOCATIONS OF MECHANICAL EQUIPMENT SHOWN IS APPROXIMATE. COORDINATE EXACT LOCATIONS OF MECHANICAL EQUIPMENT WITH MECHANICAL INSTALLER PRIOR TO ROUGH-IN.
- REFER TO EQUIPMENT SCHEDULE FOR CONDUCTOR, CONDUIT, AND DEVICE SIZES FOR MECHANICAL EQUIPMENT.

SHEET KEYNOTES

- CEILING MOUNTED RECEPTACLE AND TELE/ DATA FOR CEILING MOUNTED TELEVISION. COORDINATE EXACT LOCATION WITH ARCHITECTURAL PLANS PRIOR TO ROUGH-IN.
- JUNCTION BOX FOR MOTORIZED SCREEN. COORDINATE EXACT LOCATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
- JUNCTION BOX FOR PROMETHEAN BOARD. COORDINATE EXACT LOCATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
- CEILING MOUNTED RECEPTACLE AND TELE/ DATA FOR PROJECTOR.
- JUNCTION BOX FOR MISC. MECHANICAL POWER (CONTROLS, ETC.).
- JUNCTION BOX MOUNTED IN ACCESSIBLE LOCATION ABOVE CEILING FOR VAV CONTROL POWER.
- PROVIDE POWER CONNECTION TO SERVER EQUIPMENT RACK. PROVIDE (2) #10 AWG CONDUCTORS WITH (1) #12 AWG GROUND IN 1" DIA CONDUIT. COORDINATE AND VERIFY EXACT USER POWER REQUIREMENTS WITH OWNER PRIOR TO ROUGH-IN.
- JUNCTION BOX FOR AIR HANDLER RECEPTACLE LIGHTING AND POWER CONNECTION. COORDINATE EXACT LOCATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
- JUNCTION BOX FOR POWER CONNECTION TO DRAIN HEAT TRACE. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
- CONNECT TO ASSOCIATED OUTDOOR CONDENSING UNIT LOCATED ON ROOF. PROVIDE CONDUIT AND CONTROL WIRING AS REQUIRED BY MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- CONNECT TO LIGHTING BRANCH CIRCUIT SWITCH LEG SERVING BATHROOM LIGHTING.
- JUNCTION BOX FOR POWER CONNECTION TO DENTAL ACCESSORIES EQUIPMENT. COORDINATE EXACT LOCATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
- RECEPTACLE FOR POWER CONNECTION TO PANORAMIC XRAY MACHINE. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN.
- RECEPTACLE FOR MICROWAVE. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT WITH MILLWORK PRIOR TO ROUGH-IN.
- JUNCTION BOX FOR CONNECTION TO SENSOR OPERATED SINKS. COORDINATE REQUIREMENTS WITH EQUIPMENT PRIOR TO ROUGH-IN.
- JUNCTION BOX FOR CONNECTION TO SENSOR OPERATED TOILETS. COORDINATE REQUIREMENTS WITH EQUIPMENT PRIOR TO ROUGH-IN.
- CIRCUIT TO UNDER CABINET LIGHT FIXTURES LOCATED DIRECTLY ABOVE.
- PROVIDE (1) 2" EMPTY CONDUIT WITH PULL STRING FROM FLOOR BOX TO FLUSH WALL MOUNTED JUNCTION BOX WITH SINGLE GANG OPENING. MOUNT JUNCTION BOX AT TYPICAL RECEPTACLE HEIGHT.
- PROVIDE (1) 2" EMPTY CONDUIT WITH PULL STRING FROM PANEL "ELA" AND STUBBED UP AT GENERATOR ENCLOSURE.
- POWER CONNECTION FOR GENERATOR CONTROLS AND DEVICES.
- POWER CONNECTION FOR GENERATOR COOLANT HEATER. COORDINATE EXACT STUB-UP LOCATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
- POWER CONNECTION FOR GENERATOR BLOCK HEATER. COORDINATE EXACT STUB-UP LOCATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
- JUNCTION BOX FOR IRRIGATION CONTROLLER. COORDINATE EXACT LOCATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
- KEYED AND BUTTON CONTROL SWITCHES FOR CONTROLS TO MECHSHADES IN THIS ROOM. MOUNT SWITCHES ADJACENT TO ROOM LIGHT SWITCHES.
- CONTROL SWITCH FOR MECHSHADES LOCATED IN LOCKABLE CABINET. COORDINATE EXACT LOCATION WITH MILLWORK PRIOR TO ROUGH-IN.
- JUNCTION BOX FOR MOTORIZED MECHSHADES. COORDINATE EXACT LOCATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
- CONTROL SWITCH FOR CONTROLS TO MECHSHADES IN DAY ROOM. MOUNT SWITCH ADJACENT TO ROOM LIGHT SWITCHES.
- PROVIDE (1) 1" CONDUIT FROM SINGLE GANG JUNCTION BOX LOCATED ADJACENT TO X-RAY EQUIPMENT TO FOUR GANG JUNCTION BOX FOR EQUIPMENT SWITCHES AND INDICATOR LIGHT. MOUNT EQUIPMENT JUNCTION BOX AT STANDARD RECEPTACLE HEIGHT. X-RAY EQUIPMENT, SWITCHES, INDICATOR LIGHTING, AND CABLING PROVIDED BY OWNER. COORDINATE WITH OWNER FOR INSTALLATION OF OWNER PROVIDED EQUIPMENT, CABLING, AND DEVICES.
- JUNCTION BOX FOR POWER CONNECTION TO AUTOMATIC DOOR. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH AUTODOOR EQUIPMENT PRIOR TO ROUGH-IN.
- PROVIDE (1) 2" CND FROM 4G JUNCTION BOX IN BASE CABINET TO PLENUM. COORDINATE WITH EXACT LOCATION WITH MILLWORK PRIOR TO ROUGH-IN.

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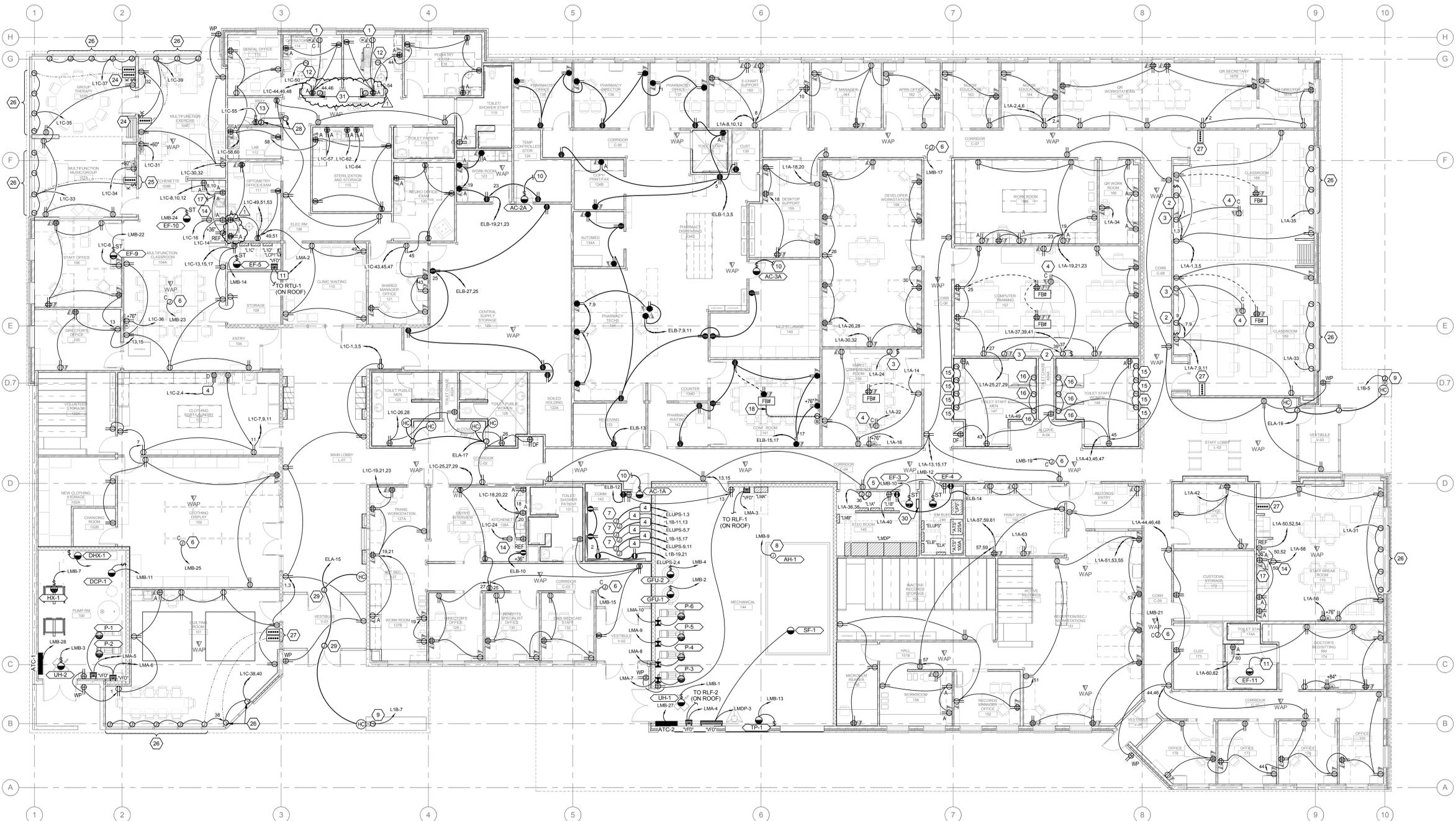
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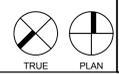
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D4 ENLARGED UTILITY ENCLOSURE POWER PLAN
SCALE: 1/8" = 1'-0"

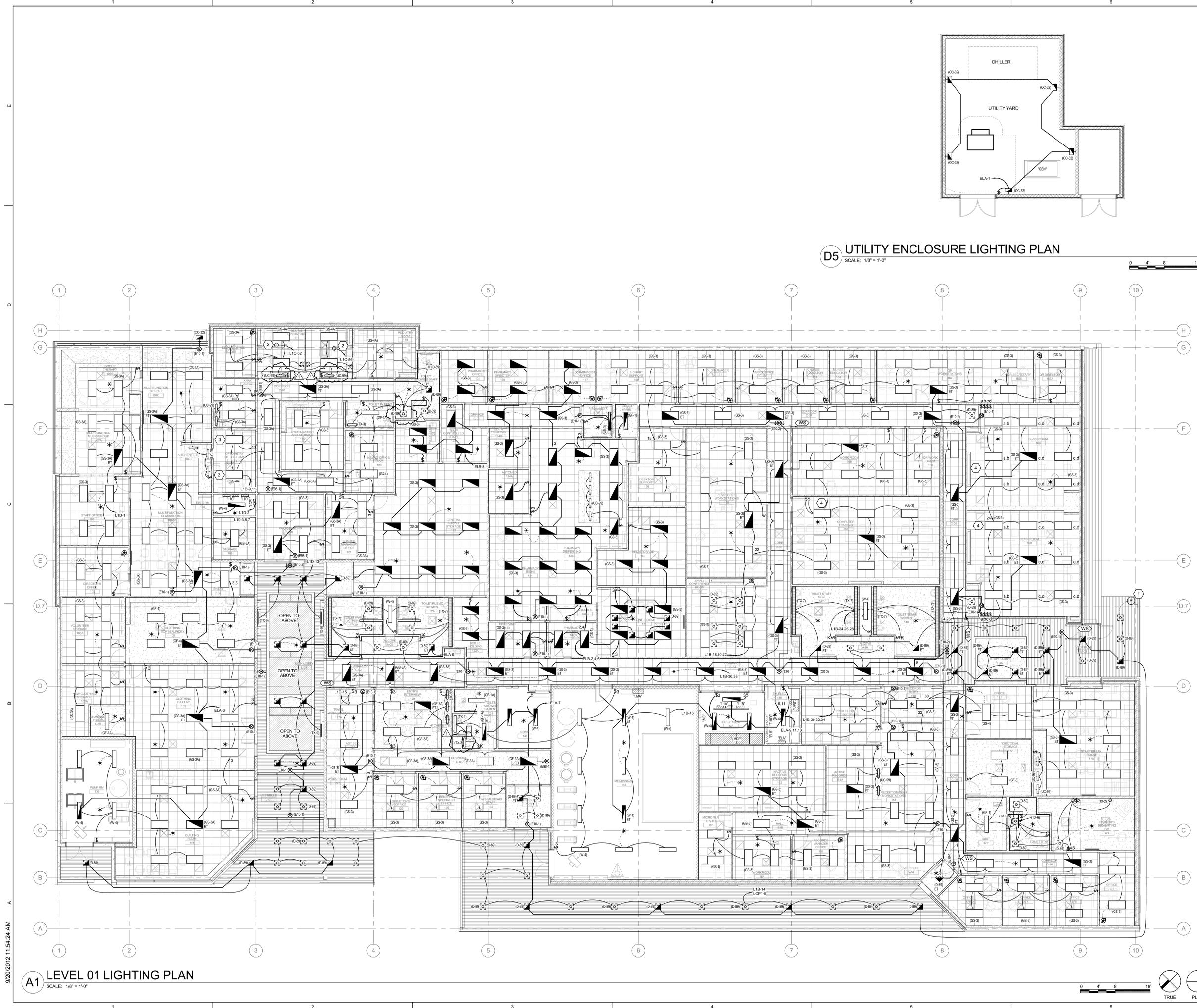


A1 LEVEL 01 POWER PLAN
SCALE: 1/8" = 1'-0"

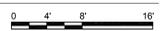


Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

DATE	09/12/2012
STATUS	
PROJECT NUMBER	11111
FILE	11111 USH Payne
DRAWN BY	WRT
CHECKED BY	CAG
SCALE	1/8" = 1'-0"
LEVEL 1 POWER PLAN	
EP101	



D5 UTILITY ENCLOSURE LIGHTING PLAN
SCALE: 1/8" = 1'-0"



FORM APPROVAL STAMP

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GENERAL SHEET NOTES

1. PROVIDE GENERATOR TRANSFER DEVICES IN EACH EMERGENCY FIXTURE, EXCEPT THOSE CONNECTED TO PANEL "ELB" IN TELECOM ROOMS, AND ELECTRICAL ROOMS.

SHEET KEYNOTES

1. MOUNT PHOTOCELL ON CANOPY ROOF FOR LIGHTING CONTROL SYSTEM.
2. JUNCTION BOX FOR POWER CONNECTION TO DENTAL EXAMINATION LIGHT. COORDINATE EXACT LOCATION WITH EQUIPMENT AND REQUIREMENTS WITH MANUFACTURER'S WRITTEN SPECIFICATION PRIOR TO ROUGH-IN.
3. PROVIDE FIXTURE WITH DIMMING BALLAST.
4. PROVIDE EACH FIXTURE WITH TWO BALLASTS FOR DUAL LEVEL SWITCHING (INBOARD/OUTBOARD).

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Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012



DATE	STATUS
09/12/2012	

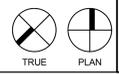
DATE	REVISION
1 9/20/12	ADD #1

PROJECT NUMBER: 11111
FILE: 11111 USH Payne
DRAWN BY: WRT
CHECKED BY: CAG
SCALE: 1/8" = 1'-0"
LEVEL 1 LIGHTING PLAN

EL101

9/20/2012 11:54:24 AM

A1 LEVEL 01 LIGHTING PLAN
SCALE: 1/8" = 1'-0"



LIGHTING FIXTURE SCHEDULE

REFER TO SPECIFICATIONS FOR IMPORTANT TECHNICAL REQUIREMENTS FOR LIGHTING FIXTURES, BALLASTS, AND LAMPS. THE CATALOG NUMBERS LISTED BELOW HAVE BEEN CAREFULLY PREPARED TO ASSIST BIDDERS IN SELECTING PRODUCTS TO ACHIEVE THE DESIGN CONCEPT. HOWEVER, PRIOR TO BIDDING, EACH MANUFACTURER SHALL COMPARE THE CATALOG NUMBERS SHOWN WITH THE DESCRIPTION AND REQUIREMENTS ON THE DRAWINGS, AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES. SPECIFICALLY INCLUDED IN THIS EVALUATION SHALL BE THE VERIFYING OF PROPER MOUNTING KITS OR ACCESSORIES TO FACILITATE INSTALLATION AS SHOWN AT EACH LOCATION ON THE DRAWINGS. NO ALLOWANCE OR REDRESS WILL BE ALLOWED FOR DISCREPANCIES THAT WERE NOT REPORTED TO THE ARCHITECT/ENGINEER IN TIME FOR CORRECTION OR CLARIFICATION BEFORE THE BID. THE REPORTING OF ANY AMBIGUITY IS THE RESPONSIBILITY OF THE BIDDER. PROVIDE UNIT PRICES AND FIXTURE BRAND SELECTED FOR ADDITIONAL CHANGES FOR EACH FIXTURE TYPES SHOWN WITHIN 48 BUSINESS HOURS OF THE BID DATE. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY DISQUALIFY THE PRODUCTS AND EMPOWER THE ENGINEER TO DETERMINE FAIR VALUE FOR FIXTURE AND INSTALLATION CHANGES, WITHOUT FURTHER INPUT FROM THE CONTRACTOR OR INSTALLER. SUBMITTAL PACKAGE SHALL INCLUDE LAMP MANUFACTURER AND CATALOG NUMBER ON EACH FIXTURE SHEET. ON ALL PENDANT MOUNTED FIXTURES, PROVIDE A SECOND SET OF PENDANTS, OF A DIFFERENT LENGTH, AS DIRECTED BY THE ARCHITECT/ENGINEER, PROVIDED AND INSTALLED AT NO ADDITIONAL CHARGE. ALL FIXTURES SHALL BE APPROVED BY UL OR ANOTHER ACCEPTABLE LISTING LAB FOR THE PURPOSE INTENDED AND WITH THE LAMP AND BALLAST PROPOSED. CONTRACTOR ALLOWANCE PRICES ARE ACCURATE WHEN THIS JOB WAS SPECIFIED. CONTRACTOR AND ELECTRICAL DISTRIBUTOR SHALL VERIFY THIS ALLOWANCE AND REPORT ANY PROBLEMS TO THE ENGINEER BEFORE THE BID. ALLOWANCE PRICE MAY OR MAY NOT INCLUDE LAMP(S) OR FREIGHT AS NOTED, AND DO NOT INCLUDE ANY TAXES, UNIVERSAL VOLTAGE (120/277) BALLASTS REQUIRED UNLESS NOTED OTHERWISE. DIMENSION SPECIFICATION = (LENGTH X WIDTH X DEPTH) IN INCHES.

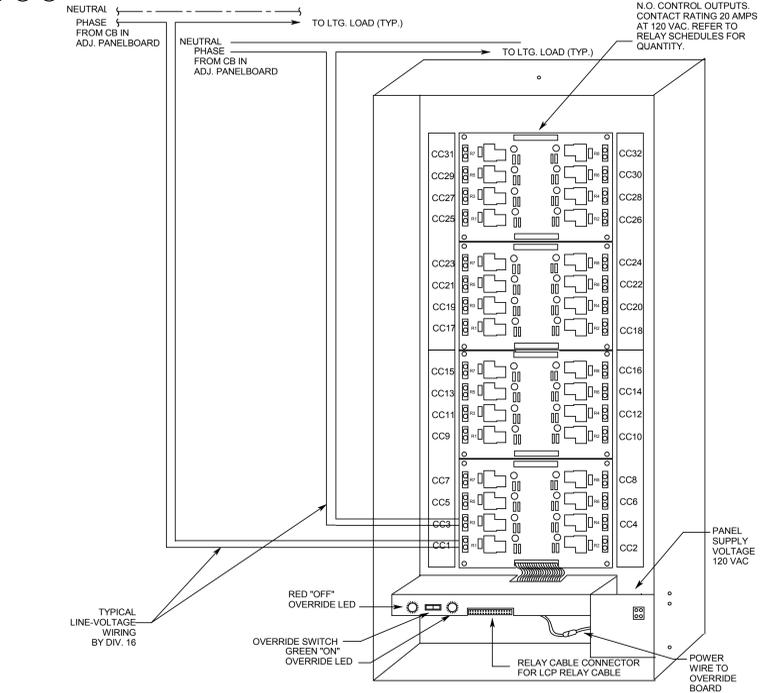
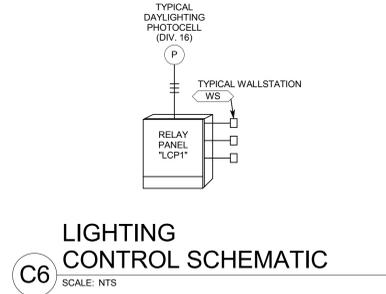
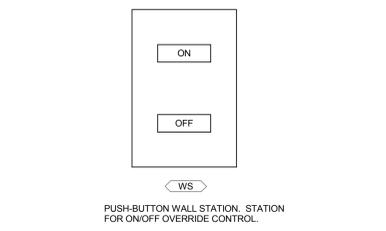
FIXTURE CHARACTERISTICS		BODY / AIR / MOUNTING / DOOR		LENS/COVER/REFLECTOR/OTHER		LAMP		WATTS		VOLTS		MANUFACTURER		CATALOG NUMBER		NOTES	
SYMBOL	MARK	BOLLARD, ALUMINUM HOUSING															
B-1	BOLLARD, CONCRETE FORM, CLEAR LENS	1-50MH	50W	120V	ARCH. AREA	CB18R-23-CUTOFF-50MH-MSB-RAL7023-INT											(OR APPROVED EQUAL PRIOR TO BID)
D	DOWNLIGHT; THERMALLY PROTECTED HOUSING, TO ACCOMMODATE MULTIPLE ALUMINUM TRIMS AND REFLECTOR ASSEMBLIES AS LISTED BELOW; MAX 8" DEEP, NON-IC HOUSINGS EXCEPT AS NOTED.																
D-89	LED DOWNLIGHT, SELF-FLANGED TRIM, PHOSPHOR LENS, DIMMABLE WHERE INDICATED BY SWITCHING, 1500 LUMENS (6" APERTURE)	LED	30W	277V	LIGHTOLIER	C6L1520DL-CCL-W / C6L15-N-2											
D-99	LED DOWNLIGHT, SELF-FLANGED TRIM, PHOSPHOR LENS, DIMMABLE WHERE INDICATED BY SWITCHING, 2000 LUMENS (7" APERTURE)	LED	40W	120V	LIGHTOLIER	C7L1520DL-CCL-W											(OR APPROVED EQUAL PRIOR TO BID)
E	EXIT SIGNS, LED																
E10-1	SINGLE FACE:	LED	20W	120/277V	DUAL-LITE	LECSGWA											
E10-2	DUAL FACE:	LED	20W	120/277V	DUAL-LITE	LECSGWA											
E88-1	SINGLE FACE:	LED	20W	120/277V	LIGHTOLIER	LR-A-1-G-W-TP-VR											
GF	TROFFERS: RECESSED FOR FLANGE MOUNTED CEILING; STATIC; HINGED AND LATCHED STEEL DOOR; 125 ACRYLIC PRISMATIC LENS, MINIMUM 1/8", PROGRAM START ELECTRONIC BALLASTS, 18 LAMPS, ONE BALLAST PER FIXTURE WHERE POSSIBLE, UNLESS TWO LEVEL SWITCHING IS SHOWN ON THE PLANS. MAX 5" DEEP. SPECIFICATION GRADE.																
GF-1	1X4, 2 LAMP, (TER VALUE: -75)	2-F32T8	65W	277/120V	LITHONIA	SFP 232 A12125 MVOLT TUBRHP											
GF-1A	1X4, 2 LAMP, WITH MAXIMUM SECURITY ENCLOSURE (MINIMUM 14 GAUGE STEEL DOOR AND FRAME WITH MINIMUM 1/4" EXTERIOR AND 1/8" INTERIOR LENS)	2-F32T8	65W	277/120V	KENALL	RC44-010-2-F32T8-RS-1-XXX-2/9-1											(OR APPROVED EQUAL PRIOR TO BID)
GF-3	2X4, 2 LAMP (TER VALUE: -75)	2-F32T8	95W	277/120V	LITHONIA	2SP86 232 A12125 1/3 MVOLT											
GF-3A	2X4, 2 LAMP WITH MAXIMUM SECURITY ENCLOSURE (MINIMUM 16 GAUGE STEEL DOOR AND FRAME WITH MINIMUM 1/4" EXTERIOR AND 1/8" INTERIOR LENS) (PATIENT AREAS)	2-F32T8	95W	277/120V	KENALL	RMCD4-FLXX-4-232IS-0/0-XXX-2/9-1											(OR APPROVED EQUAL PRIOR TO BID)
GF-4	2X4, 3 LAMP (TER VALUE: -75)	3-F32T8	95W	277/120V	LITHONIA	2SP86 332 A12125 1/3 MVOLT											
GS	TROFFERS: RECESSED FOR LAY-IN GRID; STATIC; HINGED AND LATCHED STEEL DOOR; 125 ACRYLIC PRISMATIC LENS, MINIMUM 1/8", EARTHQUAKE CLIPS; MAX 5" DEEP; SPECIFICATION GRADE; PROGRAM START ELECTRONIC BALLASTS, 18 LAMPS, ONE BALLAST PER FIXTURE WHERE POSSIBLE, UNLESS TWO LEVEL SWITCHING IS SHOWN ON THE PLANS.																
GS-3	2X4, 2 LAMP, (TER VALUE: -75)	2-F32T8	65W	277/120V	LITHONIA	2 SP86 232 A12125 MVOLT TUBRHP											
GS-3A	2X4, 2 LAMP WITH TAMPER RESISTANT ENCLOSURE AND ACCESS (SCREW ACCESS IN LIEU OF CLIP ACCESS) (TER VALUE: -75)	2-F32T8	65W	277/120V	LITHONIA	2 SP86 232 A12125 MVOLT TUBRHP											
GS-4	2X4, 3 LAMP (TER VALUE: -75)	3-F32T8	95W	277/120V	LITHONIA	2 SP86 332 A12125 1/3 MVOLT TUBRHP											
GS-4A	2X4, 3 LAMP WITH TAMPER RESISTANT ENCLOSURE AND ACCESS (SCREW ACCESS IN LIEU OF CLIP ACCESS) (TER VALUE: -75)	3-F32T8	95W	277/120V	LITHONIA	2 SP86 332 A12125 1/3 MVOLT TUBRHP											
OC	WALL PACK; ADJUSTABLE CUT OFF; FULL PERIMETER GASKETING; WET LOCATION; STAINLESS STEEL HINGES AND LATCHES; PROJECTING LENS; LED; SEE ELEVATION FOR MOUNTING HEIGHT, COLOR AS SPECIFIED BY ARCHITECT.																
OC-32	LED, RECESSED J BOX, MEDIUM THROW, SHAPED; DECORATIVE, PROVIDE INTEGRAL PHOTOCELL	LED	40W	277/120V	LITHONIA	CSXW LED-1.30B3040K-SR3-MVOLT-PE-DBLXD											

TX	SPECIAL FIXTURES AS INDICATED, MEET ALL REQUIREMENTS OF SPECIFICATIONS AND FIXTURE SCHEDULE. VISUAL AND FINISH APPROVAL REQUIRED.																
TX-1	NOT USED																
TX-2	INCANDESCENT WALL SCONCE DOCTOR'S ROOM BED FIXTURE	1-60W	60W	120V	FORECAST	FB1844-36 / F1849											(OR APPROVED EQUAL PRIOR TO BID)
TX-3	SURFACE MOUNTED FLUORESCENT FIXTURE, HIGH ABUSE	2-F40BX	80W	120V	KENALL	WCBU-2-3/3-1/4-40B-RS-1-120-2/9-1H4											
TX-4	SURFACE MOUNTED CORNER FLUORESCENT FIXTURE, HIGH ABUSE	2-F32T8	65W	120V	KENALL	CD-4-3/3-2-32-RS-1-120-2/9-1H4											
TX-5	INCANDESCENT WALL SCONCE DOCTOR'S ROOM BATH FIXTURE	1-60W	60A	120V	FORECAST	FB1844-36 / F1857											(OR APPROVED EQUAL PRIOR TO BID)
TX-6	LED SURFACE MOUNTED STRIP FIXTURE DOCTOR'S ROOM BATH FIXTURE	LED	24W	120V	WALDMANN	MUAL-4-S-112-571-035 / 209-585-030											(OR APPROVED EQUAL PRIOR TO BID)
TX-7	RECESSED LINEAR FLUORESCENT; PROVIDE LENGTHS AS INDICATED ON PLANS	1-F32T8	35W	120V	MARK ARCH	MP-X-1-T8S-EBPR-120-EBB											(OR APPROVED EQUAL PRIOR TO BID)
TX-8	NOT USED																
TX-9	RECESSED LINEAR LED FIXTURE, 2700 LUMENS, INTEGRAL DIMMING, 3500K	LED	45W	120V	NEORAY	22DR											(OR APPROVED EQUAL PRIOR TO BID)
UC	UNDERCABINET LIGHT; LOW PROFILE X 5 1/4" DEEP X LENGTH AS NOTED; HIGH IMPACT RESISTANT ACRYLIC DIFFUSER.																
UC-99	18" NOMINAL LENGTH WITH INTEGRAL ROCKER SWITCH; LED; PROVIDE POWER PACKS AS REQUIRED	LED	18W	120V	KENALL	MAUCLED-X-M-18-120-SW											(OR APPROVED EQUAL PRIOR TO BID)
W	LOW PROFILE WRAPAROUND; SURFACE MOUNTED SUITABLE FOR MOUNTING ON LOW DENSITY CEILING. WRAPAROUND ACRYLIC PRISMATIC DIFFUSER; WHITE ENAMEL ENDPLATES; MINIMUM CU OF 70 @ 80/50/20 AND RCR=1; PROGRAM START ELECTRONIC BALLASTS; 18 LAMPS; ONE BALLAST PER FIXTURE WHERE POSSIBLE, UNLESS TWO LEVEL SWITCHING IS SHOWN ON THE PLANS.																
W-4	WIDE BODY WRAPAROUND; 2-LAMP, APPROX; 3" X 16" X 48"	2-F32T8	65W	277/120V	LITHONIA	SFP 232 A12125 MVOLT TUBRHP											
WB	WALL MOUNTED FLUORESCENT LOCATED ABOVE WALL ELEMENT (MIRROR/WHITEBOARD, ETC.); AS INDICATED ON DRAWINGS; WITH ACRYLIC INJECTION MOLDED; PROGRAM START ELECTRONIC BALLASTS, 18 LAMPS; ONE BALLAST PER FIXTURE WHERE POSSIBLE, UNLESS TWO LEVEL SWITCHING IS SHOWN ON THE PLANS.	2-F32T8	65W	277/120V	DAYBRITE	CD232W-UNV-1/2-EB-SPEC											
WB-3	2-LAMP, WALL MOUNT 48", STEEL ENCLOSURE, DOWNLIGHT ONLY; ACRYLIC INJECTION MOLDED PRISMATIC DIFFUSER.	2-F32T8	65W	277/120V	DAYBRITE	CD232W-UNV-1/2-EB-SPEC											
ZW	LIGHT POLES; TOTALLY ENCLOSED RAIN TIGHT, DUST-TIGHT AND CORROSION RESISTANT; POLE AS SHOWN IN DETAIL WITH HANDHOLE, COVER, BOLT COVER, AND BASE, PAINTED (COLOR TO BE SELECTED BY ARCHITECT / ENGINEER WHICH MAY DIFFER FROM CATALOG NUMBER SHOWN); PROVIDE MULTI-TAP VOLTAGE FIXTURE.	LED	140W	208V	KIM LIGHTING	XSA-WP9-L-E-3-L-5K-208-SG-DB-A-90											(EXCLUDING POLE)

LIGHTING CONTROL GROUPS	
A	CORRIDOR AND COMMON AREAS
B	LOBBY AREA
C	CANOPY AREA
D	OUTDOOR AREAS

LIGHTING CONTROL METHODS	
1	ON/OFF WITH OCCUPIED/UNOCCUPIED MODE, WITH WALLSTATION OVERRIDE
2	ON/OFF WITH EXTERIOR PHOTOCELL
3	ON W/ EXTERIOR PHOTOCELL, OFF W/ TIMECLOCK

RELAY PANEL SCHEDULE				
RELAY CABINET: "LCP1"				
RELAY #	PANEL CIRCUIT #	CONTROL GROUP	CONTROL METHOD	LOAD DESCRIPTION
1	L1B-2.4	D	3	SITE LIGHTING
2	L1B-6.8	D	3	SITE LIGHTING
3	L1B-10	D	3	SITE LIGHTING - BOLLARDS
4	L1B-12	D	3	SITE LIGHTING - BOLLARDS
5	L1B-14	C	3	CANOPY LIGHTING
6	L1B-36	A	1	CORRIDOR LTG.
7	L1B-38	A	1	CORRIDOR LTG.
8	L1D-4	D	3	TREE LIGHTING RECEPT.
9	L1D-6	D	3	TREE LIGHTING RECEPT.
10	L1D-8	D	3	TREE LIGHTING RECEPT.
11	L1D-10	D	3	TREE LIGHTING RECEPT.
12	L1D-12	D	3	TREE LIGHTING RECEPT.
13	L1D-14	D	3	TREE LIGHTING RECEPT.
14	-	-	-	SPARE RELAY
15	-	-	-	SPARE RELAY
16	-	-	-	SPARE RELAY



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GENERAL SHEET NOTES

1. CONTRACTOR SHALL PROGRAM LIGHTING CONTROL SYSTEM AND TIMELOCK(S) PER SCHEDULE PROVIDED BY OWNER.

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Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

PROJECT NUMBER: 11111
FILE: 11111 USH Payne
DRAWN BY: WRT
CHECKED BY: CAG
SCALE: 1/8" = 1'-0"

LIGHTING SCHEDULES AND DIAGRAMS

EL601



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GENERAL SHEET NOTES



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SHEET KEYNOTES

- 1 PROVIDE ALPHONE JK SERIES VIDEO INTERCOM.

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Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012



DATE	STATUS
09/12/2012	
DATE	REVISION
1 9/20/12	ADD #1

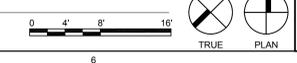
PROJECT NUMBER: 11111
FILE: 11111 USH Payne
DRAWN BY: WRT
CHECKED BY: CAG
SCALE: 1/8" = 1'-0"

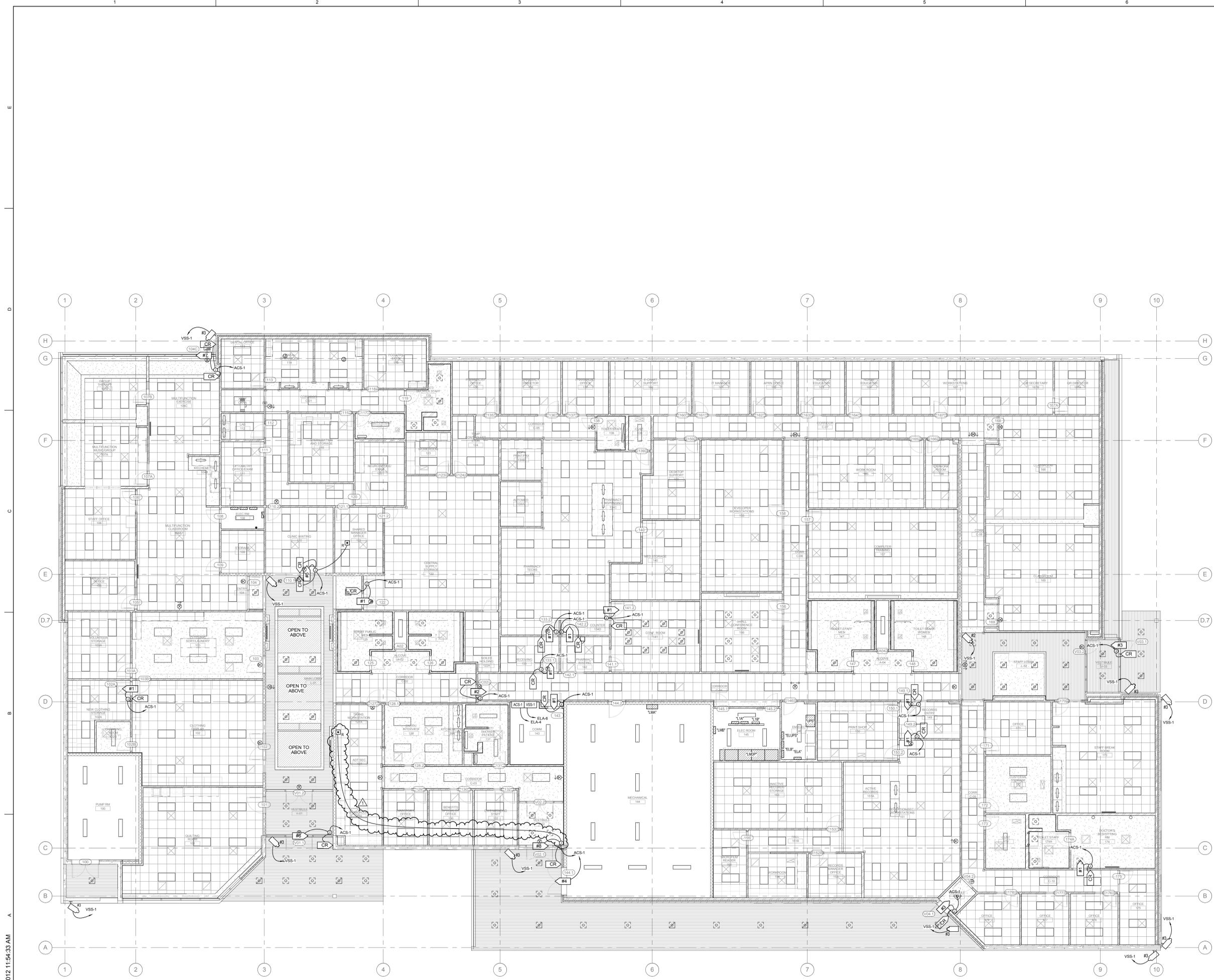
**LEVEL 1
AUDIO
VISUAL PLAN**

EJ101

9/20/2012 11:54:17 AM

A1 LEVEL 01 AUDIO VISUAL PLAN
SCALE: 1/8" = 1'-0"





A1 LEVEL 01 AUXILIARY PLAN
SCALE: 1/8" = 1'-0"

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GENERAL SHEET NOTES

SHEET KEYNOTES

Mark I. Payne Building
1300 East Center St. Provo, Utah
Utah State Hospital Consolidation
BID DOCUMENTS - 09/12/2012

DATE	STATUS
09/12/2012	
DATE	REVISION
1 9/20/12	ADD #1

PROJECT NUMBER: 11111
FILE: 11111 USH Payne
DRAWN BY: WRT
CHECKED BY: CAG
SCALE: 1/8" = 1'-0"

**LEVEL 1
AUXILIARY
PLAN**

EY101

9/20/2012 11:54:33 AM



Sheet / Detail - Description of change:

Pediatric Facility

Sheet AS202 - Site Plan

- Added Keynotes and associated elements to coordinate with Landscape & Civil Drawings: 32.08 Mowstrip, 32.22 Landscape Area, 32.26, Catchment Basins, 32.28 Typ Pediatric Mowstrip @ Fence, 32.29 Fire Hydrants, 32.30 Manholes, 32.31 Curb Inlets, 32.32 Precast Concrete Wheel Stops
- Adjusted mislocated Basketball Court approximately 6' East to proper location
- Modified Staff Patio to allow for plantings adjacent to building
- Added trees on plan to coordinate with Landscape Drawings
- add 6 signs type: Detail A2/AF501
- add 12 signs type: Detail A3/AF501 (6 each)

See attached.

Sheet AS203 - Enlarged Site Plans. See ASD-010 and ASD-011

- Modified Details E1, E2, & E3 to add detectable warning at curb ramps

Sheet AS204 - Site Details. See ASD-012

- Added detail C3 Site Bench Section
- Added graphic scales to all details

Sheet AS501 - Typical Site Details. See ASD-013

- revise detail tactile warning panel detail
- See attached.

Sheet A101D

- Column detail callouts added. See ASD-001

Sheet A101E

- Column detail callouts added. See ASD-002

Sheet A201

- Reveal dimensions added to D1 and B1; Signage added to A1 and D1
 - Signage added to D1 and A1
- See attached

Sheet A402

- Hid unnecessary callouts
 - Stone wall @ conference was lowered to 18'-0" to match stone wall at entrance
 - Reveal pattern revised on details C1 and D1 (sheet rearranged)
- See attached



Sheet A412

- Filled regions demarcating accent tiles deleted where not applicable. See ASD-003

Sheet A415

- Elevation B3 had keynote 4.27 added. See ASD-004

Sheet A418

- Elevation E3 had keynote 4.27 added. See ASD-005

Sheet A520

- Details E1, D1, D2 and B5 revised

Sheet A532

- Detail D4 added

Sheet A560 - Typical Detail

- Added detail C1/A560 Base @ Clinic Sink. See ASD-006

Sheet A801 - Millwork Schedule & Details

- Modified Detail A3 Vanity Section by adding additional keynotes. See ASD-007
- Added detail C1/A801 Desk @ Spandrel. See ASD-008

Sheet A802 - Millwork Details

- Replaced incorrect graphic scales on details E1 & E2 w/ correct 3"=1'-0" graphic scales
- Reveals revised

Sheet A803 - Millwork Details

- Reveal detail callouts revised

Sheet AF101A

- Added signage over corridors per redlines. See ASD-009

Sheet AF101B

- deleted redundant sign keynote for Girls Youth Dorm

Sheet AF501 through AF504

- Add Sheets
See attached.

Sheet AF111

- Detail numbered "1" now numbered "C4"



Sheet G160

- Masonry anchors and 'z' clips added and noted

MEMORANDUM

Date Wednesday, September 20, 2012
To Michael Dolan, FFKR Architects
From Jeff Miller *jmiller@reaveley.com*
Corey Price *cprice@reaveley.com*
Subject Pediatric Facility- Utah State Hospital Addendum #1

Pediatric Facility- Utah State Hospital Addendum #1 September 20, 2012

The following are revisions to the Contract Documents.

SHEET S101B

1. Revised Generator Enclosure per the attached SSD1-1.
2. Added masonry columns for openings above per SSD1-2.

SHEET S101C

1. Revised masonry columns for openings and wall positions per SSD1-3 and SSD1-4.

SHEET S101D

1. Revised masonry columns for openings and wall positions per SSD1-5 and SSD1-6.

SHEET S101E

1. Revised masonry columns for openings and wall positions per SSD1-7 and SSD1-8.

SHEET S102A- See attached sheet, reissued with mechanical information removed.

1. Added lintels for mechanical openings on Grid B.G and B.F (clouded).

SHEET S102B- See attached sheet, reissued with mechanical information removed.

1. Revised lintels and masonry columns on Grids B.D, B.A, and B.2 (clouded).

SHEET S102C- See attached sheet, reissued with mechanical information removed.

1. Revised lintels and masonry columns on Grid C.2 (clouded).
2. Revised wall locations at wings (clouded).

SHEET S102D- See attached sheet, reissued with mechanical information removed.

1. Revised lintels and masonry columns on Grid D.B (clouded).
2. Revised wall locations at wings (clouded).



Pediatric Facility- Utah State Hospital
Structural Addendum #1- 9/20/12

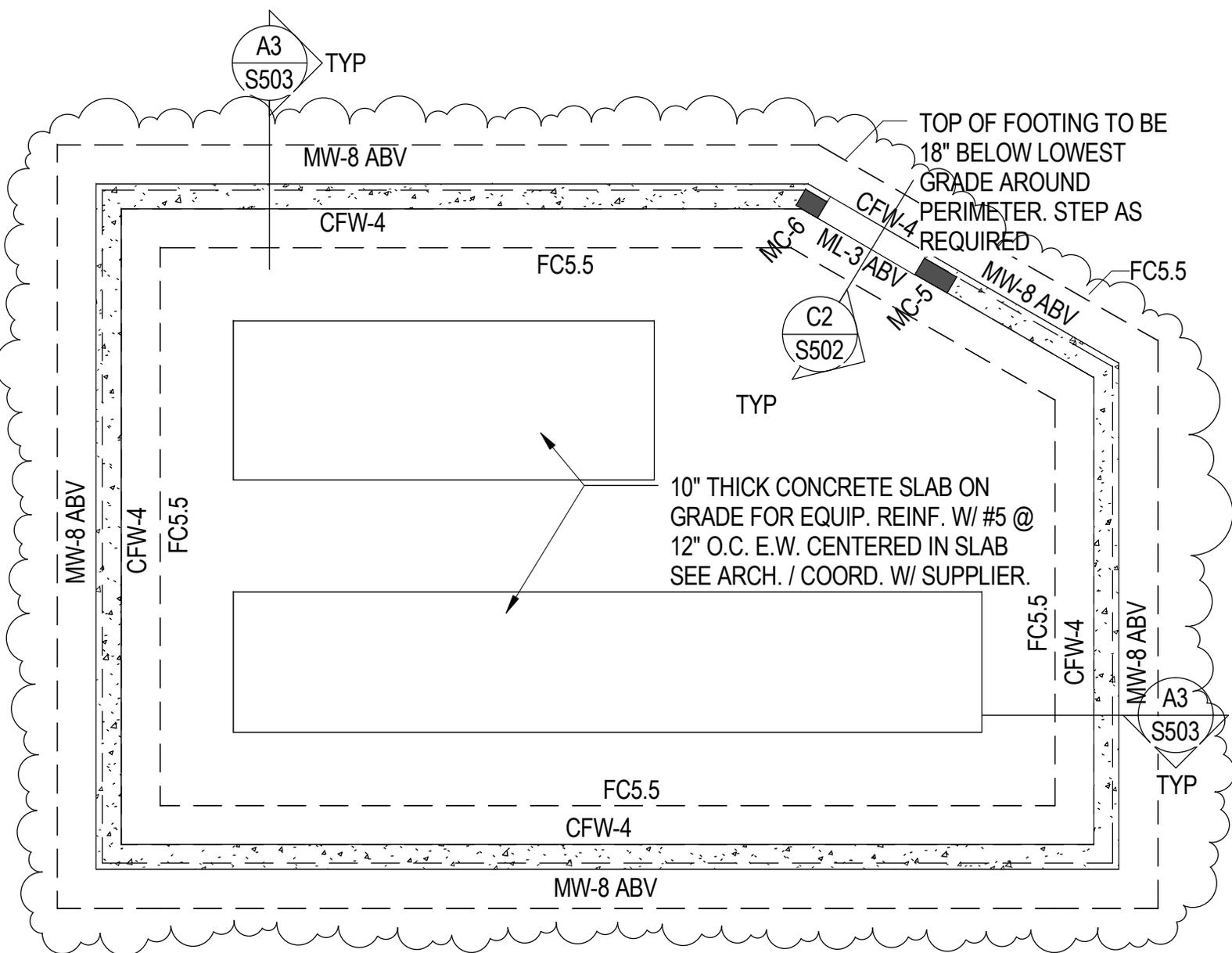
SHEET S102E- See attached sheet, reissued with mechanical information removed.

1. Revised lintels and masonry columns on Gird E.4 (clouded).
2. Revised wall locations at wings (clouded).

SHEET S103- See attached sheet, reissued with mechanical information removed.

SHEET S602

1. Added MC-6 and MC-7 in Masonry Column Schedule per attached SSD1-9.

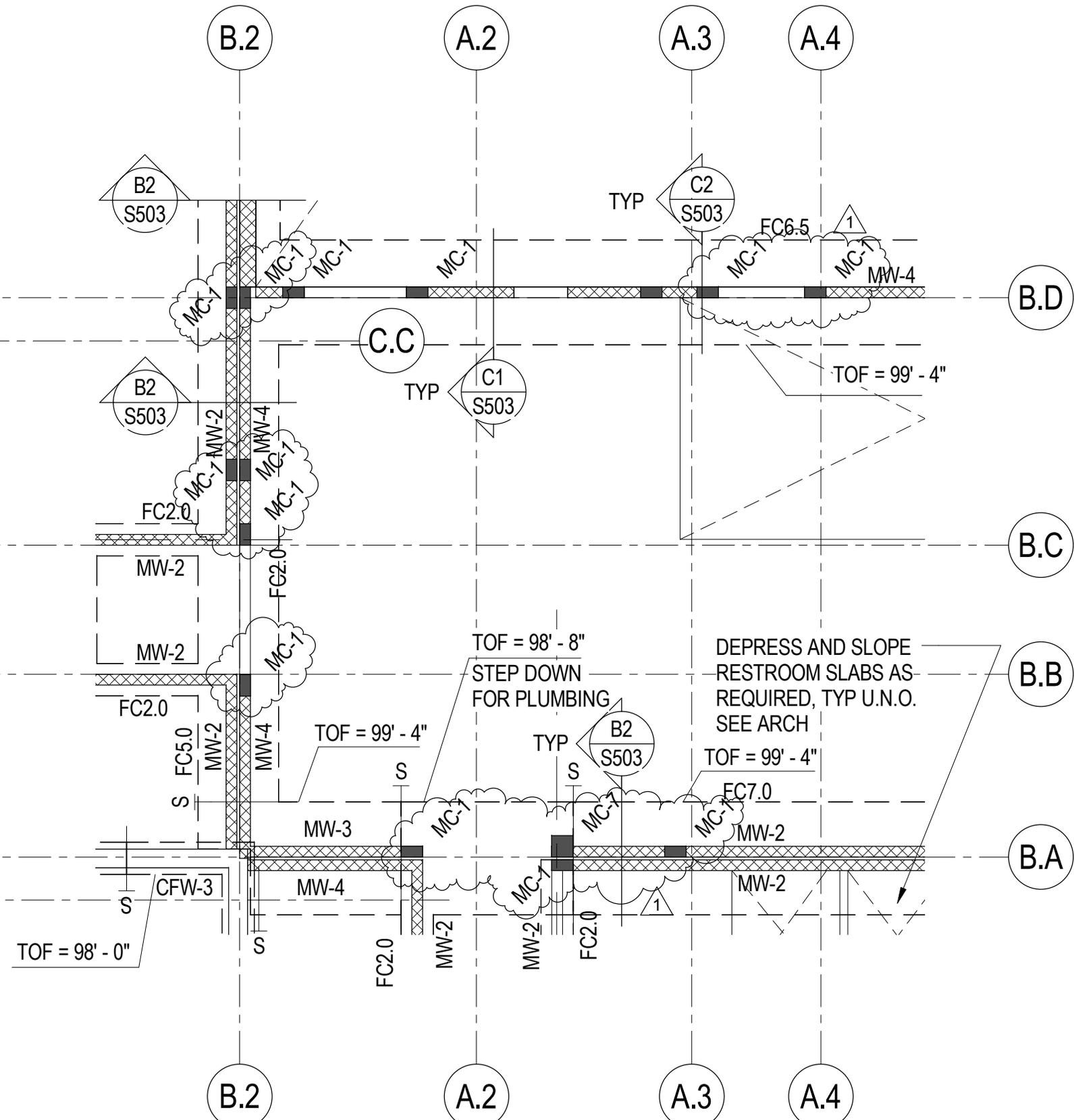


1
SSD1-1

GENERATOR ENCLOSURE - REVISED (S101B - PARTIAL)

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

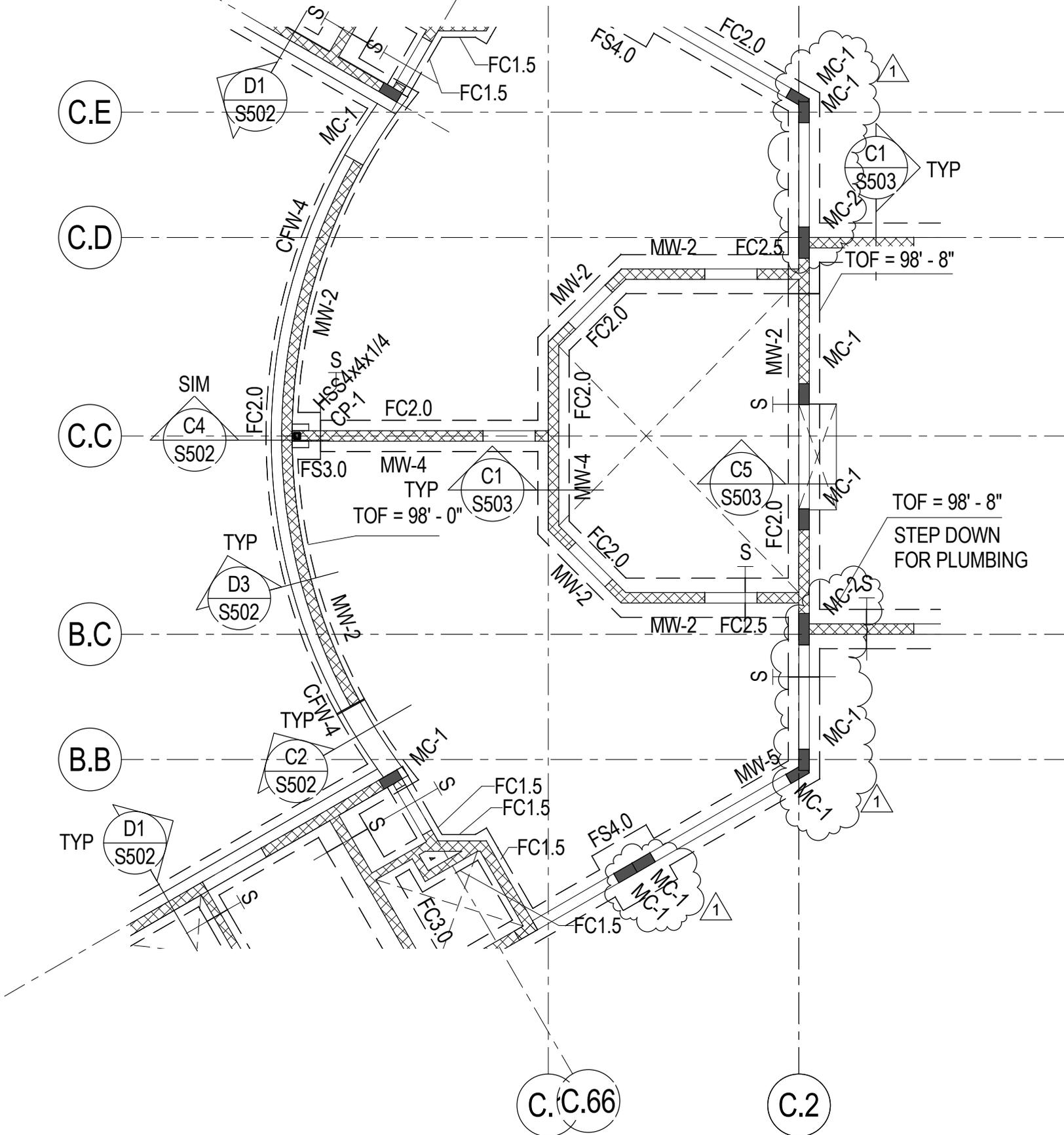
<p>REAVELEY ENGINEERS + ASSOCIATES Consulting Structural Engineers</p> <p>PH: 452-8842 F: 452-4117911</p> <p>6051 222nd Street SW Seattle, WA 98148 www.reaveley.com</p>	PEDIATRIC FACILITY	<p>SSD1-1</p>
	GENERATOR ENCLOSURE - REVISED	
	09/20/12	



1 FTG & FDTN PLAN - AREA B (S101B PARTIAL)

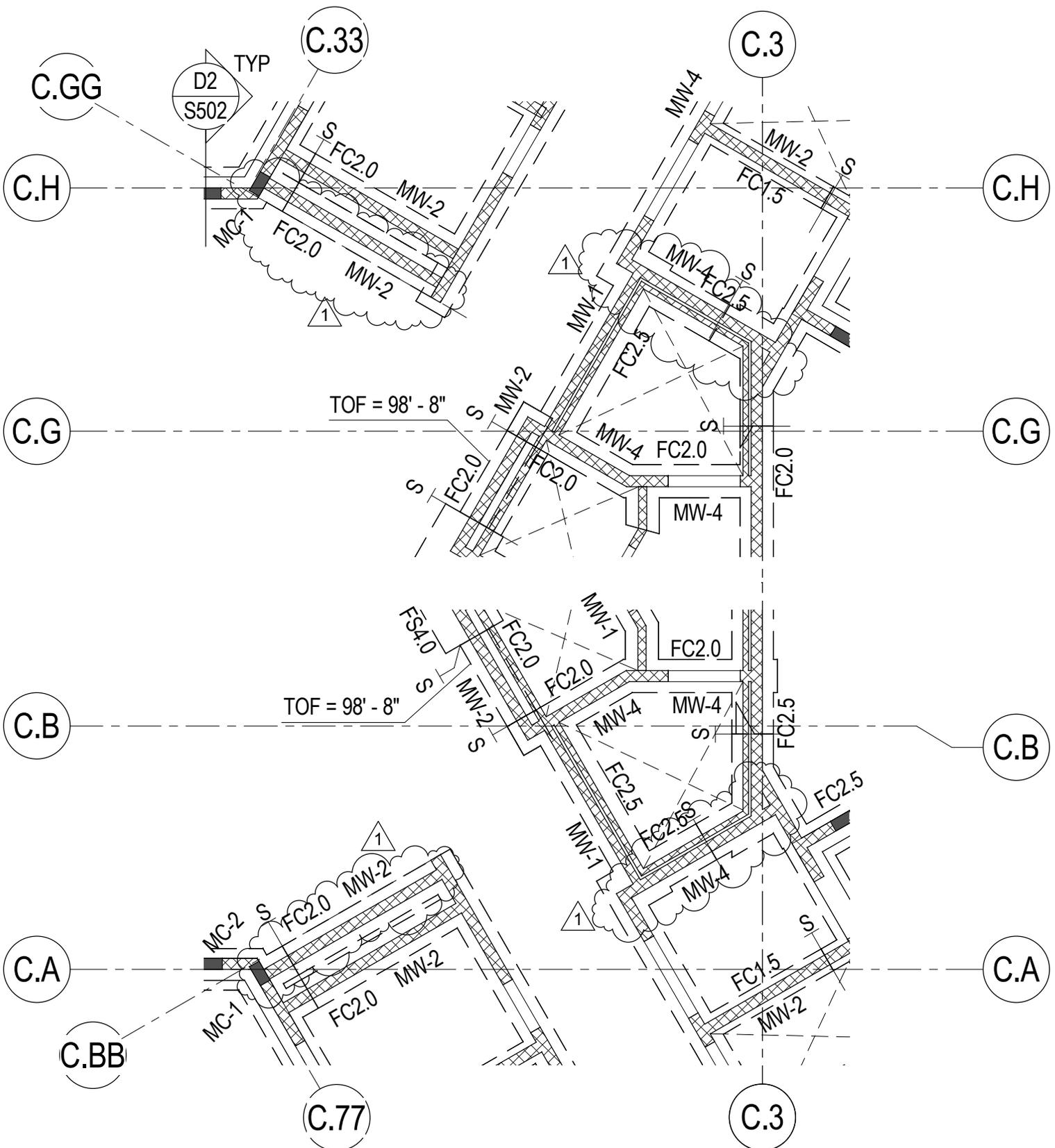
SSD1-2 SCALE: 1/8" = 1'-0"

 <p>REAVELEY ENGINEERS + ASSOCIATES Consulting Structural Engineers</p>	<p>1501 453842 1301.4117911</p>	<p>PEDIATRIC FACILITY</p>	<p>SSD1-2</p>
	<p>6017 222 E. 10th St Cedar Rapids, IA 52402 www.reaveley.com</p>	<p>FTG & FDTN PLAN - AREA B (S101B PARTIAL)</p>	
	<p>09/20/12</p>		



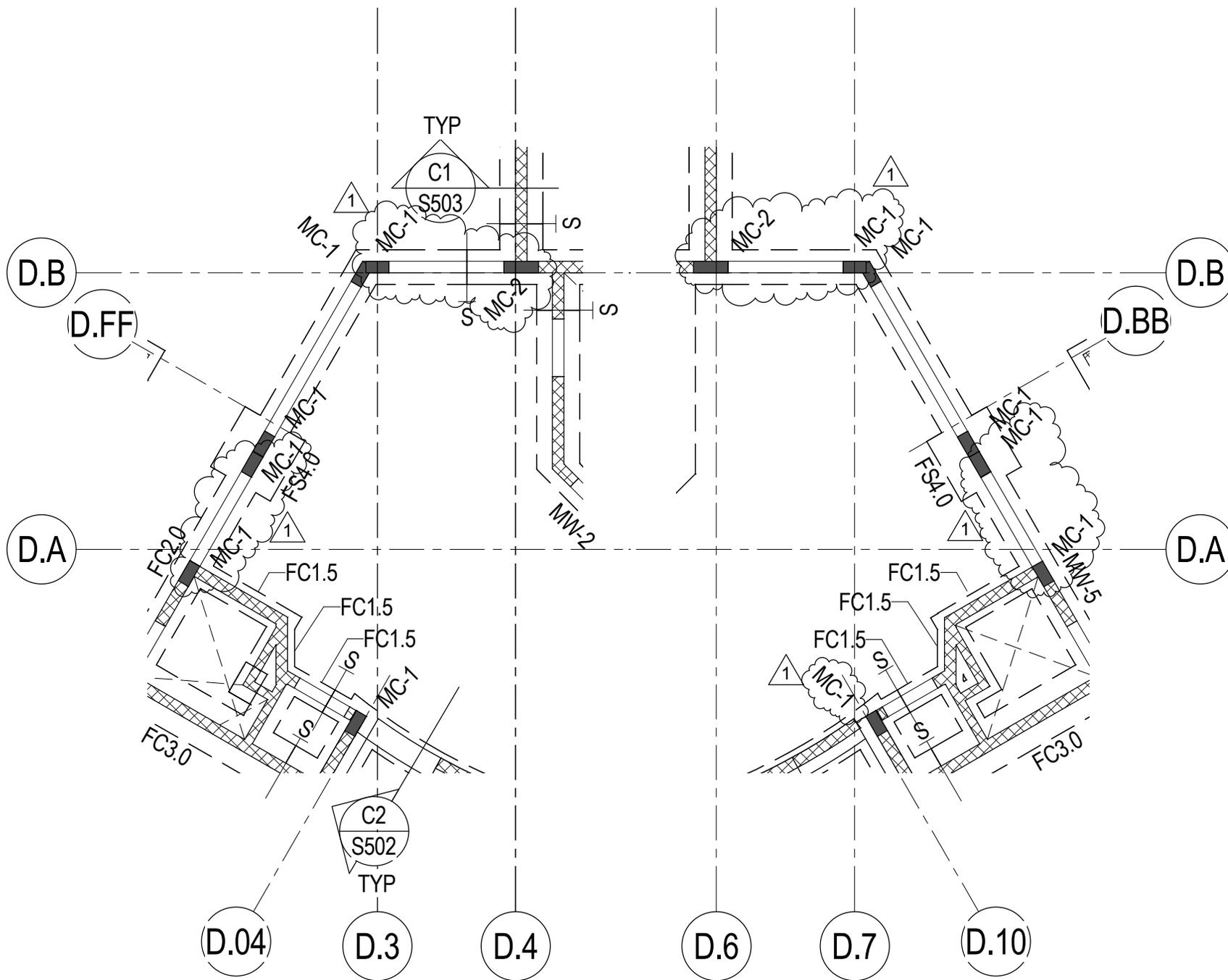
1 FTH & FDTN PLAN - AREA C (PARTIAL S101C)
 SSD1-3 SCALE: 1/8" = 1'-0"

 <p>REAVELEY ENGINEERS + ASSOCIATES Consulting Structural Engineers</p>	<p>PHONE: 452-2842 FAX: 452-2911</p>	<p>PEDIATRIC FACILITY</p>	<p>SSD1-3</p>
	<p>6201 222nd Avenue SW Seattle, WA 98148-3200 www.reaveley.com</p>	<p>FTG & FDTN PLAN - AREA C (S101C PARTIAL)</p>	
		<p>09/20/12</p>	



1 FTG & FDTN PLAN - AREA C (S101C - PARTIAL)
 SSD1-4 SCALE: 1/8" = 1'-0"

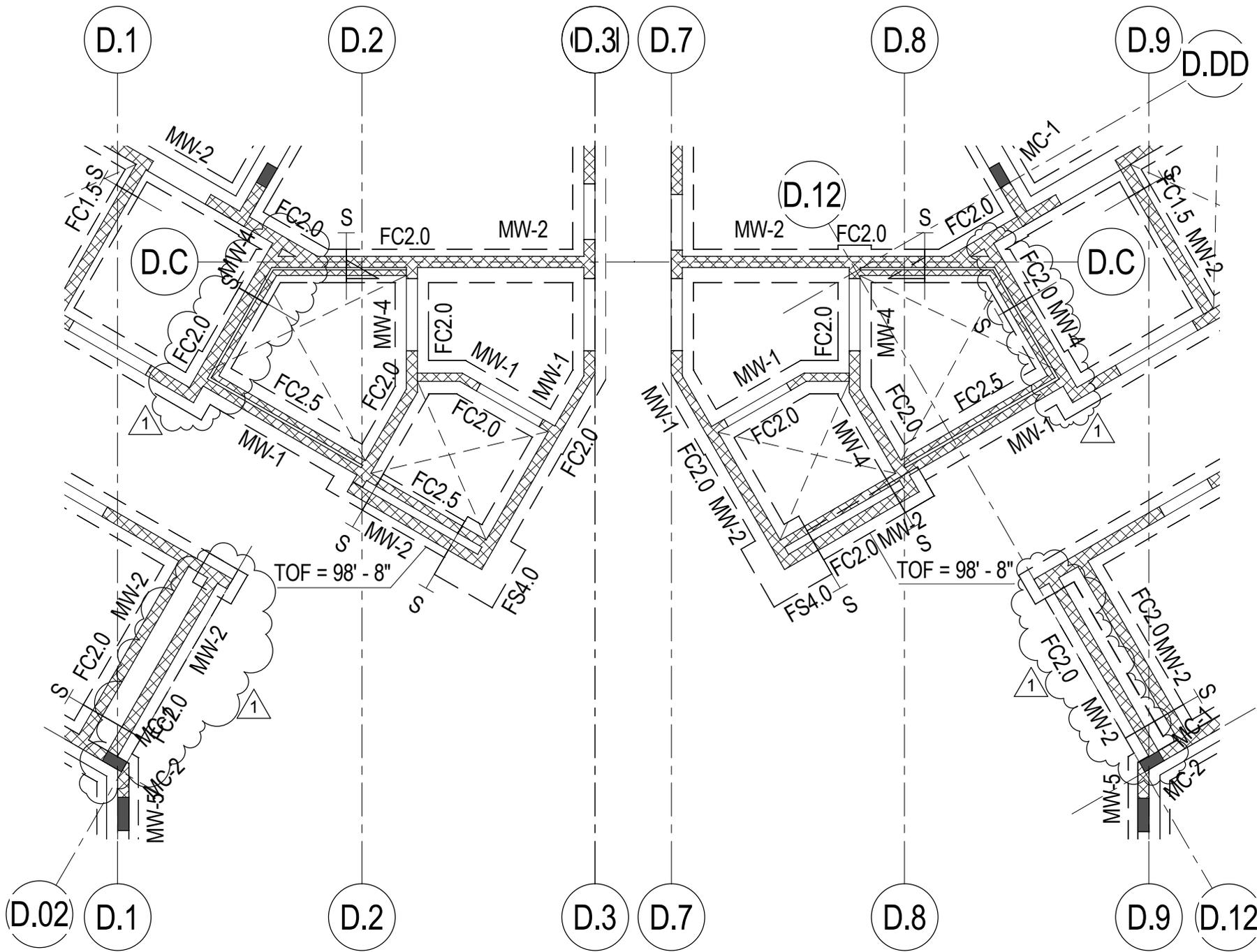
 <p>REAVELEY ENGINEERS + ASSOCIATES Consulting Structural Engineers</p>	<p>1501 4520442 1301.4117911</p>	PEDIATRIC FACILITY	
	<p>6051 2226 7486 196 6051 2226 7486 196 www.reaveley.com</p>	FTG & FDTN PLAN - AREA C (S101C PARTIAL)	
		09/20/12	



1 FTG & FDTN PLAN - AREA D (S101D PARTIAL)

SSD1-5 SCALE: 1/8" = 1'-0"

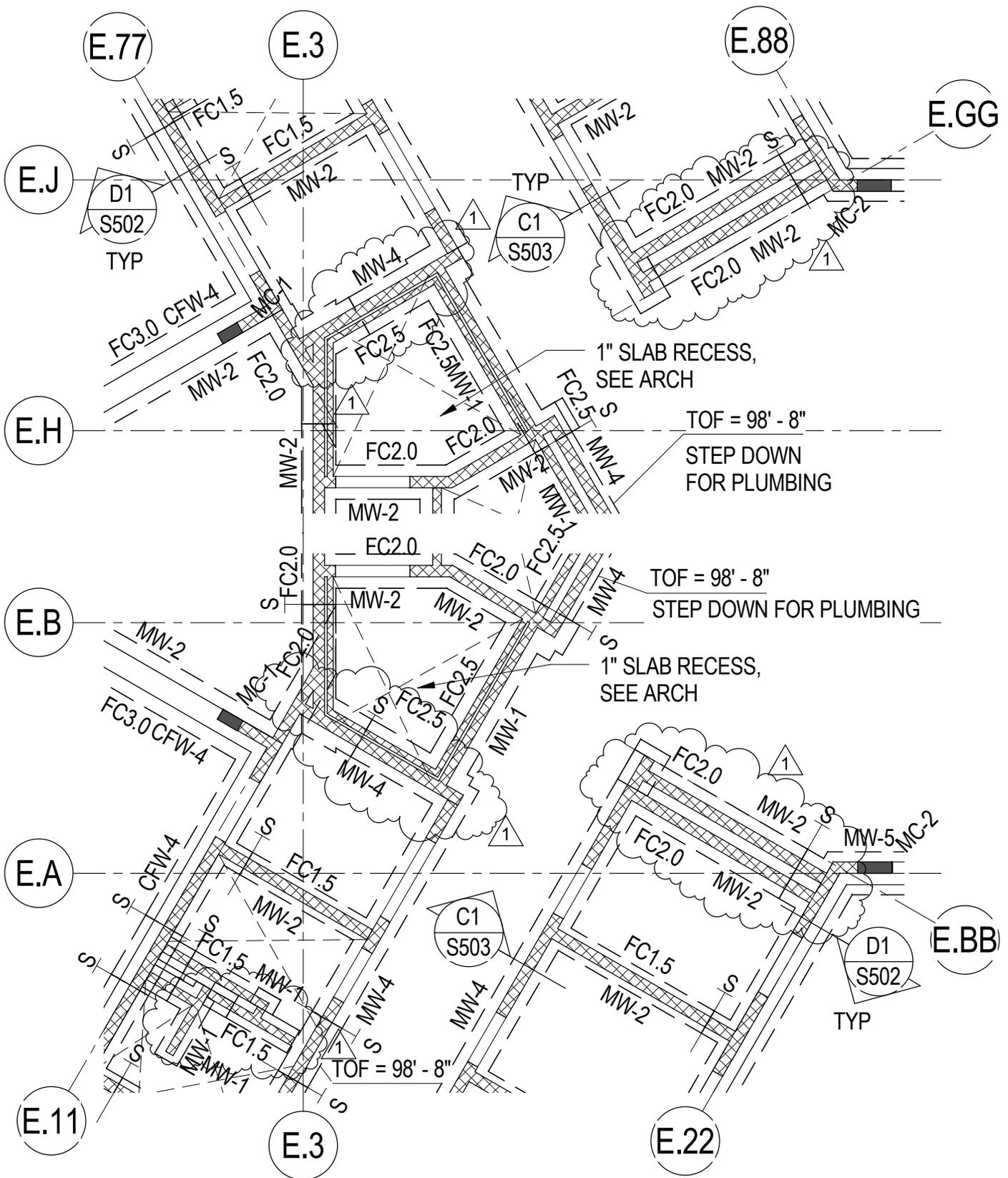
 REAVELEY ENGINEERS + ASSOCIATES Consulting Structural Engineers	
<small>1330 4535000 1330/1117011 600+ 777 7466 700 5000 36th St. Suite 200 Westborough, MA 01581</small>	
PEDIATRIC FACILITY	SSD1-5
FTG & FDTN PLAN - AREA D (S101D PARTIAL)	
09/20/12	



1 FTG & FDTN PLAN - AREA D (S101D PARTIAL)

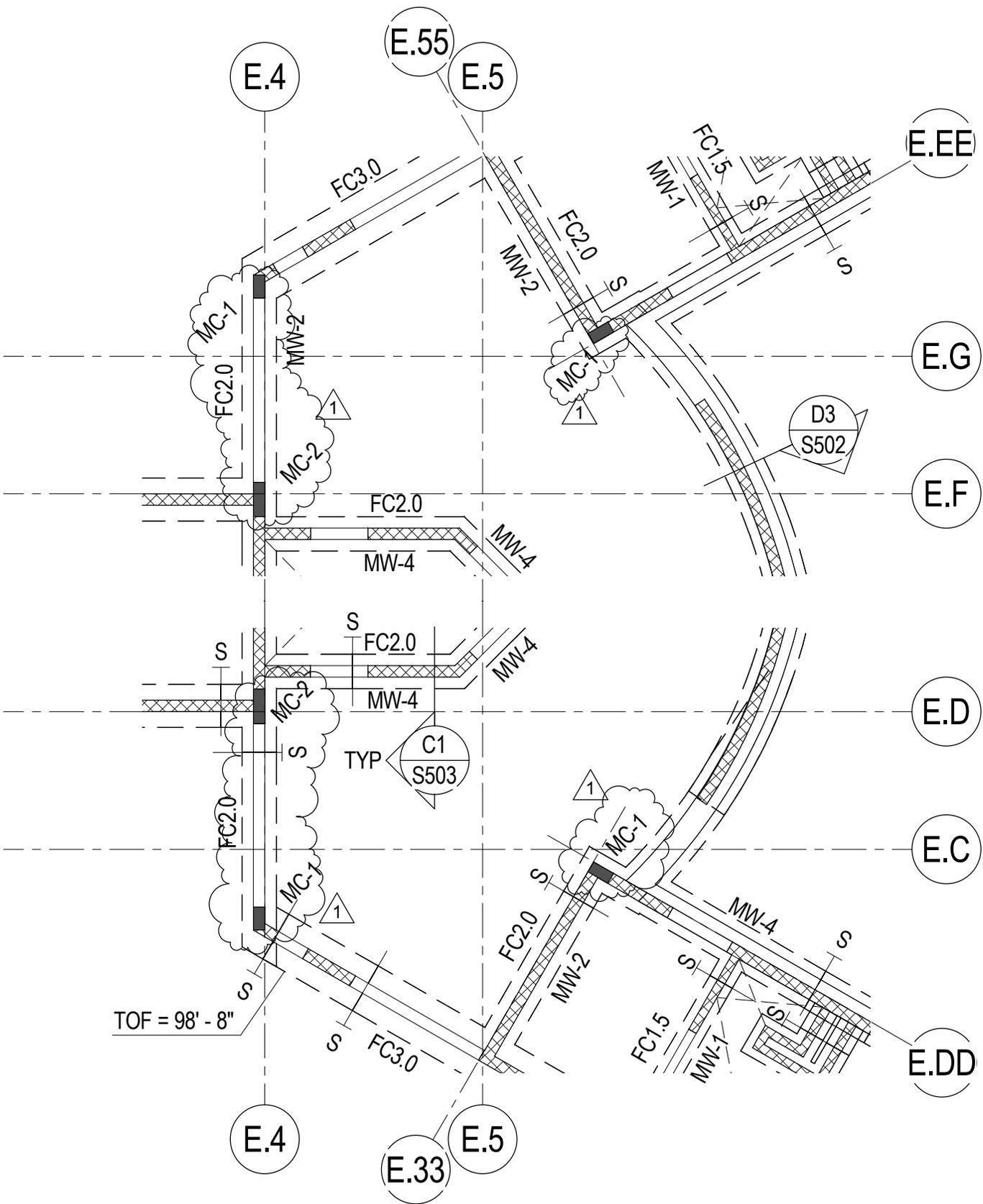
SSD1-6 SCALE: 1/8" = 1'-0"

 REAVELEY ENGINEERS + ASSOCIATES Consulting Structural Engineers	
<small>1300 4530000 13100117011 605 • 774 • 616 • 700 507 • 860 • 711 • 281 • 0 www.reaveley.com</small>	
PEDIATRIC FACILITY FTG & FDTN PLAN - AREA D (S101D PARTIAL) 09/20/12	
SSD1-6	



1 FTG & FDTN PLAN - AREA E (S101E PARTIAL)
 SSD1-7 SCALE: 1/8" = 1'-0"

 <p>REAVELEY ENGINEERS + ASSOCIATES Consulting Structural Engineers</p>	<p>PHONE: 452-2642 FAX: 452-2911</p>	<p>PEDIATRIC FACILITY</p>	<p>SSD1-7</p>
	<p>2011 222 N. Fuller St. Suite 1000 Chicago, IL 60610 www.reaveley.com</p>	<p>FTG & FDTN PLAN - AREA E (S101E PARTIAL)</p>	
	<p>09/20/12</p>		



1 FTG & FDTN PLAN - AREA E (S101E PARTIAL)
 SSD1-8 SCALE: 1/8" = 1'-0"

 <p>REAVELEY ENGINEERS + ASSOCIATES Consulting Structural Engineers</p>	<p>1581 452642 1301.4117911</p>	<p>PEDIATRIC FACILITY</p>	<p>SSD1-8</p>
	<p>6017 2226, 11416 198 Cell: 404.711.2470 www.reaveley.com</p>	<p>FTG & FDTN PLAN - AREA E (S101E PARTIAL)</p>	
		<p>09/20/12</p>	

MASONRY COLUMN SCHEDULE

MC-1

MARK	SIZE	REINFORCING		REMARKS
		VERTICAL	TIES	
MC-1	8" x 16"	4 - #4	#2 @ 8" O.C.	
MC-2	8" x 24"	6 - #4	#2 @ 8" O.C.	
MC-3	8" x 8"	2 - #4	-	
MC-4	12" x 40"	10 - #5	-	
MC-5	12" x 24"	6 - #5	-	
MC-6	12" x 16"	4 - #5	-	1
MC-7	16" x 16"	4 - #8	#3 @ 8" O.C.	

NOTES:

1. THE CENTERLINE OF VERTICAL BARS SHALL BE LOCATED 2.1/2" FROM THE FACE OF THE MASONRY. HORIZONTAL BARS SHALL BE LOCATED TO THE INSIDE OF THE VERTICAL BARS.
2. UNLESS NOTED OTHERWISE, VERTICAL REINFORCING AND TIES SHALL EXTEND FULL HEIGHT OF THE WALL.
3. MASONRY COLUMN VERTICAL BARS OR DOWELS IN CONCRETE FOUNDATION WALLS SHALL BE TIED WITH #3 TIES @ 8" O.C.

1530 4535844
 15104117911
 605 S. 1ST STREET, SUITE 100
 SPOKANE, IDAHO 83402
 WWW.REAVELEY.COM



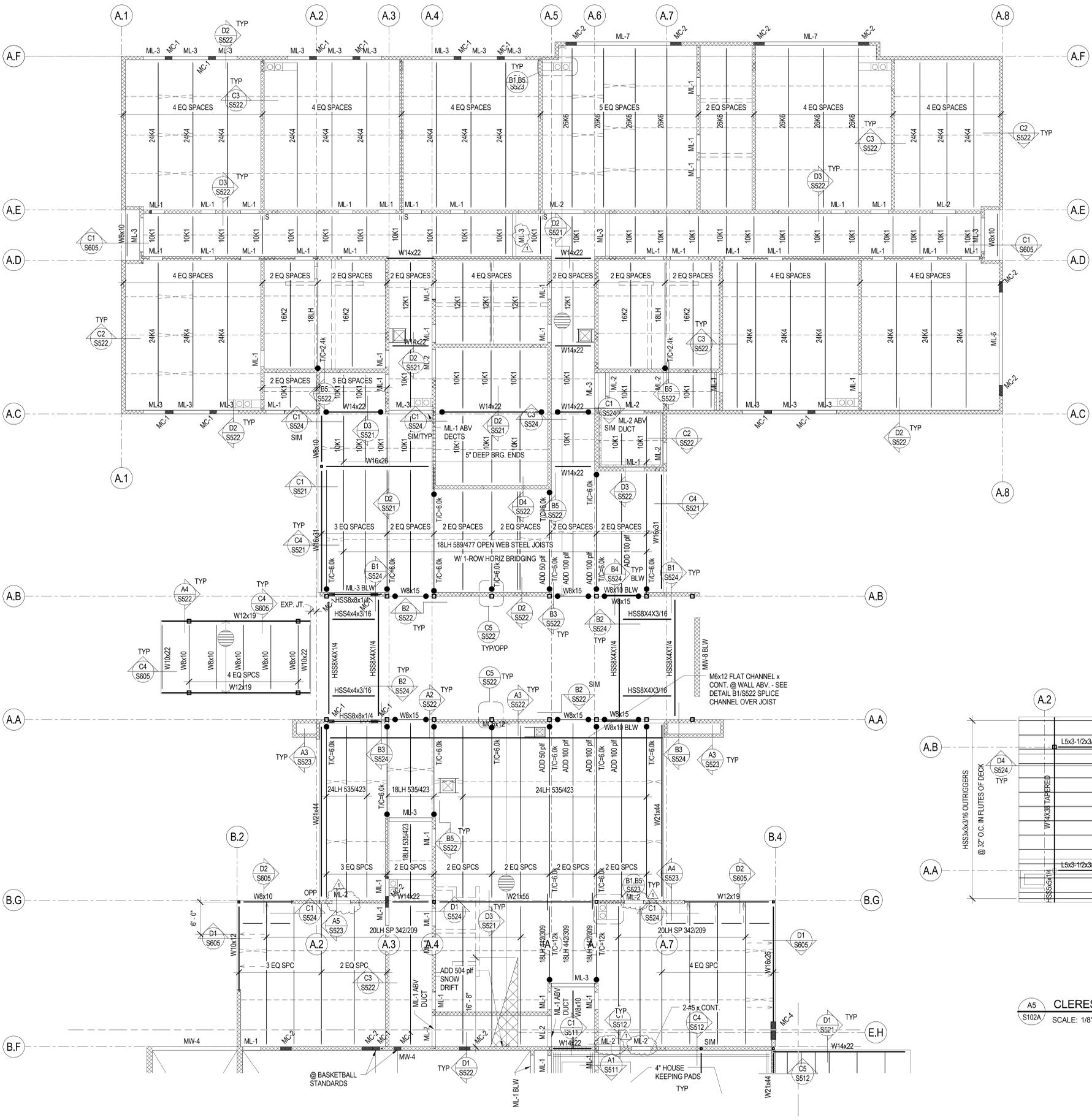
PEDIATRIC FACILITY

MASONRY COLUMN SCHED (S602 PARTIAL)

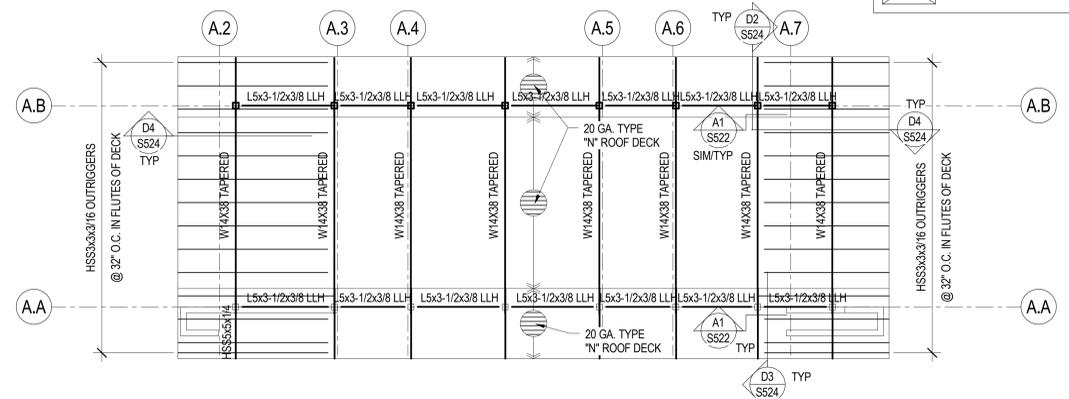
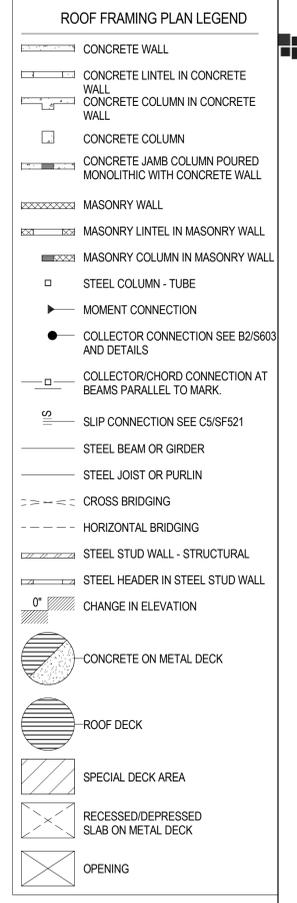
09/20/12

SSD1-9

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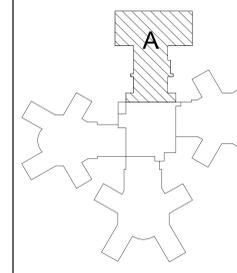


- ### ROOF FRAMING PLAN NOTES
1. VERIFY SIZE, WEIGHT, LOCATION AND CONFIGURATION OF ALL ROOF TOP EQUIPMENT WITH ARCHITECT AND MECHANICAL ENGINEER. PROVIDE STEEL FRAMES FOR SUPPORT OF ROOF TOP EQUIPMENT AS INDICATED IN DETAIL B4/S523 COORDINATE OPENINGS WITH MECHANICAL AND ELECTRICAL AND GENERAL CONTRACTORS.
 2. ALL ROOF OPENINGS SHALL BE FRAMED AS INDICATED IN DETAIL B3/S523. FOR ROUND OPENINGS WHICH ARE LESS THAN 12" DIA. SEE DETAIL B2/S523.
 3. SEE ARCHITECTURAL FOR ROOF SLOPES AND DRAINS. SEE B1/S523 FOR ROOF DRAIN OPENING FRAME.
 4. OPEN WEB STEEL JOISTS AND JOIST GIRDERS SHALL BE DESIGNED BY THE MANUFACTURER TO SUPPORT THE MECHANICAL AND LATERAL LOADS SHOWN ON THE ROOF FRAMING PLANS IN ADDITION TO THE UNIFORM AND POINT LOADS SHOWN.
 5. #H-#K ADD - INDICATES ADDITIONAL UPLIFT / DOWNWARD FORCE ON STEEL JOIST IN ADDITION TO REGULAR LOADS.
 6. T/C-#K - INDICATES ADDITIONAL TOP CHORD AXIAL FORCE ON STEEL JOIST OR GIRDER IN ADDITION TO REGULAR LOADS. THIS FORCE IS A SEISMIC LRFD LOAD THAT SHALL BE CONSIDERED IN BOTH TENSION AND COMPRESSION; INCLUDES APPLICABLE OVERSTRENGTH FACTORS FROM IBC SECTION 1613 AND ASCE 7 SECTION 12.10. STEEL JOISTS AND GIRDERS WITH T/C FORCE SHALL BE DESIGNED AS COLLECTOR ELEMENTS PER IBC SECTION 1613 AND ASCE 7 SECTION 12.10 WITH STRENGTH TO RESIST APPLICABLE LOAD COMBINATIONS OF IBC SECTION 1605.4 AND ASCE 7 SECTION 12.4.
 7. ALL LOADS SUPPORTED BY OPEN WEB STEEL JOISTS AND GIRDERS SHALL BE LOCATED WITHIN 6" OF JOIST OR GIRDER PANEL POINT OR THE JOIST OR GIRDER SHALL BE REINFORCED PER DETAIL B3/S521.
 8. SEE DETAIL A2/S523 FOR SUPPORT OF HANGING MECHANICAL UNITS.
 9. HORIZONTAL AND CROSS BRIDGING SHALL BE SIZED AND SUPPLIED BY THE JOIST MANUFACTURER. CONNECT TO WALLS AS INDICATED IN DETAILS.
 10. WHERE SKYLIGHTS OR MECHANICAL UNITS INTERRUPT HORIZONTAL BRIDGING PROVIDE CROSS BRIDGING AT JOIST SPACES ON EACH SIDE. TYPICAL.
 11. ALL JOISTS TO BE DESIGNED FOR:
 - A. 2.5k TOP CHORD AXIAL FORCE, CONSIDERED AS EARTHQUAKE OR WIND PER NOTE 6. U.N.O. ON PLAN.
 - B. 20psf NET WIND UPLIFT (ASD)
 12. AT ALL MASONRY BEARING WALLS, PROVIDE ADDITIONAL DUCTILITY REINFORCING PER A4/S602 TYPICAL.



A5 CLERESTORY ROOF FRAMING PLAN
SCALE: 1/8" = 1'-0"

KEY PLAN



A2 Low Roof Area A
SCALE: 1/8" = 1'-0"

bogue building
730 pacific avenue
salt lake city
Utah 84104

• 801-521-6186
• 801-539-1916
ffkr.com

REAVELEY
ENGINEERS - ASSOCIATES
Consulting Structural Engineers

PEDIATRIC FACILITY
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL
BID DOCUMENTS - 09/12/2012

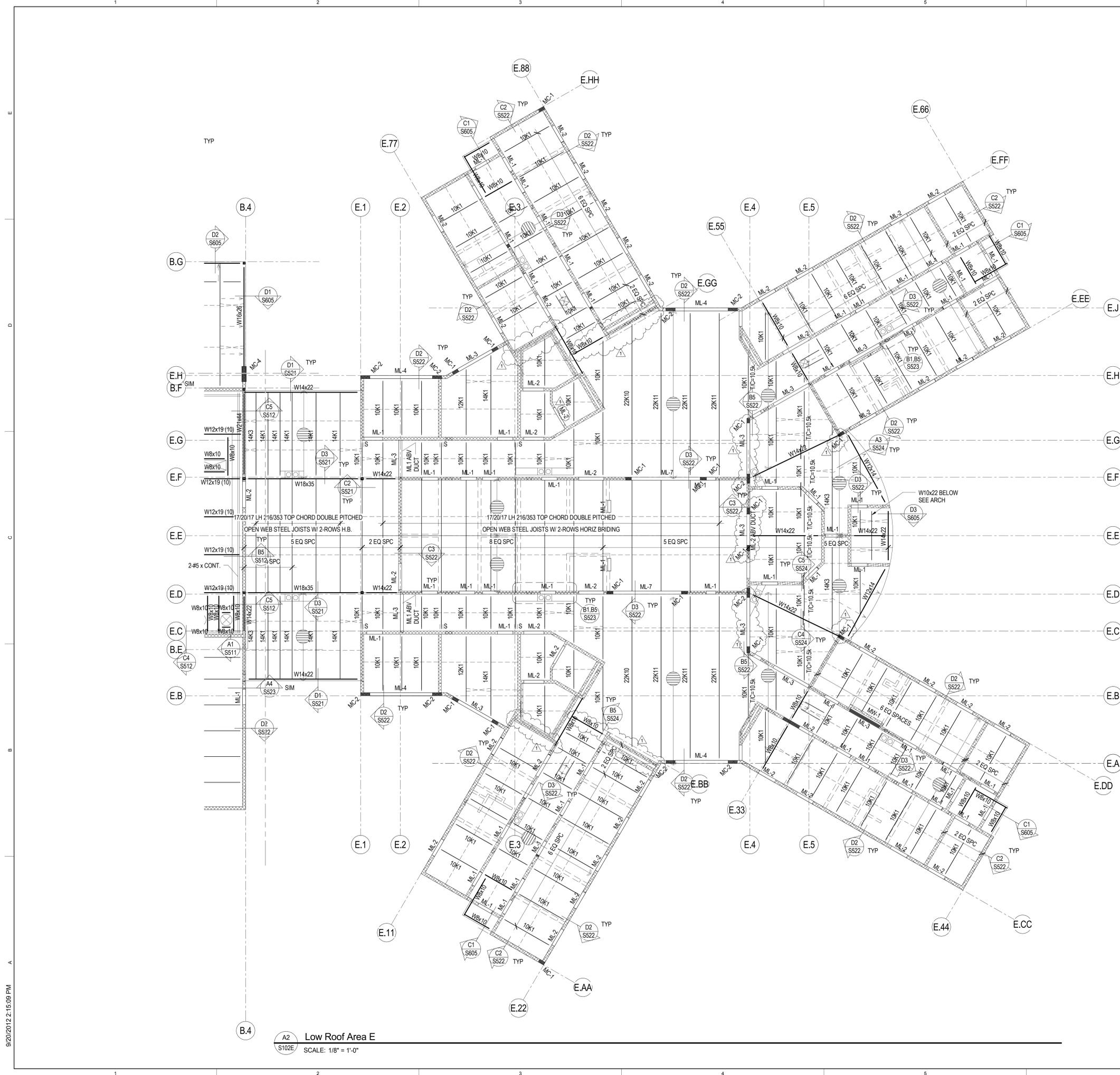
DATE	STATUS

DATE	REVISION
1 9/20/2012	Addendum #1

PROJECT NUMBER: 11111
FILE: 11111 USH Pediatric.rvt

AREA - A
LOW ROOF
FRAMING
PLAN

S102A



- ### ROOF FRAMING PLAN NOTES
1. VERIFY SIZE, WEIGHT, LOCATION AND CONFIGURATION OF ALL ROOF TOP EQUIPMENT WITH ARCHITECT AND MECHANICAL ENGINEER. PROVIDE STEEL FRAMES FOR SUPPORT OF ROOF TOP EQUIPMENT AS INDICATED IN DETAIL B4/S523 COORDINATE OPENINGS WITH MECHANICAL AND ELECTRICAL AND GENERAL CONTRACTORS.
 2. ALL ROOF OPENINGS SHALL BE FRAMED AS INDICATED IN DETAIL B3/S523. FOR ROUND OPENINGS WHICH ARE LESS THAN 12" DIA. SEE DETAIL B2/S523.
 3. SEE ARCHITECTURAL FOR ROOF SLOPES AND DRAINS. SEE B1/S523 FOR ROOF DRAIN OPENING FRAME.
 4. OPEN WEB STEEL JOISTS AND JOIST GIRDERS SHALL BE DESIGNED BY THE MANUFACTURER TO SUPPORT THE MECHANICAL AND LATERAL LOADS SHOWN ON THE ROOF FRAMING PLANS IN ADDITION TO THE UNIFORM AND POINT LOADS SHOWN.
 5. #K ADD - INDICATES ADDITIONAL UPLIFT / DOWNWARD FORCE ON STEEL JOIST IN ADDITION TO REGULAR LOADS.
 6. T/C-##K - INDICATES ADDITIONAL TOP CHORD AXIAL FORCE ON STEEL JOIST OR GIRDER IN ADDITION TO REGULAR LOADS. THIS FORCE IS A SEISMIC LRFD LOAD THAT SHALL BE CONSIDERED IN BOTH TENSION AND COMPRESSION; INCLUDES APPLICABLE OVERSTRENGTH FACTORS FROM IBC SECTION 1613 AND ASCE 7 SECTION 12.10. STEEL JOISTS AND GIRDERS WITH T/C FORCE SHALL BE DESIGNED AS COLLECTOR ELEMENTS PER IBC SECTION 1613 AND ASCE 7 SECTION 12.10 WITH STRENGTH TO RESIST APPLICABLE LOAD COMBINATIONS OF IBC SECTION 1605.4 AND ASCE 7 SECTION 12.4.
 7. ALL LOADS SUPPORTED BY OPEN WEB STEEL JOISTS AND GIRDERS SHALL BE LOCATED WITHIN 6" OF JOIST OR GIRDER PANEL POINT OR THE JOIST OR GIRDER SHALL BE REINFORCED PER DETAIL B3/S521.
 8. SEE DETAIL A2/S523 FOR SUPPORT OF HANGING MECHANICAL UNITS.
 9. HORIZONTAL AND CROSS BRIDGING SHALL BE SIZED AND SUPPLIED BY THE JOIST MANUFACTURER. CONNECT TO WALLS AS INDICATED IN DETAILS.
 10. WHERE SKYLIGHTS OR MECHANICAL UNITS INTERRUPT HORIZONTAL BRIDGING PROVIDE CROSS BRIDGING AT JOIST SPACES ON EACH SIDE. TYPICAL.
 11. ALL JOISTS TO BE DESIGNED FOR:
 - A. 2.5K TOP CHORD AXIAL FORCE. CONSIDERED AS EARTHQUAKE OR WIND PER NOTE 6. U.N.O. ON PLAN.
 - B. 20psf NET WIND UPLIFT (ASD)
 12. AT ALL MASONRY BEARING WALLS, PROVIDE ADDITIONAL DUCTILITY REINFORCING PER A4/S602 TYPICAL.

FFKR ARCHITECTS

bogue building
730 pacific avenue
salt lake city
Utah 84104

• 801-521-6186
• 801-539-1916
ffkr.com

ROOF FRAMING PLAN LEGEND

- CONCRETE WALL
- CONCRETE LINTEL IN CONCRETE WALL
- CONCRETE COLUMN IN CONCRETE WALL
- CONCRETE COLUMN
- CONCRETE JAMB COLUMN POURED MONOLITHIC WITH CONCRETE WALL
- MASONRY WALL
- MASONRY LINTEL IN MASONRY WALL
- MASONRY COLUMN IN MASONRY WALL
- STEEL COLUMN - TUBE
- MOMENT CONNECTION
- COLLECTOR CONNECTION SEE B2/S603 AND DETAILS
- COLLECTOR/CHORD CONNECTION AT BEAMS PARALLEL TO MARK
- SLIP CONNECTION SEE C5/SF521
- STEEL BEAM OR GIRDER
- STEEL JOIST OR PURLIN
- CROSS BRIDGING
- HORIZONTAL BRIDGING
- STEEL STUD WALL - STRUCTURAL
- STEEL HEADER IN STEEL STUD WALL
- CHANGE IN ELEVATION
- CONCRETE ON METAL DECK
- ROOF DECK
- SPECIAL DECK AREA
- RECESSED/DEPRESSED SLAB ON METAL DECK
- OPENING

PEDIATRIC FACILITY
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL
BID DOCUMENTS - 09/12/2012

KEY PLAN

DATE	STATUS
9/20/2012	Addendum #1

DATE	REVISION
9/20/2012	Addendum #1

PROJECT NUMBER: 11111
FILE: 11111 USH Pediatric.rvt

AREA - E
LOW ROOF
FRAMING
PLAN

S102E

9/20/2012 2:15:09 PM

A2 Low Roof Area E
S102E SCALE: 1/8" = 1'-0"



Supporting Documents:

Specifications

07 5419 11111 polyvinyl-chloride _pvc_ roofing
08 4226 11111 glass shower doors (added section)
08 7100 11111 door hardware _pages 20-23
10 1400 11111 signage (added section)
26 2923 11111 variable frequency motor controllers (added section)
32 1726 11111 detectable warning panels (added section)

Architectural Supporting Drawings:

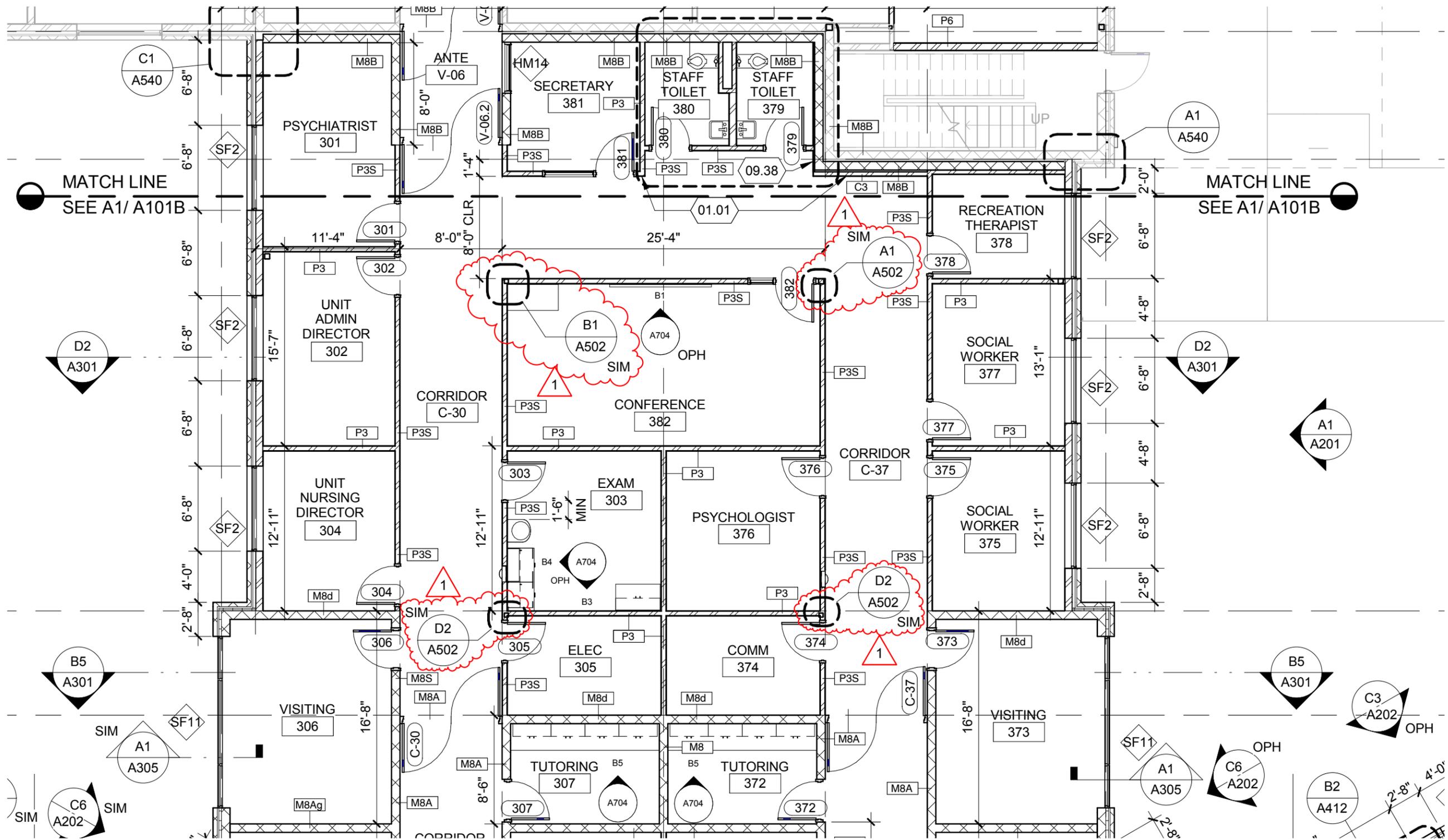
Payne Building

A111 - Reflected Ceiling Plan (re-issued)
A201 - Exterior Elevations (re-issued)
A302 - Wall Sections (re-issued)
A303 - Wall Sections (re-issued)
A704 - Interior Elevations (re-issued)
AF501 - Signage Details (new sheet)
AF502 - Signage Details (new sheet)
AF601 - Door Signage Schedule (new sheet)

Pediatric Facility

AS202 - SITE PLAN
A201 - BUILDING ELEVATIONS (re-issued)
A402 - ENLARGED LOBBY PLAN AND ELEVATIONS (re-issued)
A520 - CEILING DETAILS (re-issued)
A532 - ROOF DETAILS (re-issued)
AF501 - SIGNAGE DETAILS (new sheet)
AF502 - SIGNAGE DETAILS (new sheet)
AF503 - SIGNAGE DETAILS (new sheet)
AF504 - SIGNAGE DETAILS (new sheet)
AF601 - DOOR ROOM SIGNAGE SCHEDULE (new sheet)
G160 - MOCK UP PLANS ELEVATIONS & DETAILS (re-issued)

ASD-001 through ASD-013

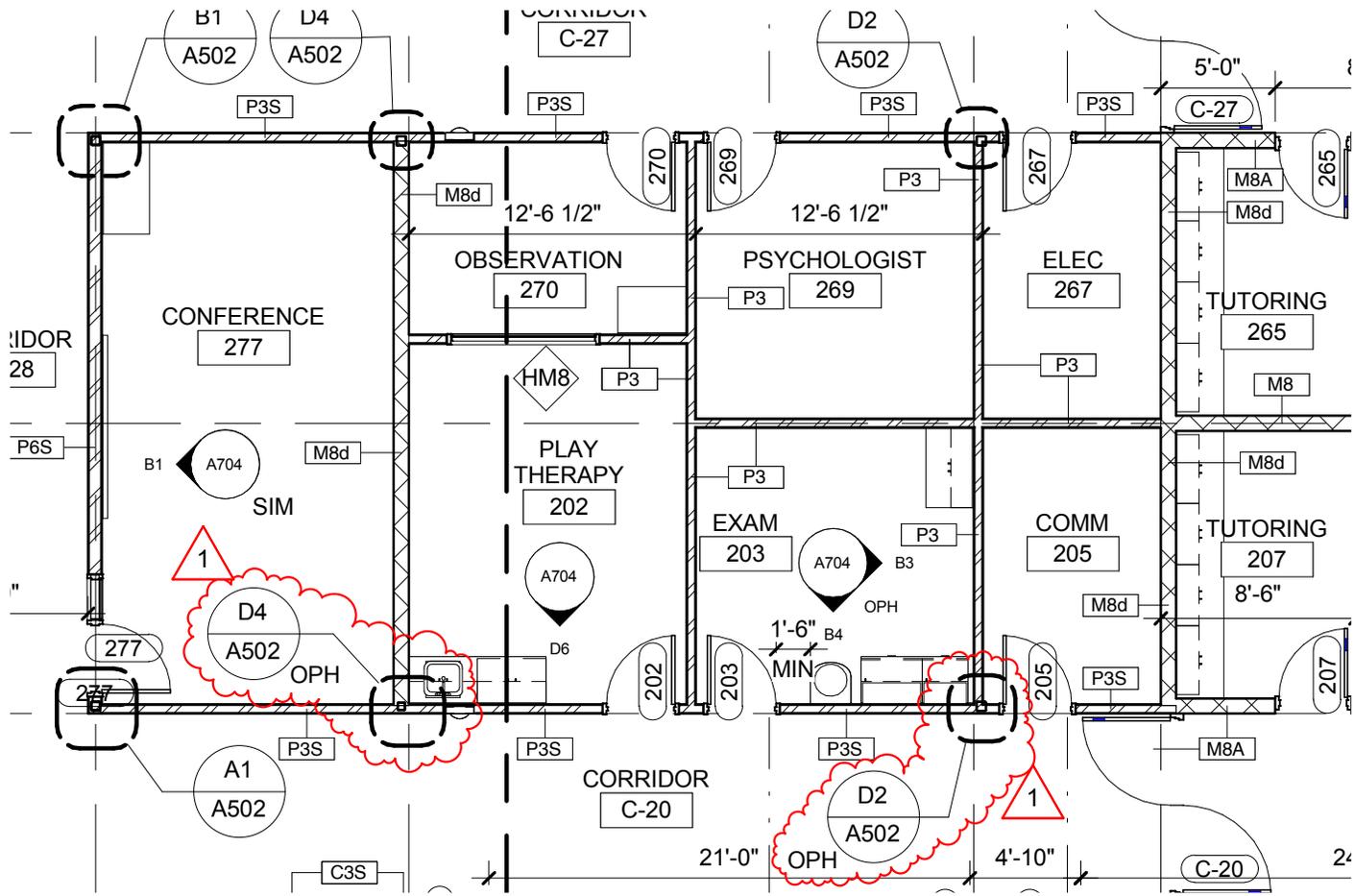


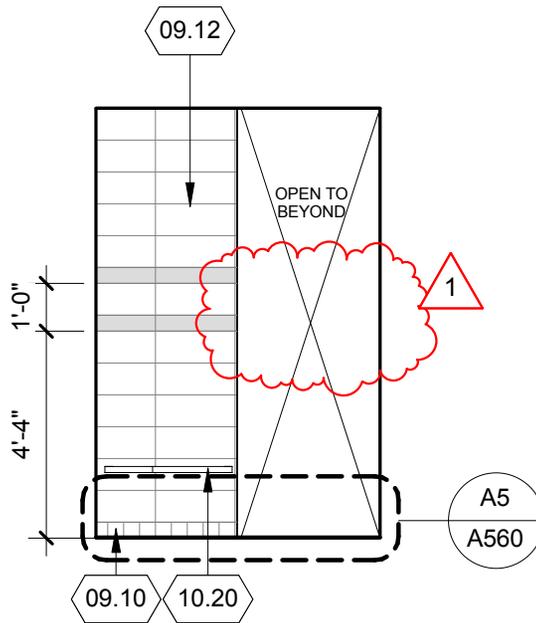
PEDIATRIC FACILITY
1300 East Center St. Provo, Utah

ASD-001

ADDENDUM #1

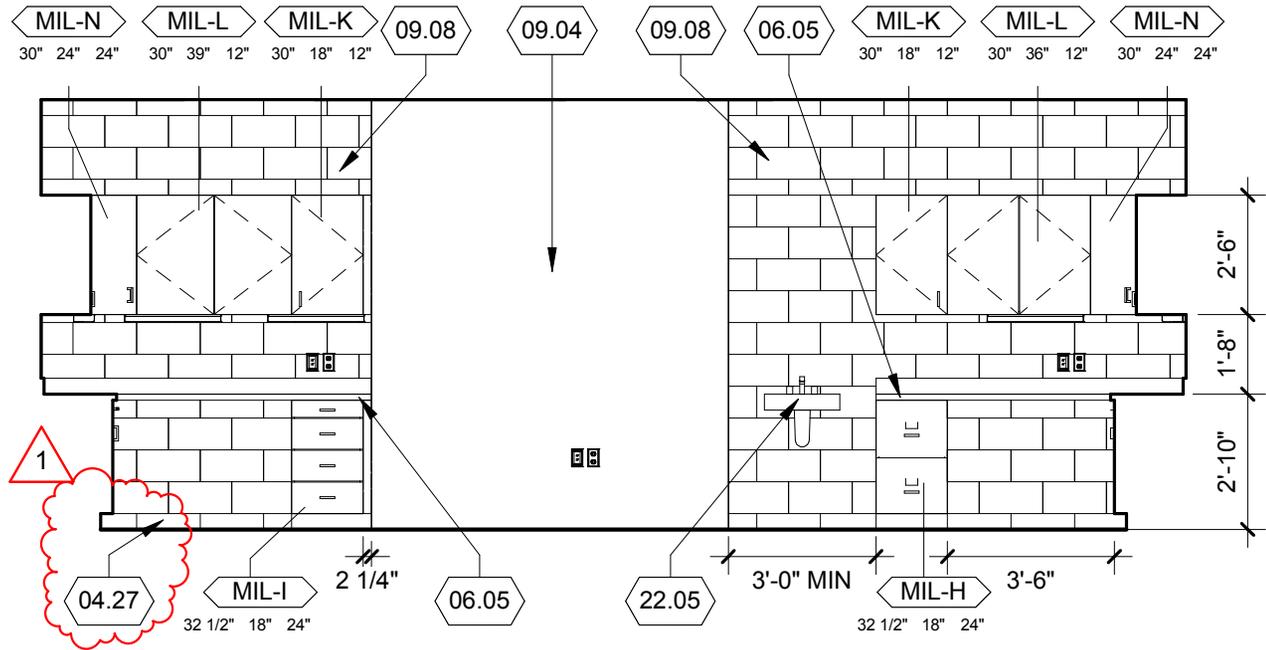
A101D





C6 TYP MED/ADA TOILET 6

SCALE: 1/4" = 1'-0" 0" 4' 8'

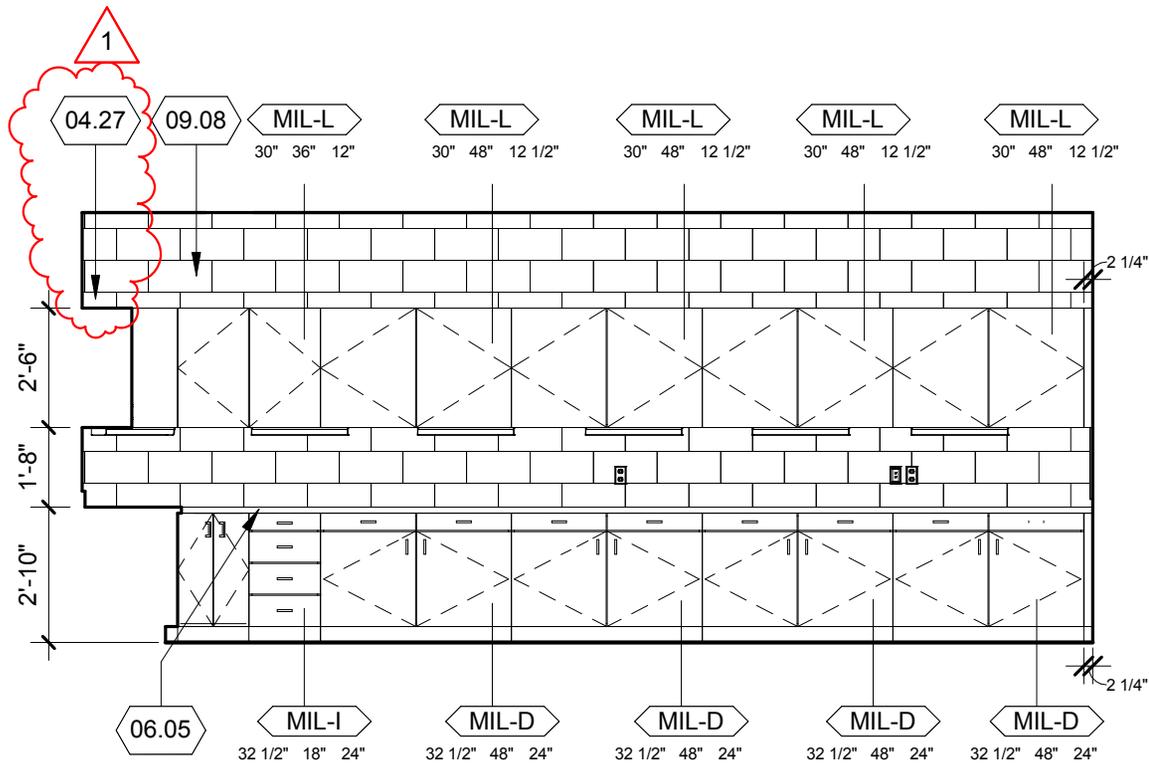


B3

TYP SUITE MED 4

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



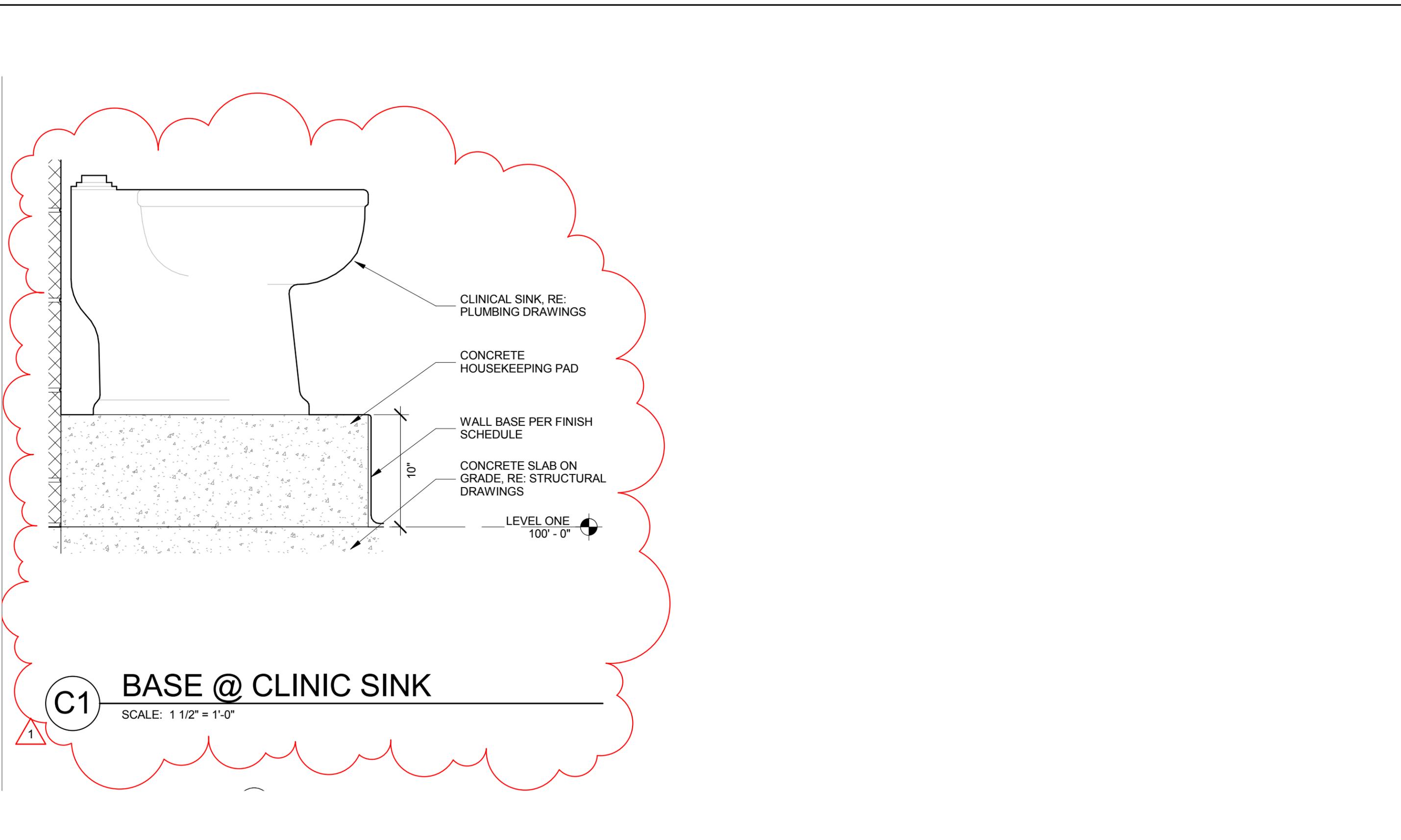


E3

TEACHER WORK S

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

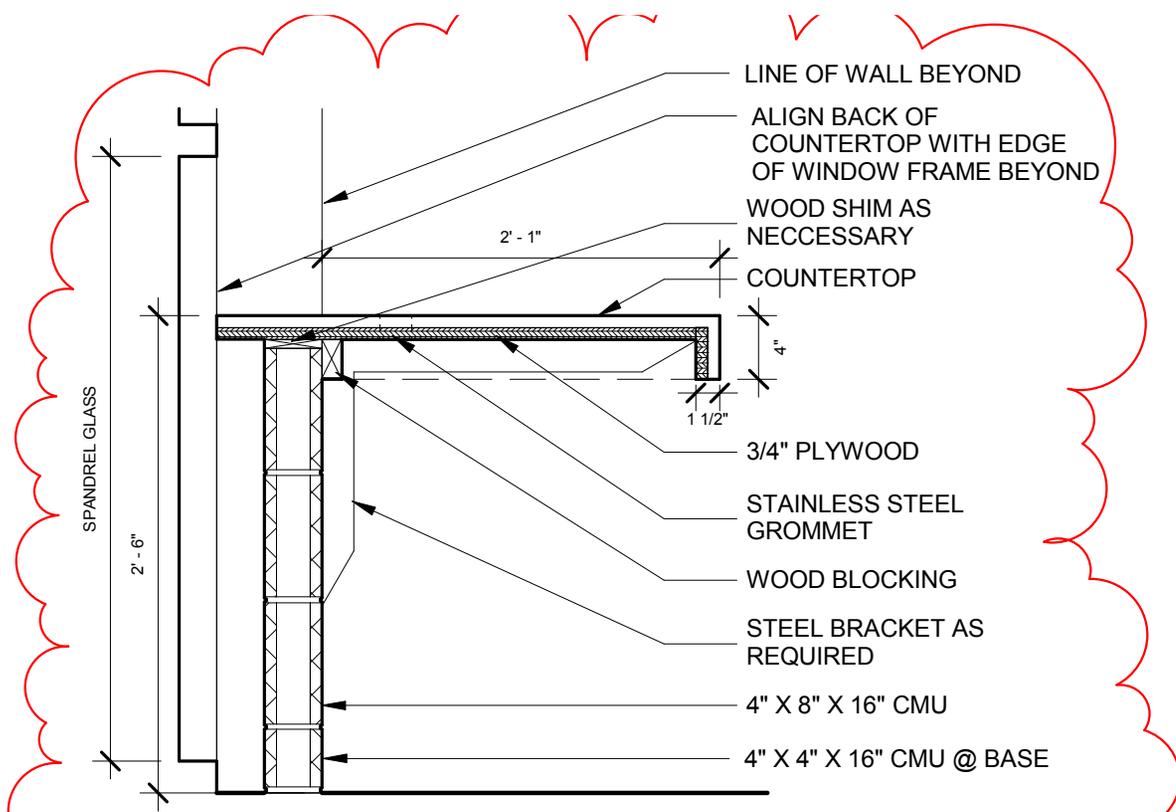




C1 BASE @ CLINIC SINK

SCALE: 1 1/2" = 1'-0"

1



- LINE OF WALL BEYOND
- ALIGN BACK OF COUNTERTOP WITH EDGE OF WINDOW FRAME BEYOND
- WOOD SHIM AS NECESSARY
- COUNTERTOP
- 3/4" PLYWOOD
- STAINLESS STEEL GROMMET
- WOOD BLOCKING
- STEEL BRACKET AS REQUIRED
- 4" X 8" X 16" CMU
- 4" X 4" X 16" CMU @ BASE

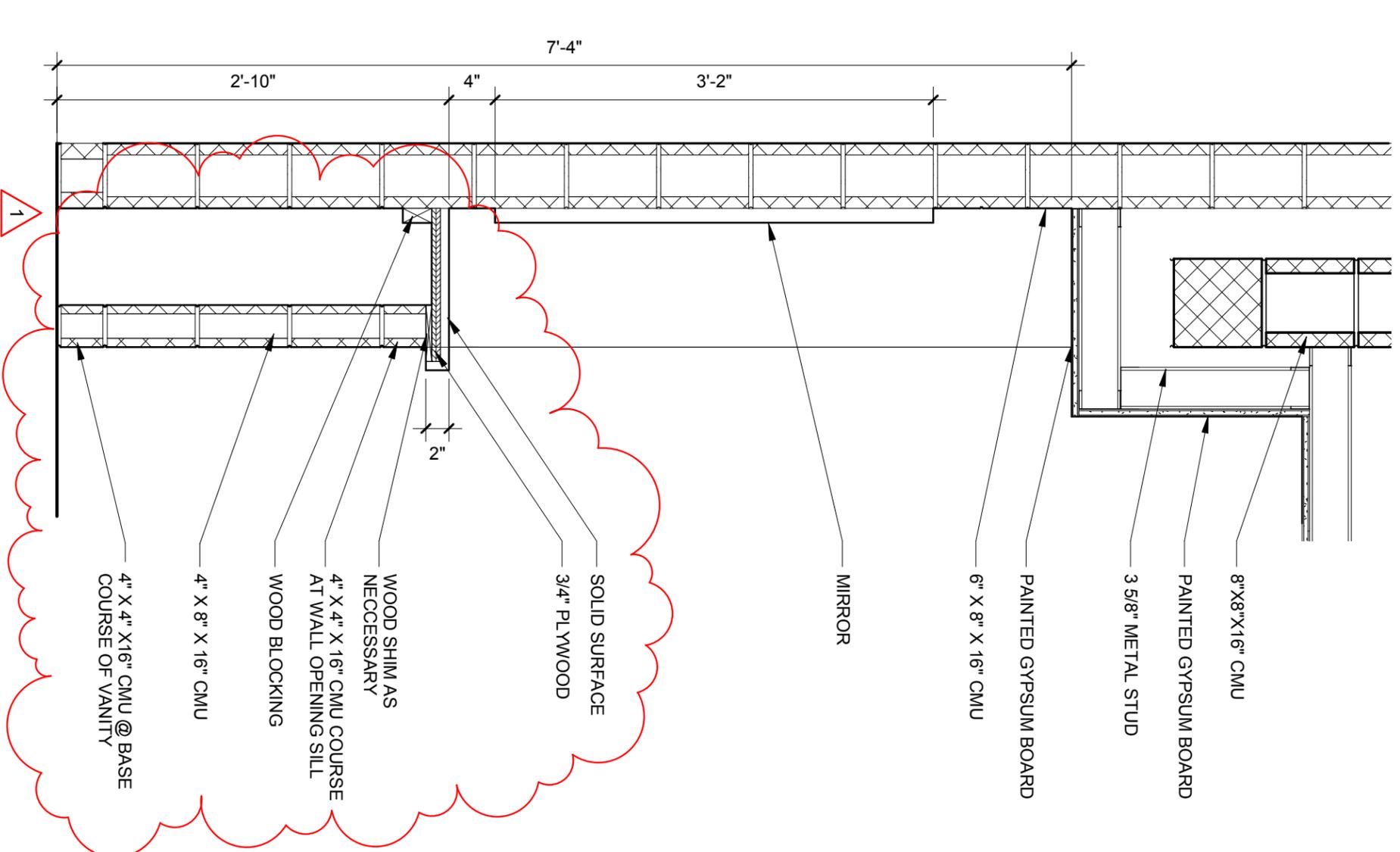
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C1

DESK @ SPANDREL

SCALE: 1" = 1'-0"



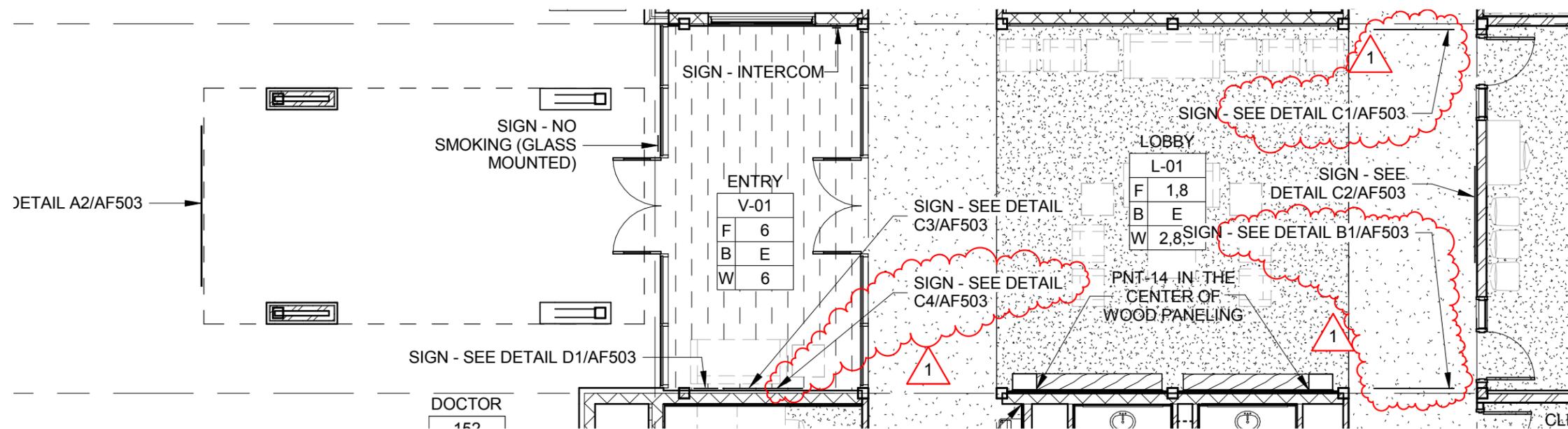


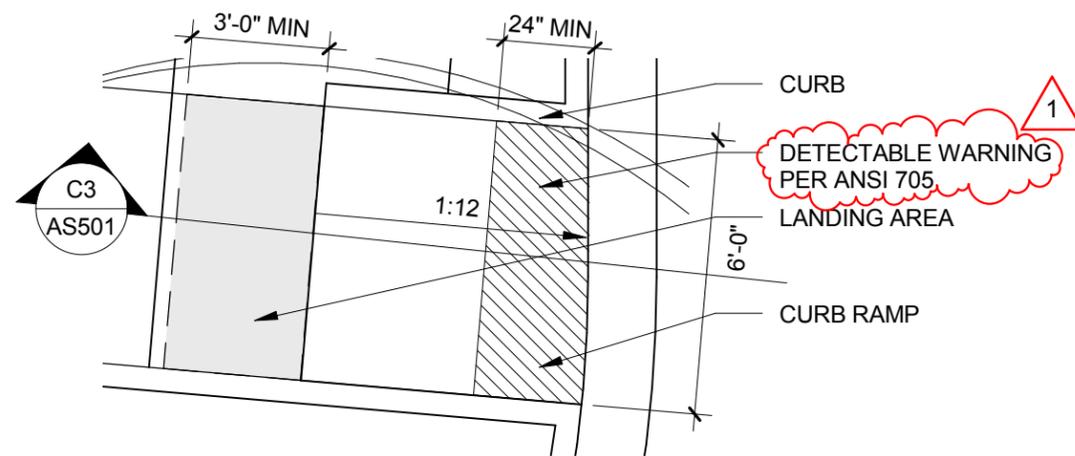
A4

VANITY SECTION

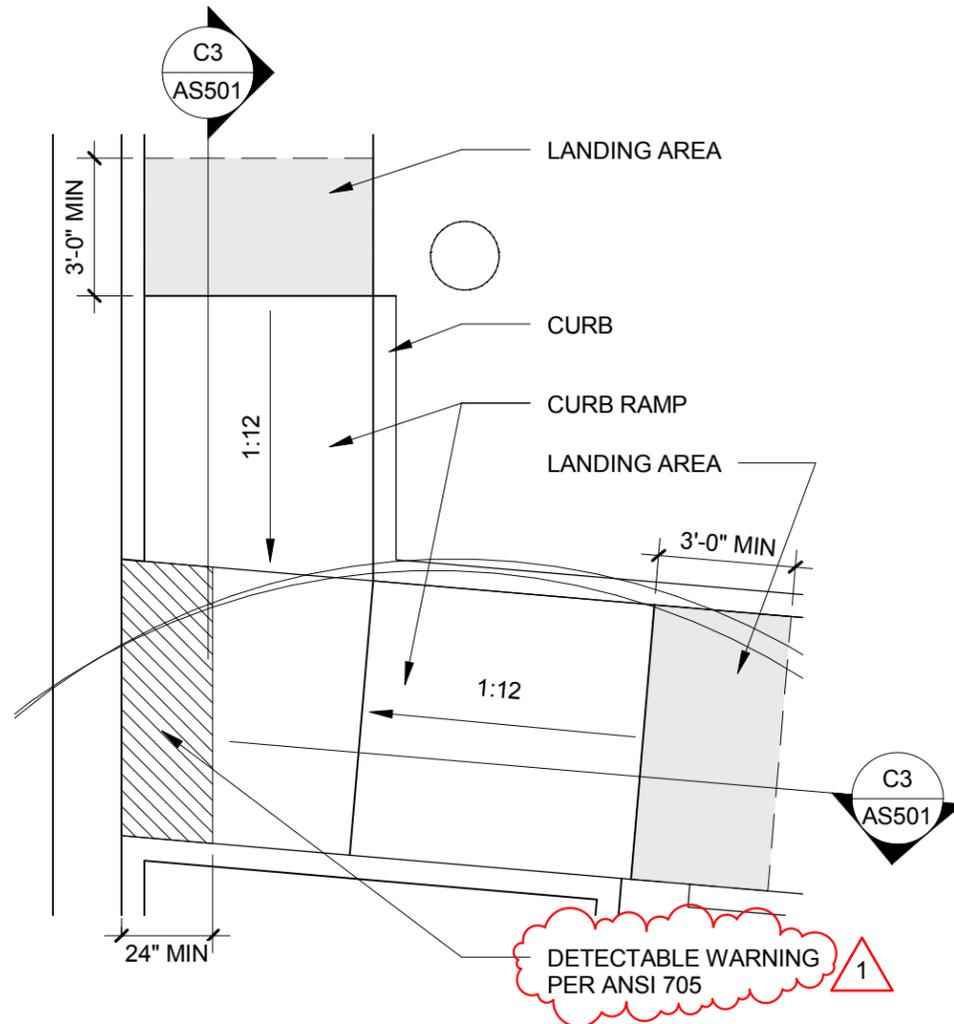
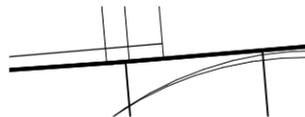
SCALE: 1" = 1'-0"





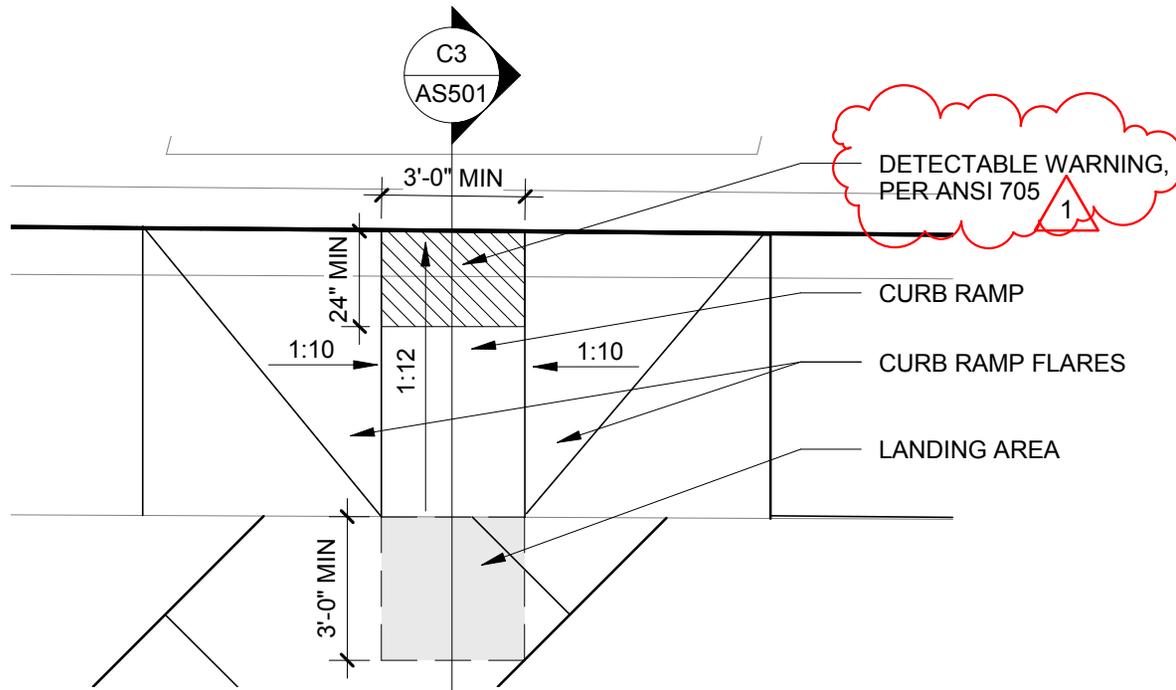


E2 ACCESSIBLE CURB RAMP
SCALE: 1/4" = 1'-0"

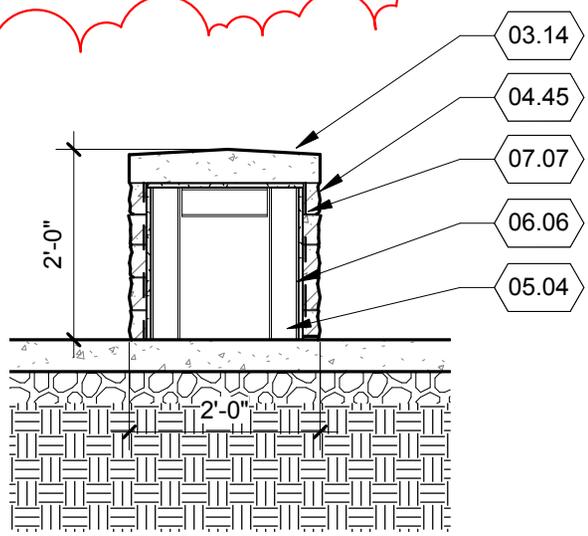


E3 ACCESSIBLE CURB RAMP
SCALE: 1/4" = 1'-0"





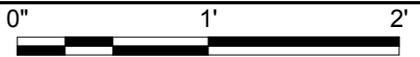
E1 **ACCESSIBLE CURB RAMP**
 SCALE: 1/4" = 1'-0"

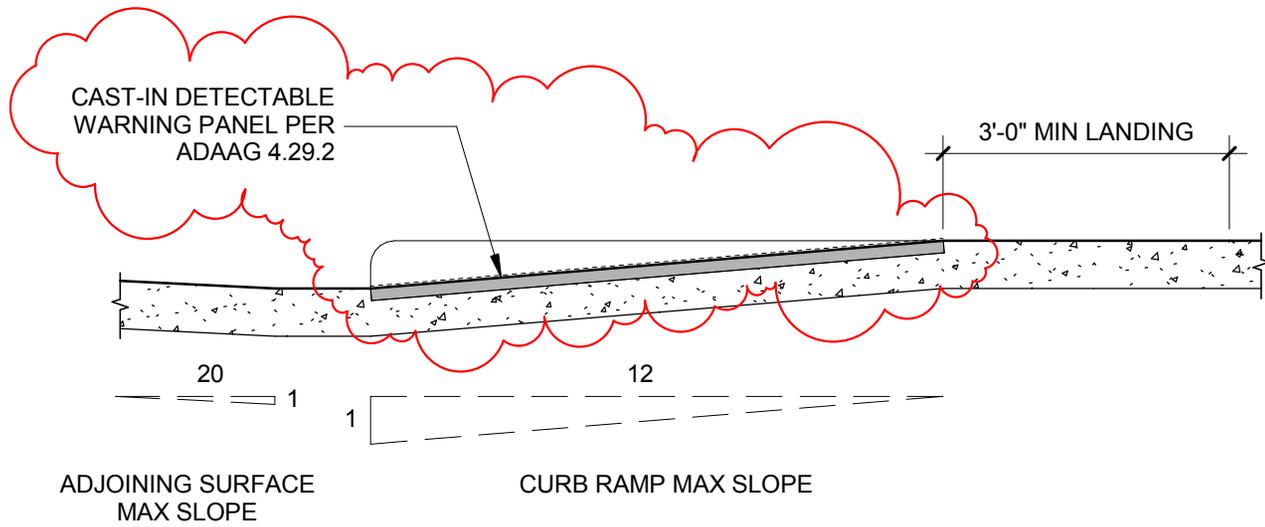


C3

SITE BENCH

SCALE: 1/2" = 1'-0"

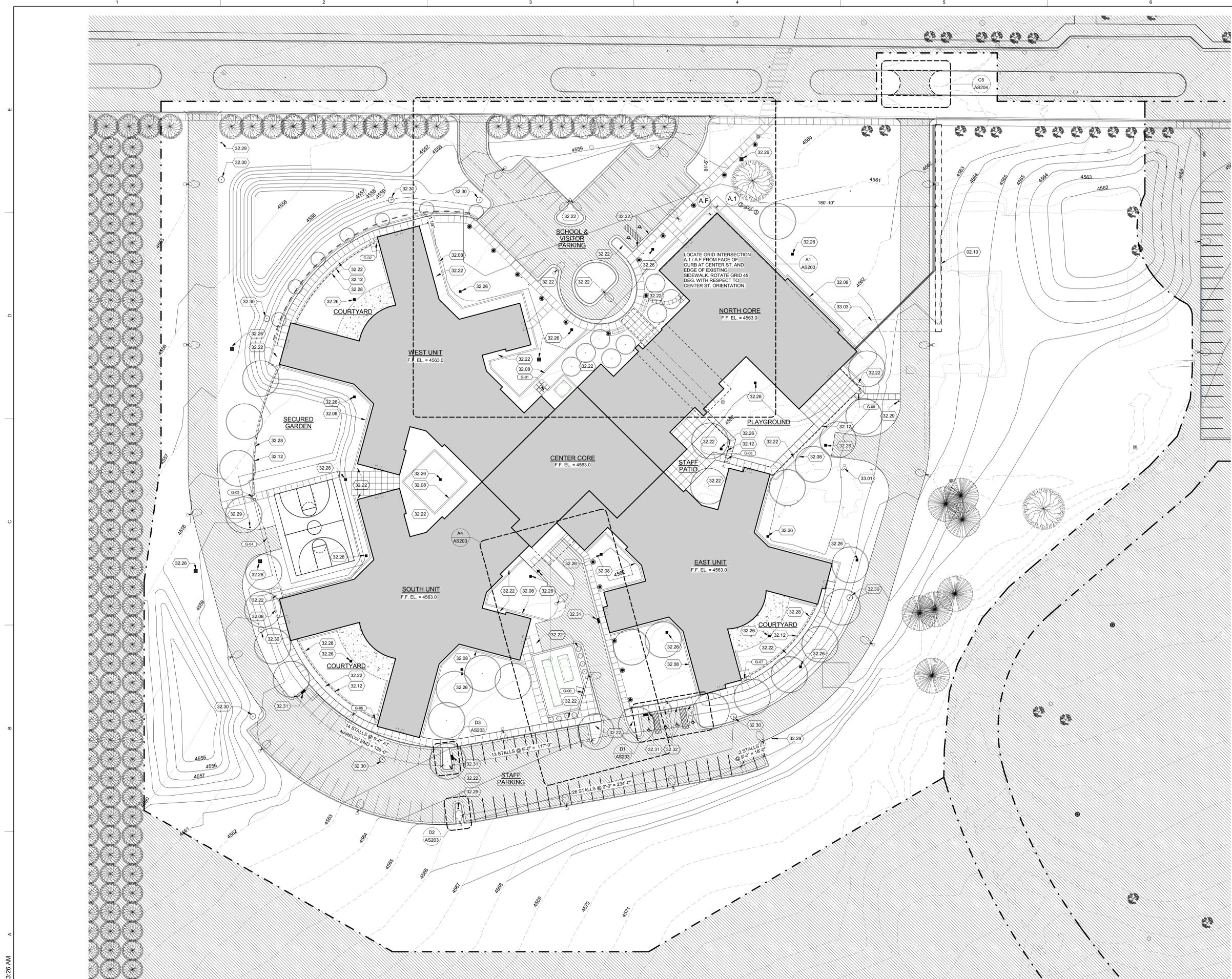




C3

ACCESSIBLE CURB RAMP

SCALE: 1/2" = 1'-0"



REFERENCE NOTES

02.10	EXISTING UTILITY TUNNEL AND CONCRETE WALK TO REMAIN AND BE PROTECTED DURING CONSTRUCTION
32.08	CONCRETE MOW STRIP, RE: LANDSCAPE DRAWINGS
32.12	SECURITY CHAIN LINK FENCE DRAWINGS
32.22	LANDSCAPE AREA, RE: LANDSCAPE DRAWINGS
32.26	CATCHMENT BASIN, RE: CIVIL DRAWINGS
32.28	TYP MOW STRIP @ PEDIATRIC FENCE, RE: 05/AS551
32.29	FIRE HYDRANT, RE: CIVIL DRAWINGS
32.30	MANHOLE, RE: CIVIL DRAWINGS
32.31	CURB INLET, RE: CIVIL DRAWINGS
32.32	PRECAST CONCRETE WHEEL STOP
33.01	FIRE HYDRANT RE: CIVIL DRAWINGS
33.03	TIE INTO EXISTING TUNNEL

LEGEND

	NEW TREES, RE: LANDSCAPE DRAWINGS
	EXISTING TREES

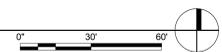
UTAH STATE HOSPITAL
 1300 East Center St. Provo, Utah
 UTAH STATE HOSPITAL CONSOLIDATION
 BID DOCUMENTS - 09/12/2012

DATE	STATUS
12 SEP 2012	BID DOCS

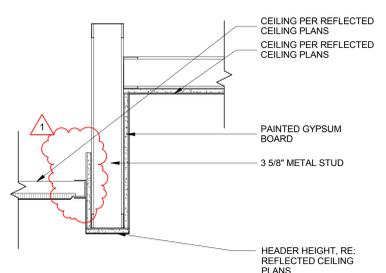
DATE	REVISION
1 2012.09.20	ADD 1

PROJECT NUMBER 11111
 FILE USH-SITE

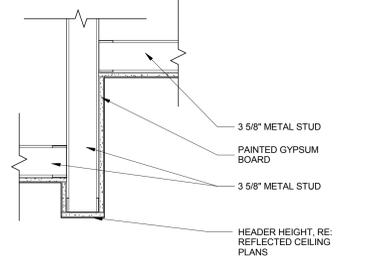
A1 PEDIATRIC SITE PLAN
 SCALE: 1" = 30'-0"



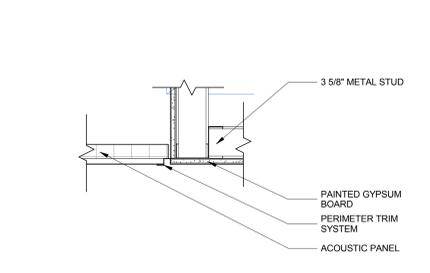
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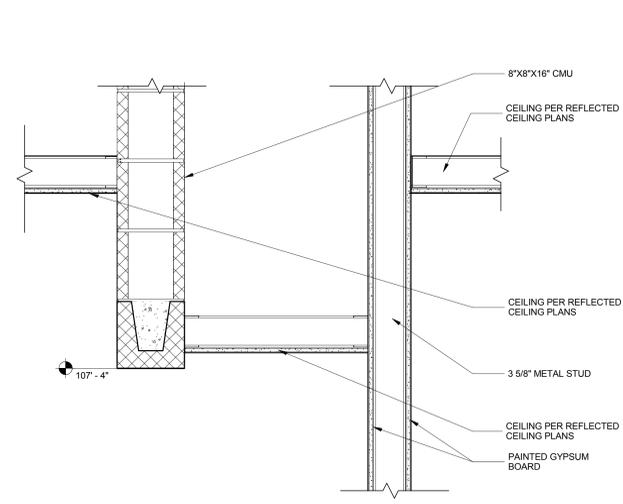
E1 CEILING DETAIL
SCALE: 1 1/2\"/>



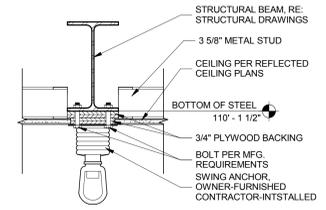
E2 CEILING DETAIL
SCALE: 1 1/2\"/>



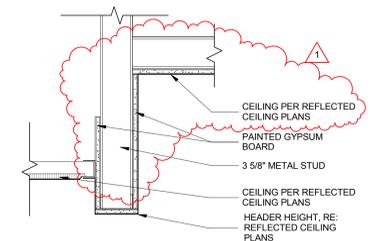
E3 CEILING DETAIL
SCALE: 1 1/2\"/>



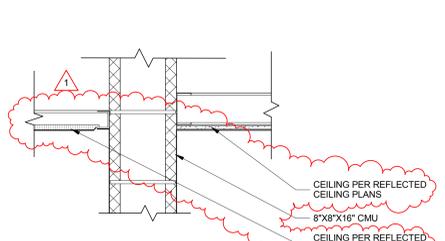
D5 CEILING DETAIL
SCALE: 1 1/2\"/>



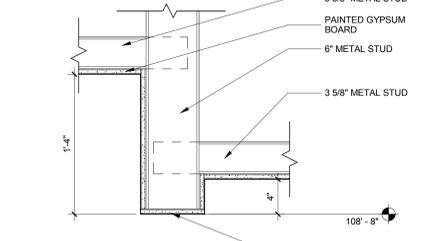
D7 Swing Anchor Detail
SCALE: 1 1/2\"/>



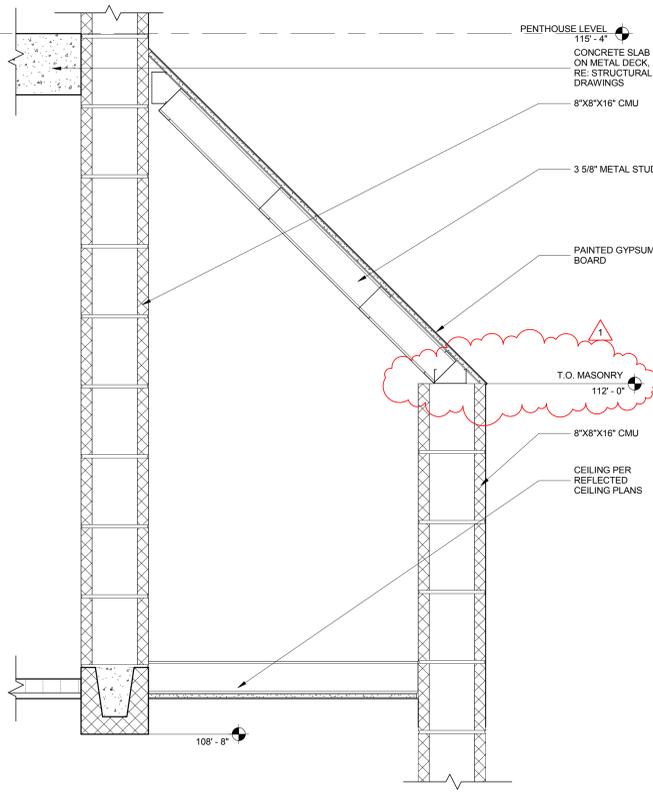
D1 CEILING DETAIL
SCALE: 1 1/2\"/>



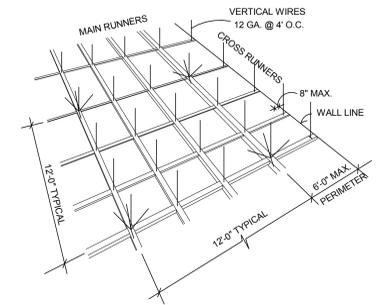
D2 CEILING DETAIL
SCALE: 1 1/2\"/>



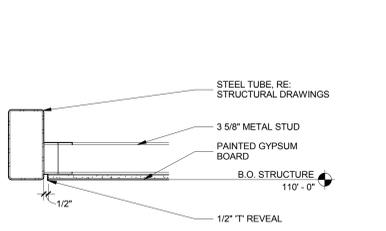
D3 CEILING DETAIL
SCALE: 1 1/2\"/>



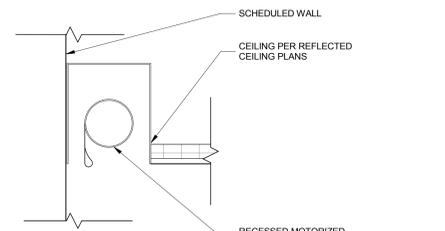
D5 CEILING DETAIL 7
SCALE: 1 1/2\"/>



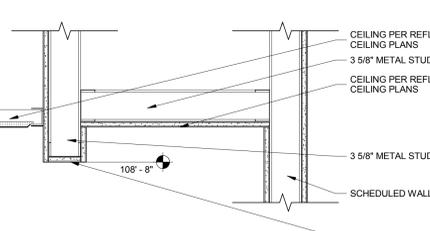
- NOTES:
1. A CEILING AREA OF 144 SF OR LESS SURROUNDED BY WALLS THAT CONNECT DIRECTLY TO STRUCTURE ABOVE SHALL BE EXEMPT FROM THE FOLLOWING LATERAL DESIGN REQUIREMENTS.
2. IN EACH ORTHOGONAL DIRECTION, ONE END OF THE CEILING GRID SHALL BE ATTACHED TO THE CLOSURE ANGLE. THE OTHER END IN EACH DIRECTION SHALL BE ATTACHED WITH AN ICC EVALUATED & APPROVED SEISMIC CLIP SYSTEM AND 0.75\"/>



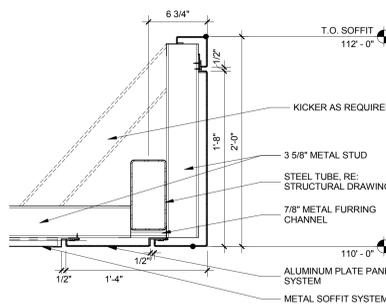
C1 EDGE @ CONF CLOUD
SCALE: 1 1/2\"/>



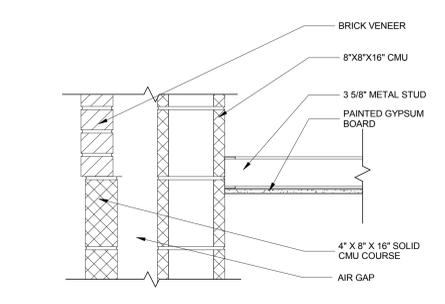
C2 CEILING DETAIL
SCALE: 1 1/2\"/>



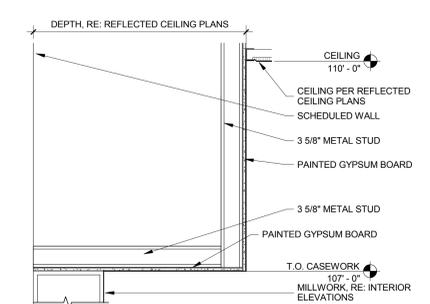
C3 CEILING DETAIL
SCALE: 1 1/2\"/>



B1 EDGE @ VESTIBULE CLOUD
SCALE: 1 1/2\"/>



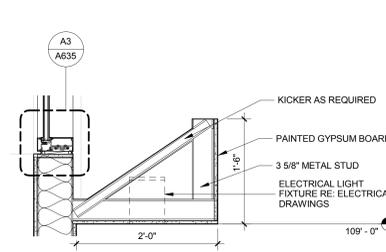
B2 CEILING DETAIL
SCALE: 1 1/2\"/>



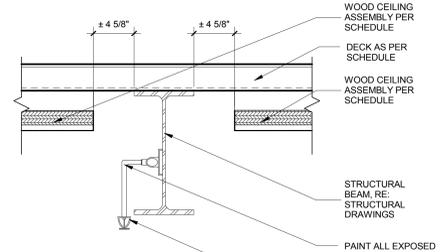
B3 TYP SOFFIT @ CLASSROOMS
SCALE: 1\"/>

B5 CEILING DETAIL 7
SCALE: 1 1/2\"/>

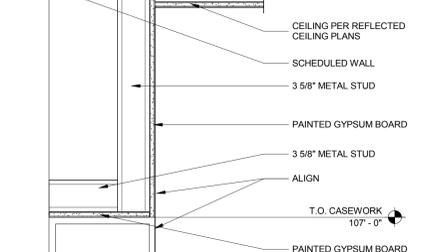
B7 SEISMIC BRACING DETAIL
SCALE: N.T.S.



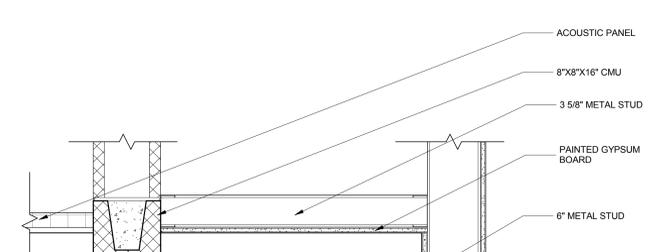
A1 SOFFIT @ CONFERENCE 127
SCALE: 1\"/>



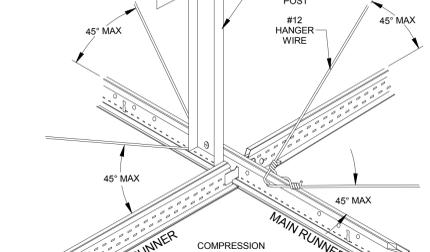
A2 CEILING DETAIL
SCALE: 1 1/2\"/>



A3 TYP SOFFIT @ WALL-HUNG CASEWORK
SCALE: 1 1/2\"/>



A5 CEILING DETAIL
SCALE: 1 1/2\"/>



A7 SEISMIC BRACING DETAIL
SCALE: N.T.S.

PEDIATRIC FACILITY
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

Table with columns for DATE, STATUS, REVISION, and PROJECT NUMBER. Includes a revision entry for 20 SEP 12 ADD 1.

CEILING DETAILS

A520

GENERAL NOTES

1. PROVIDE FILLER PANELS AT ENDS OF CABINETS WHERE THEY ABUT WALLS, TYP
2. PROVIDE BLOCKING BEHIND ALL MILLWORK, TYP
3. PROVIDE 1 1/2" THICK SHELVES AT CABINETS WIDER THAN 36"
4. UPPER WALL CABINETS HAVE TWO ADJUSTABLE SHELVES, BASE CABINETS HAVE ADJUSTABLE SHELF, EXCEPT AT SINK BASE. TALL CABINETS HAVE FIVE ADJUSTABLE SHELVES
5. ROUND ALL OUTSIDE CORNERS OF COUNTERTOPS
6. ALL CABINET INTERIORS AND SHELVES TO BE FINISHED IN WHITE MELAMINE, U.N.O.
7. WIRE MANAGEMENT AND GROMMETS TO BE PROVIDED AT ALL MILLWORK FINISHES
8. REFER TO AF SHEETS FOR MILLWORK FINISHES
9. PROVIDE FINISH AT ALL EXPOSED SIDES AND RETURNS OF CASEWORK, FINISH TO MATCH FRONT FACE OF MATERIAL

E1 HORIZONTAL REVEAL DETAIL

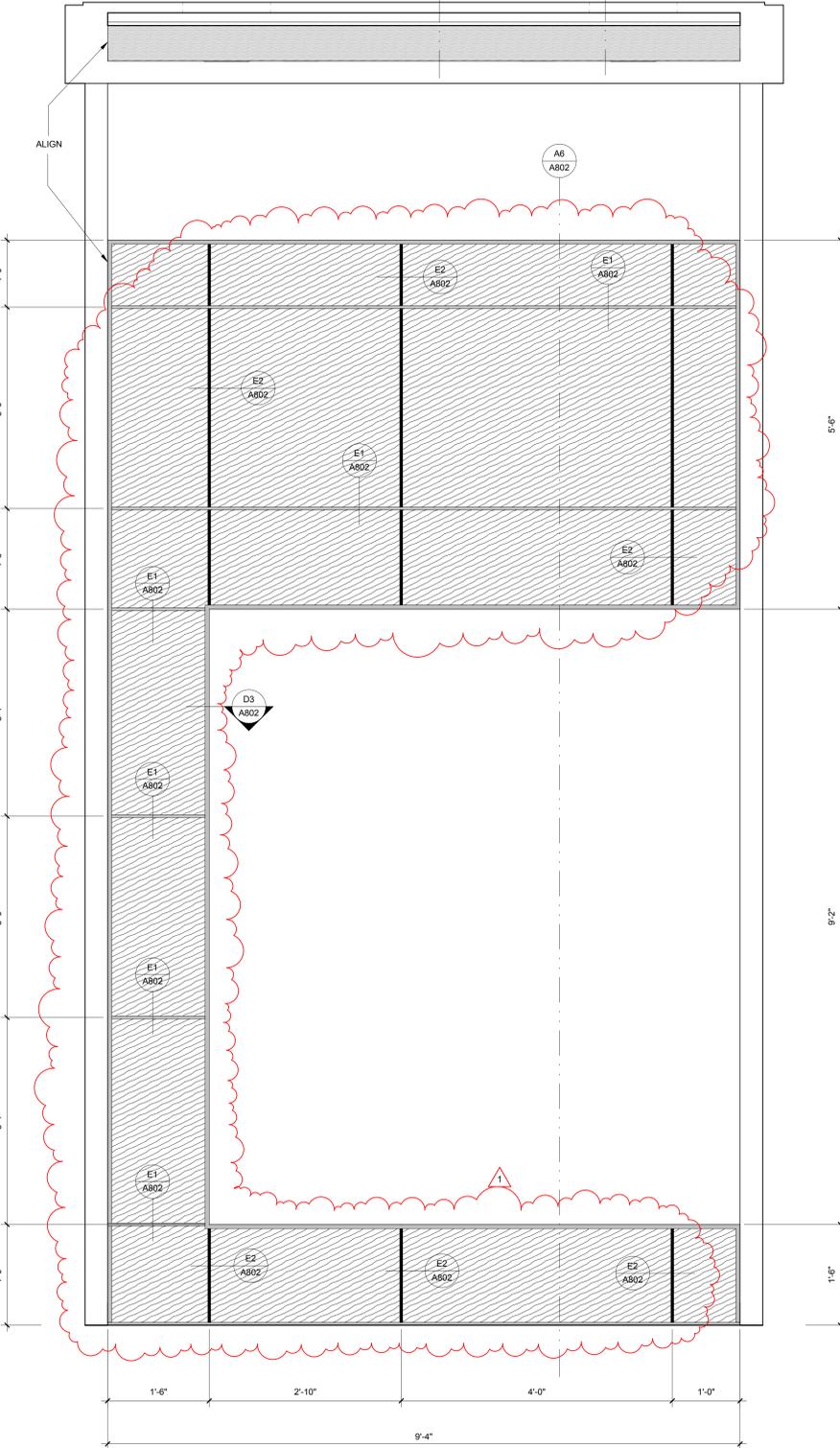
SCALE: 3" = 1'-0"

E2 VERTICAL REVEAL DETAIL

SCALE: 3" = 1'-0"

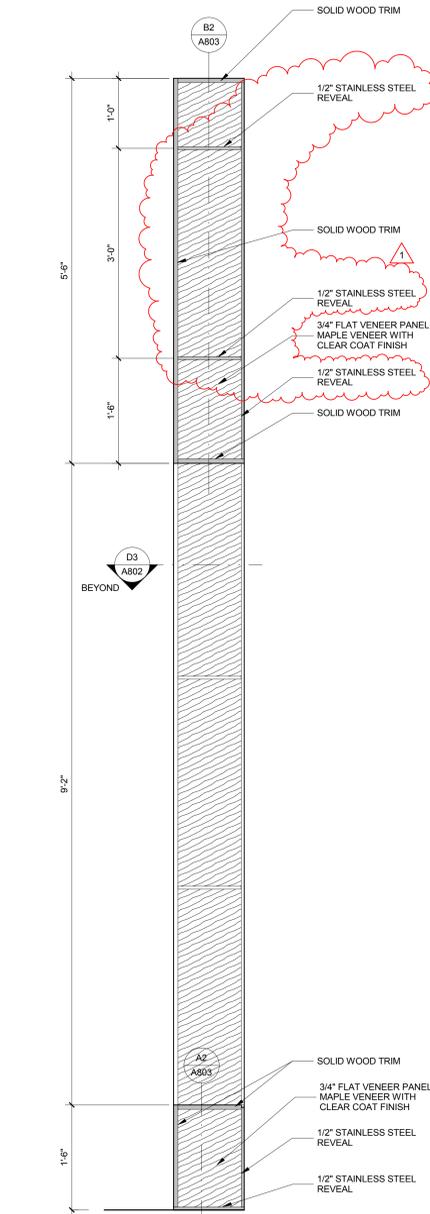
D3 LOBBY CASEWORK DETAIL

SCALE: 3" = 1'-0"



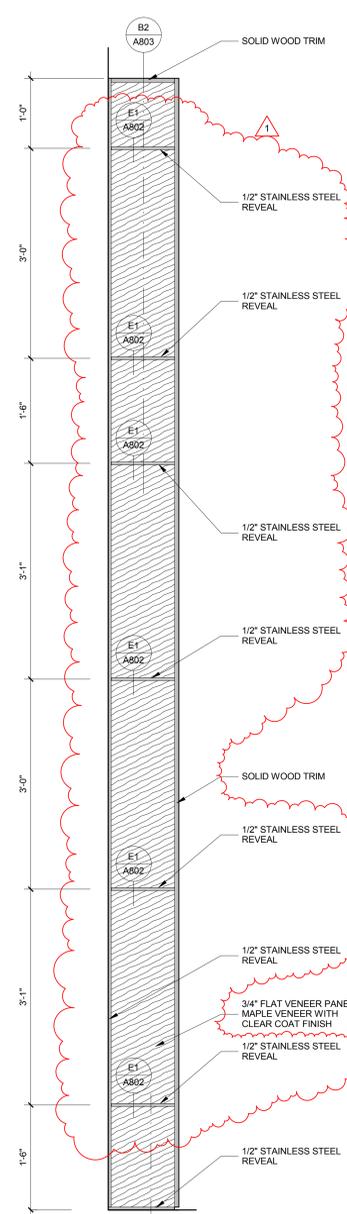
D1 ENLARGED LOBBY CASEWORK ELEVATION

SCALE: 1" = 1'-0"



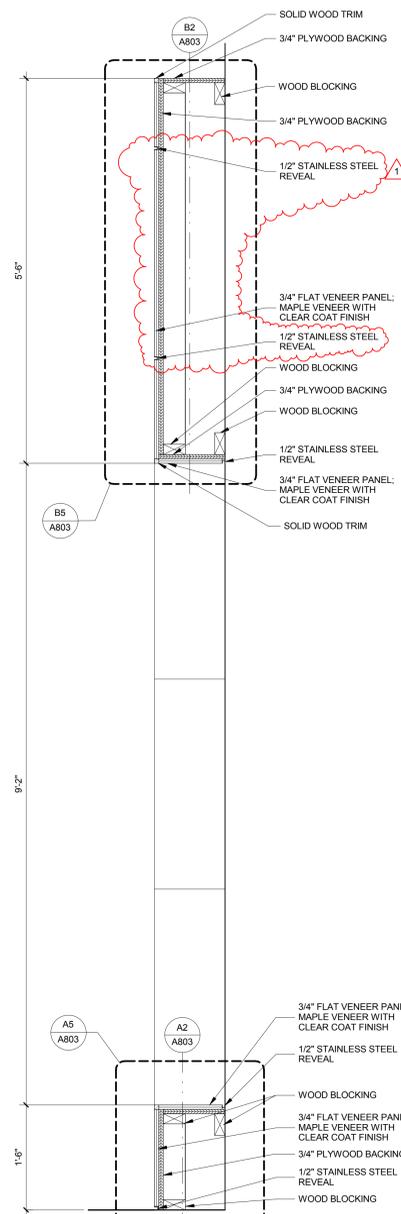
A4 LOBBY CASEWORK ELEVATION 1

SCALE: 1" = 1'-0"



A5 LOBBY CASEWORK ELEVATION 2

SCALE: 1" = 1'-0"



A6 LOBBY CASEWORK SECTION

SCALE: 1" = 1'-0"

9/20/2012 2:48:41 PM

DATE	STATUS
1 20 SEP 12	ADD 1

PROJECT NUMBER: 11111
FILE: 11111 USH Pediatric.rvt

REFERENCE NOTES

PEDIATRIC FACILITY
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

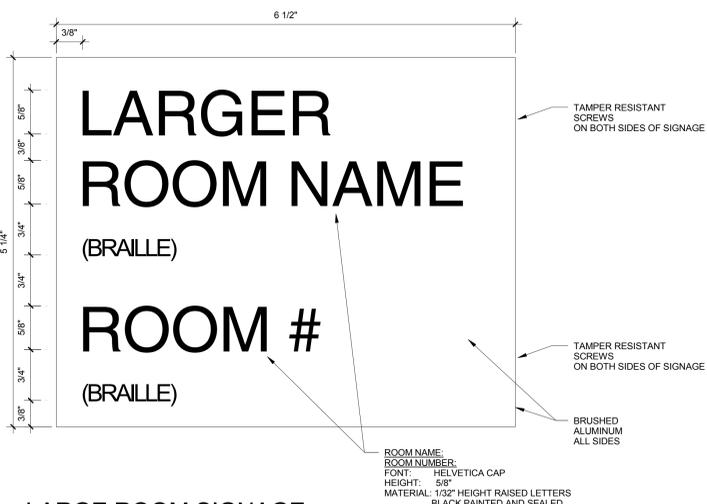
GENERAL NOTES

- ALL SIGNS TO BE MOUNTED WITH TAMPER PROOF HARDWARE WALL MOUNTS.
- ALL EXPOSED FASTENERS ARE TO BE TAMPER RESISTANT TYPE PER SPECIFICATION.
- ALL SIGNS TO COMPLY WITH ICC A117.1 AND ALL OTHER RELEVANT CODES AND REQUIREMENTS.

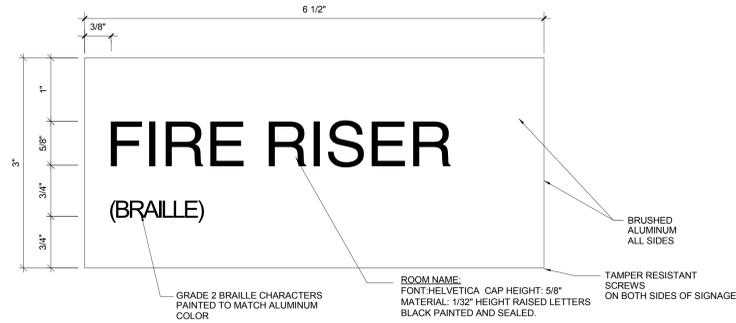
DATE	STATUS

PROJECT NUMBER	11111
FILE	11111 USH Pediatric.rvt

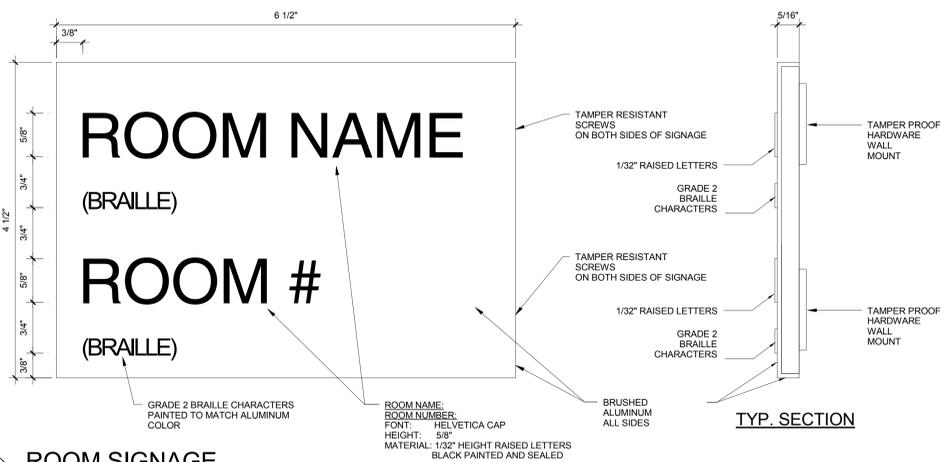
SIGNAGE DETAILS



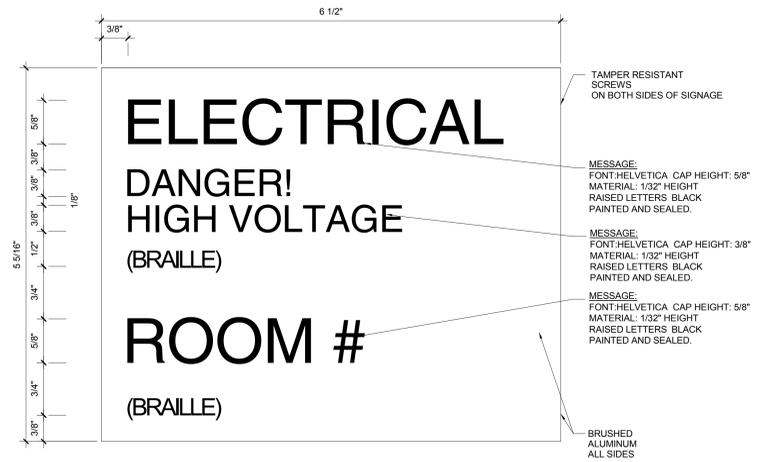
D1 LARGE ROOM SIGNAGE
SCALE: 12" = 1'-0"



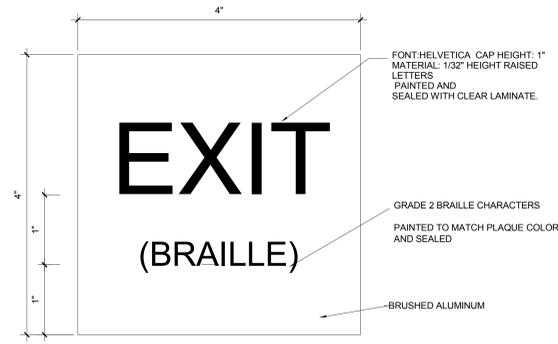
D2 FIRE RISER
SCALE: 12" = 1'-0"



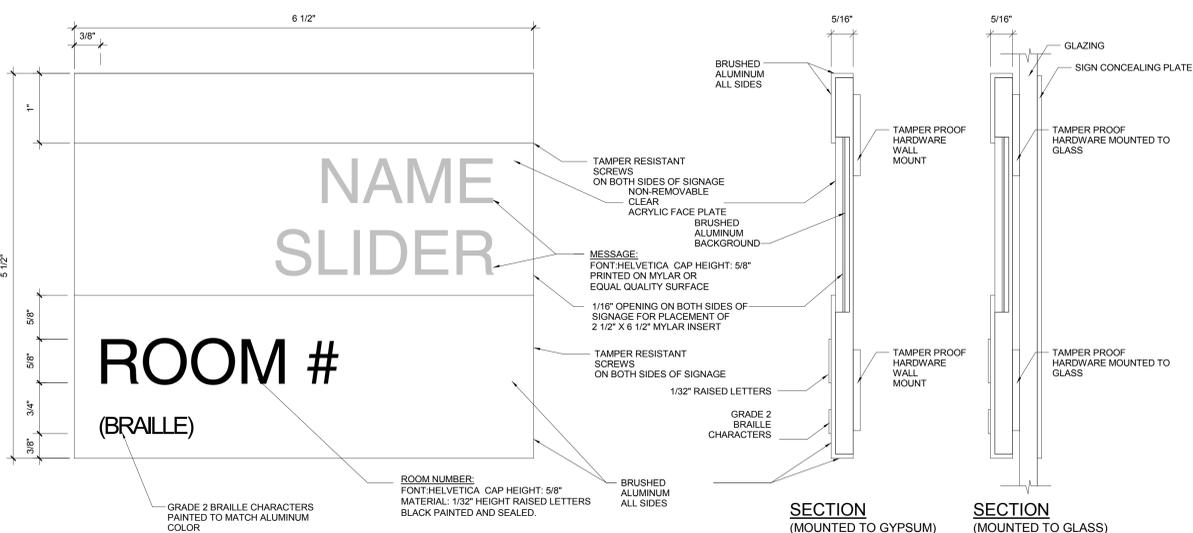
C1 ROOM SIGNAGE
SCALE: 12" = 1'-0"



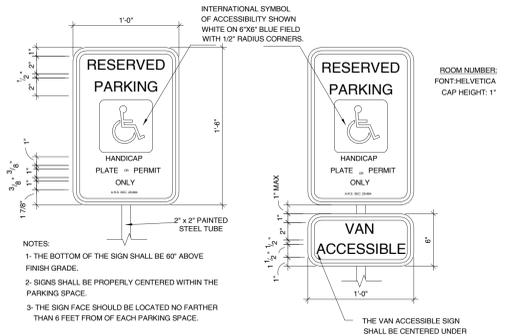
C2 ELECTRICAL SIGNAGE
SCALE: 12" = 1'-0"



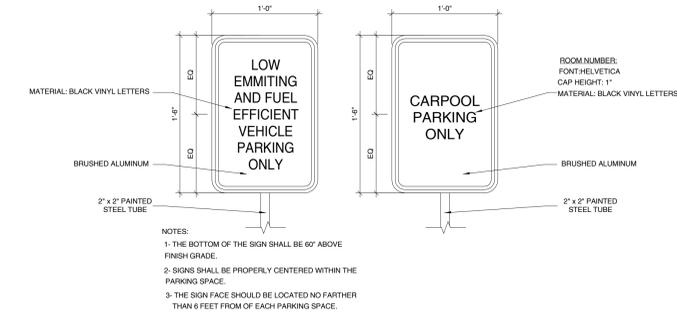
B3 EXIT SIGN
SCALE: 12" = 1'-0"



A1 ROOM SLIDER SIGNAGE
SCALE: 12" = 1'-0"



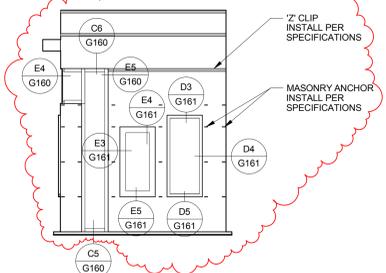
A2 ADA PARKING
SCALE: 3/4" = 1'-0"



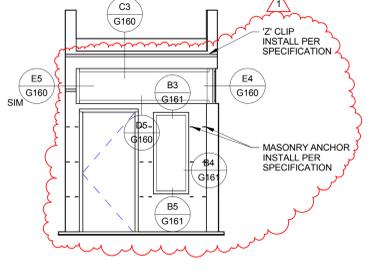
A3 LEED PARKING SIGNAGE
SCALE: 3/4" = 1'-0"

DOOR SIGNAGE SCHEDULE						
DOOR NUMBER	ROOM NUMBER	ROOM NAME ON DRAWINGS	PROGRAM NAME	ROOM NAME ON SIGN	DETAIL	NOTES
101	101	RECEPTION	Lobby Office			
102	102	TEACHER WORK	Teachers' Prep Workroom			
102A	102	TEACHER WORK	Teachers' Prep Workroom			
103	103	SECRETARY	Secretary Office			
103A	103	SECRETARY	Secretary Office			
104	104	PRINCIPAL	Principal			
105	105	ELEC	Elec.			
106	106	ACTIVITY	Activity Room			
107	107	CUSTODIAL	Custodial Closet			
108	108	TIME-OUT	Time Out Room			
109	109	PATIENT TOILET GIRLS	Patient Toilet Room			
110.1	110	PATIENT TOILET BOYS	Patient Toilet Room			
110.2	110	PATIENT TOILET BOYS	Patient Toilet Room			
111	111	CLASSROOM	Classroom			
112	112	CLASSROOM	Classroom			
113	113	CLASSROOM	Classroom			
114	114	CLASSROOM	Classroom			
115	115	LIBRARY	Library			
115A	115	LIBRARY	Library			
115B	115	LIBRARY	Library			
115C	115	LIBRARY	Library			
116	116	CLASSROOM	Classroom			
117	117	MECHANICAL	Pump Room			
118	118	CLASSROOM				
119	119	CLASSROOM				
120	120	PATIENT TOILET GIRLS	Patient Toilet Room			
121.1	121	PATIENT TOILET BOYS	Patient Toilet Room			
121.2	121	PATIENT TOILET BOYS	Patient Toilet Room			
122	122	TIME-OUT	Time Out Room			
123	123	SERVER	Server Room			
124	124	ANTE	Seclusion Ante			
124A	124	ANTE	Seclusion Ante			
124B	124	ANTE	Seclusion Ante			
125	125	MEDICATIONS	Medications Room			
126	126	NURSING	Nursing Office			
127.1	127	CONFERENCE	Conference Room			
127.2	127	CONFERENCE	Conference Room			
128	128	CLINICAL DIRECTOR	Clinical Director			
129	129	VISITOR TOILET MEN	Public Toilet			
130	130	FAMILY FACILITATOR	Family Facilitator			
131	131	COMM	Comm.			
132	132	OCCUPATIONAL THERAPIST	Occupational Therapist			
133.1	C-15	CORRIDOR				
133.2	133	LOUNGE	Employee Lounge			
134	134	STAFF LOCKER MEN	Staff Toilet Room			
134.2	134	STAFF LOCKER MEN	Staff Toilet Room			
135	135	STAFF LOCKER WOMEN	Staff Toilet Room			
136	136	DOCTOR	Medical Doctor			
137.1	137	MULTI-PURPOSE ACTIVITY	Multipurpose Activity Room			
137.2	137	MULTI-PURPOSE ACTIVITY	Multipurpose Activity Room			
137A	137	MULTI-PURPOSE ACTIVITY	Multipurpose Activity Room			
137B	137	MULTI-PURPOSE ACTIVITY	Multipurpose Activity Room			
138.1	138	MAIN ELECTRICAL	Emergency Electrical			
138.2	138	MAIN ELECTRICAL	Emergency Electrical			
138.3	138	MAIN ELECTRICAL	Emergency Electrical			
138B	138B	STORAGE				
139.1	139	EMERGENCY ELECTRICAL	Main Electrical			
139.2	139	EMERGENCY ELECTRICAL	Main Electrical			
140	140	OTSERVING	OT Serving Room			
140.2	140	OTSERVING	OT Serving Room			
141	141	INTERN	Intern Office			
142	142	ENVIRO	Environmentalist			
143.1	143	CUSTODIAL	Custodial Closet			
143.2	143	CUSTODIAL	Custodial Closet			
144	144	SOCIAL WORKER	Social Worker			
145	146	PATIENT TOILET	Patient Toilet Room			
146	145	PATIENT TOILET	Patient Toilet Room			
147.1	147	RECREATIONAL THERAPY	Recreational Therapy Room			
147.2	137	MULTI-PURPOSE ACTIVITY	Multipurpose Activity Room			
148	148	TRT	TRT Office			
149	149	RT STORAGE				
150	150	DOCTOR	Medical Doctor			
151	151	VISITOR TOILET WOMEN	Public Toilet			
152	152	DOCTOR	Medical Doctor			
201	201	SOCIAL WORKER	Social Worker			
202	202	PLAY THERAPY	Play Therapy Room			
203	203	EXAM	Exam Room			
204	204	SOCIAL WORKER	Social Worker			
205	205	COMM	Comm.			
206	206	VISITING	Visiting Room			
207	207	TUTORING	Tutoring Room			
208	208	UNIT STORAGE	Unit Storage			
209	209	LAUNDRY	Patient Laundry			
210	210	GROUP	Group Room			
211	211	PATIENT STORAGE	Patient Storage			
212	212	PHONE	Telephone Room			
213	213	ANTE	Seclusion Ante			
213A	213A	SECLUSION	Seclusion Room			
213B	213	ANTE	Seclusion Ante			
214.2	214	NURSING	Nursing Station			
214A	214	NURSING	Nursing Station			
214B	214B	RN PHONE	RN Phone			
215	215	DIRECT OBSERVATION	Direct Observation Room			
216	216	COMFORT	Comfort Room			
217	217	BEDROOM	Bedroom			
218	218	TOILET	Patient Toilet			
219	219	BEDROOM	Bedroom			
220	220	TOILET	Patient Toilet			
221	221	BEDROOM	Bedroom			
222	222	BEDROOM	Bedroom			
223	223	BEDROOM	Bedroom			
225	225	QUIET ACTIVITY	TV Room			
226	226	MEDICAL BEDROOM	Medical Bedroom			
226A	226A	MEDICAL PATIENT TOILET	Medical Toilet			
227	227	BEDROOM	Bedroom			
228	228	TOILET	Patient Toilet			
229	229	BEDROOM	Bedroom			
230	230	TOILET	Patient Toilet			
231	231	BEDROOM	Bedroom			
232	232	BEDROOM	Bedroom			
233	233	SOILED LINEN	Soiled Linen			
234	234	CLEAN LINEN	Clean Linen			
235.1	235	DINING	Dining Room			
235.2	235	DINING	Dining Room			
235.3	235	DINING	Dining Room			
236.1	236	KITCHEN	Kitchen			
236.2	236	DINING	Dining Room			
237.1	237	SENSORY	Sensory Room			
237.2	238	DINING	Dining Room			
238.1	238	DINING	Dining Room			
238.2	238	DINING	Dining Room			
239	239	MEDICAL BEDROOM	Medical Bedroom			
239A	239	MEDICAL BEDROOM	Medical Bedroom			
240	240	QUIET ACTIVITY	TV Room			
241	241	BEDROOM	Bedroom			
241.1	241	NURSING	Nursing Station			
242	242	PATIENT TOILET	Patient Toilet			
243	243	BEDROOM	Bedroom			
244	244	PATIENT TOILET	Patient Toilet			
245	245	BEDROOM	Bedroom			
246	246	BEDROOM	Bedroom			
247	247	SOILED LINEN	Soiled Linen			
248	248	CLEAN LINEN	Clean Linen			
249	255	PATIENT TOILET	Patient Toilet			
250	250	DIRECT OBSERVATION	Direct Observation Room			
251	252	COMFORT	Comfort Room			
252	251	BEDROOM	Bedroom			
253	253	PATIENT TOILET	Patient Toilet			
254	254	BEDROOM	Bedroom			
256	256	BEDROOM	Bedroom			
257	257	BEDROOM	Bedroom			
258	258	BEDROOM	Bedroom			
259	259	ANTE	Seclusion Ante			
259A	259	ANTE	Seclusion Ante			
259B	259	ANTE	Seclusion Ante			
260	260	PHONE	Telephone			
261	261	PATIENT STORAGE	Patient Storage			
262	262	GROUP	Group Room			
263	263	LAUNDRY	Patient Laundry			
264	264	UNIT STORAGE	Unit Storage			
265	265	TUTORING	Tutoring Room			
266	266	VISITING	Visiting Room			
267	267	ELEC	Elec.			
268	268	PSYCHIATRIST	Psychiatrist			
269	269	PSYCHOLOGIST	Psychologist			
270	270	OBSERVATION	Observation Room			
271	271	UNIT ADMIN DIRECTOR	Unit Administrative Director			

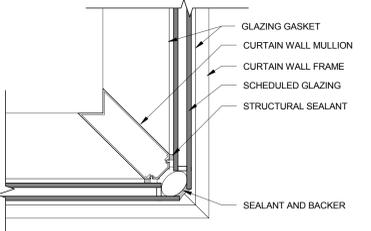
DOOR SIGNAGE SCHEDULE						
DOOR NUMBER	ROOM NUMBER	ROOM NAME ON DRAWINGS	PROGRAM NAME	ROOM NAME ON SIGN	DETAIL	NOTES
272	272	UNIT NURSING DIRECTOR	Unit Nursing Director			
273	273	RECREATION THERAPIST	Recreation Therapist			
274	274	STAFF TOILET	Staff Toilet			
275	275	STAFF TOILET	Staff Toilet			
276	276	SECRETARY	Secretary			
277	277	CONFERENCE	Conference Room			
301	301	PSYCHIATRIST	Psychiatrist			
302	302	UNIT ADMIN DIRECTOR	Unit Administrative Director			
303	303	EXAM	Exam Room			
304	304	UNIT NURSING DIRECTOR	Unit Nursing Director			
305	305	ELEC	Elec.			
306	306	VISITING	Visiting Room			
307	307	TUTORING	Tutoring Room			
308	308	UNIT STORAGE	Unit Storage			
309	309	LAUNDRY	Patient Laundry			
310	310	GROUP	Group Room			
311	311	PATIENT STORAGE	Patient Storage			
312	312	PHONE	Telephone Room			
313	313	ANTE	Seclusion Ante			
313A	313A	SECLUSION	Seclusion Room			
313B	313	ANTE	Seclusion Ante			
314.1	314	NURSING STATION	Nursing Station			
314.2	314	NURSING STATION	Nursing Station			
314A	314	NURSING STATION	Nursing Station			
314B	314	NURSING STATION	Nursing Station			
315	315	DIRECT OBSERVATION	Direct Observation Room			
316	316	COMFORT	Comfort Room			
317	317	BEDROOM	Bedroom			
318	318	PATIENT TOILET	Patient Toilet			
319	319	BEDROOM	Bedroom			
320	320	PATIENT TOILET	Patient Toilet			
321	321	BEDROOM	Bedroom			
322	322	BEDROOM	Bedroom			
323	323	BEDROOM	Bedroom			
324	324	BEDROOM	Bedroom			
326	326	QUIET ACTIVITY	TV Room			
327	327	PATIENT ADA TOILET				
328	328	BEDROOM	Bedroom			
329.1	329	MEDICAL BEDROOM	Medical Bedroom			
329A	329	MEDICAL BEDROOM	Medical Bedroom			
330	330	BEDROOM	Bedroom			
331	331	PATIENT ADA TOILET	Patient Toilet			
332	332	PATIENT TOILET	Patient Toilet			
333	333	BEDROOM	Bedroom			
334	334	BEDROOM	Bedroom			
335	335	BEDROOM	Bedroom			
336	336	BEDROOM	Bedroom			
337	337	SOILED LINEN	Soiled Linen			
338	338	CLEAN LINEN	Clean Linen			
339.1	339	DINING	Dining Room			
339.2	341	DINING	Dining Room			
339.3	339	DINING	Dining Room			
339A	339A	STORAGE				
340.1	340	KITCHEN	Kitchen			
340.2	341	DINING	Dining Room			
341.1	341	DINING	Dining Room			
341.2	341	DINING	Dining Room			
342	342	QUIET ACTIVITY	TV Room			
343	343	PATIENT ADA TOILET				
344	344	BEDROOM	Bedroom			
345	345	MEDICAL BEDROOM	Medical Bedroom			
345A	345	MEDICAL BEDROOM	Medical Bedroom			
346	346	BEDROOM	Bedroom			
347	347	PATIENT ADA TOILET	Patient Toilet			
348	348	PATIENT TOILET	Patient Toilet			
349	349	BEDROOM	Bedroom			
350	350	BEDROOM	Bedroom			
351	351	BEDROOM	Bedroom			
352	352	BEDROOM	Bedroom			
353	353	SOILED LINEN	Soiled Linen			
354	354	CLEAN LINEN	Clean Linen			
356	356	DIRECT OBSERVATION	Direct Observation Room			
357	357	COMFORT	Comfort Room			
358	358	BEDROOM	Bedroom			
359	359	PATIENT TOILET	Patient Toilet			
360	360	BEDROOM	Bedroom			
361	361	PATIENT TOILET	Patient Toilet			
362	362	BEDROOM	Bedroom			
363	363	BEDROOM	Bedroom			
364	364	BEDROOM	Bedroom			
365	365	BEDROOM	Bedroom			
366	366	ANTE	Seclusion Ante			
366A	366	ANTE	Seclusion Ante			
366B	366B	SECLUSION TOILET	Seclusion Toilet			
367	367	PHONE	Telephone Room			
368	368	PATIENT STORAGE	Patient Storage			
369	369	GROUP	Group Room			
370	370	LAUNDRY	Patient Laundry			
371	371	UNIT STORAGE	Unit Storage			
372	372	TUTORING	Tutoring Room			
373	373	VISITING	Visiting Room			
374						



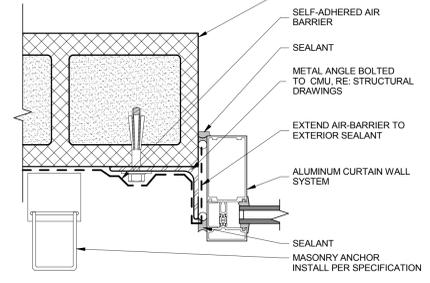
E2 MOCK-UP ELEVATION 2
SCALE: 1/4" = 1'-0"



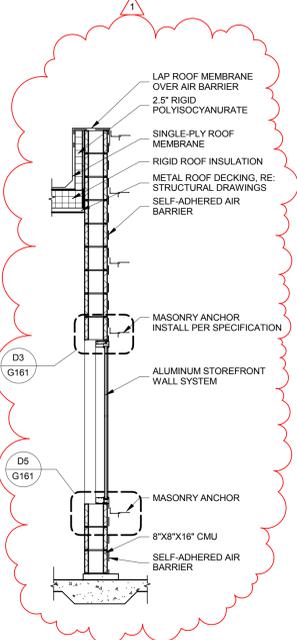
E3 MOCK-UP ELEVATION 3
SCALE: 1/4" = 1'-0"



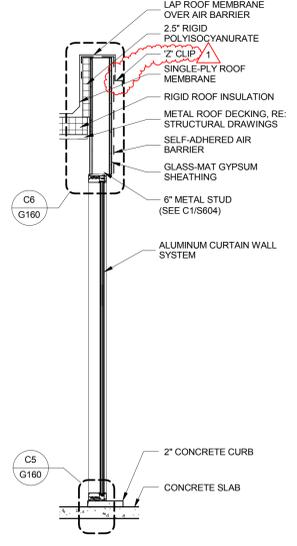
E4 MOCK-UP CLERESTORY CORNER
SCALE: 3" = 1'-0"



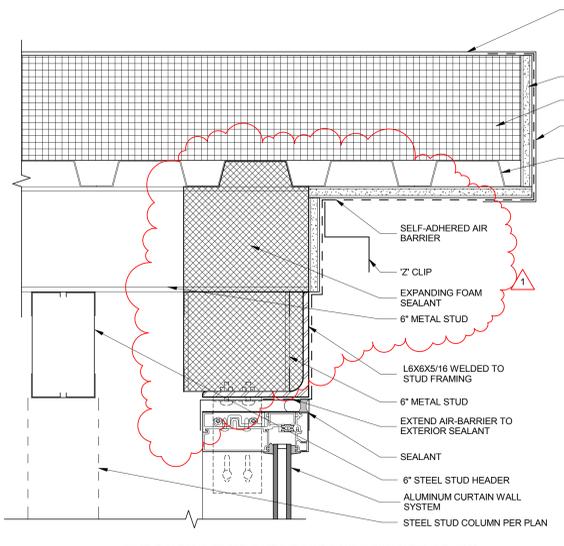
E5 MOCK-UP CURTAINWALL JAMB
SCALE: 3" = 1'-0"



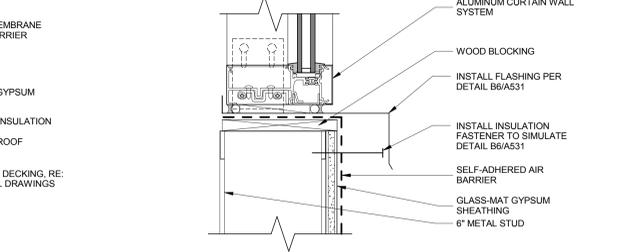
C1 MOCK-UP SECTION 3
SCALE: 1/2" = 1'-0"



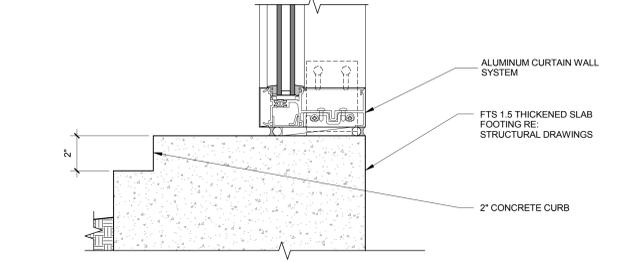
C2 MOCK-UP SECTION 4
SCALE: 1/2" = 1'-0"



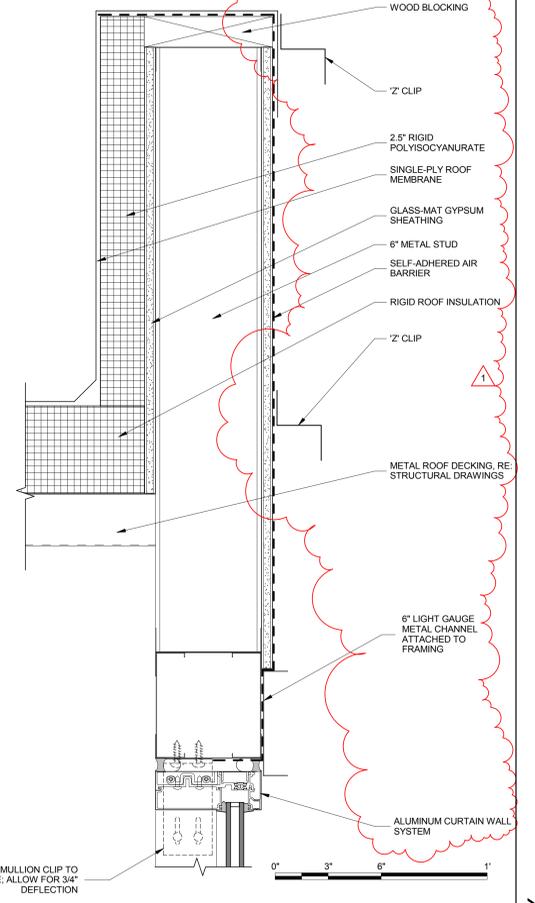
C3 MOCK-UP CLERESTORY HEAD
SCALE: 3" = 1'-0"



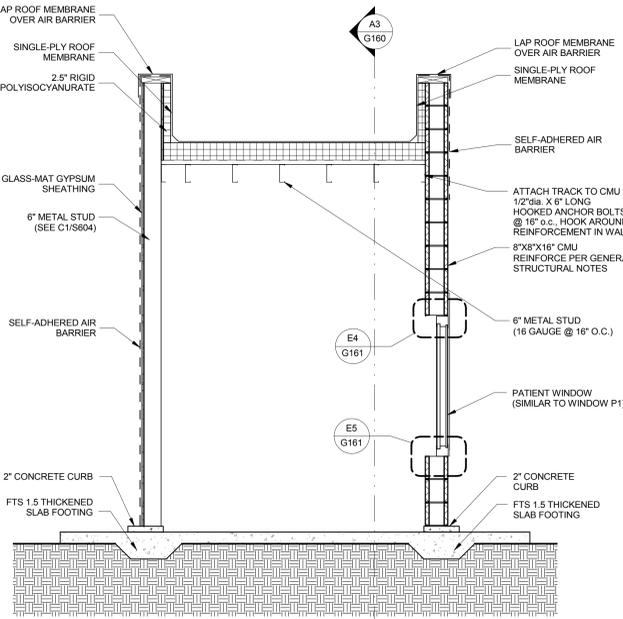
D5 MOCK-UP CLERESTORY SILL
SCALE: 3" = 1'-0"



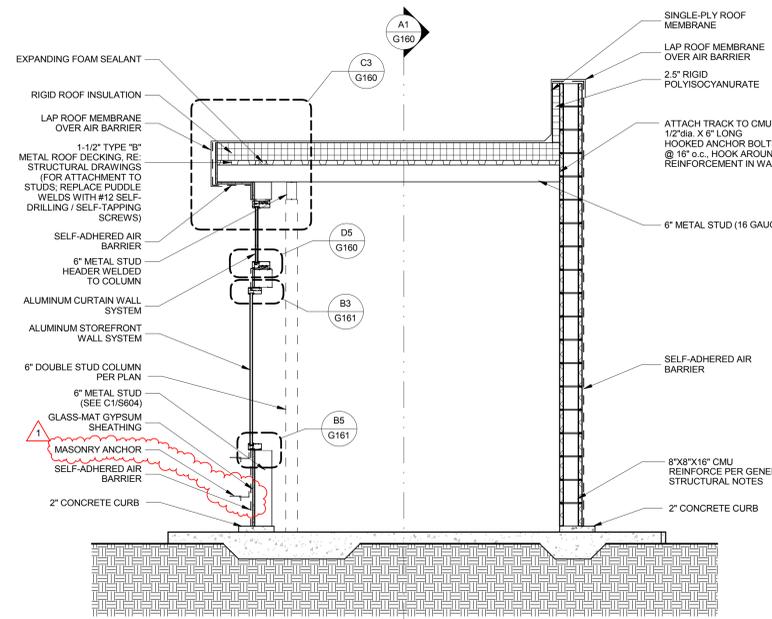
C5 MOCK-UP CURTAINWALL SILL
SCALE: 3" = 1'-0"



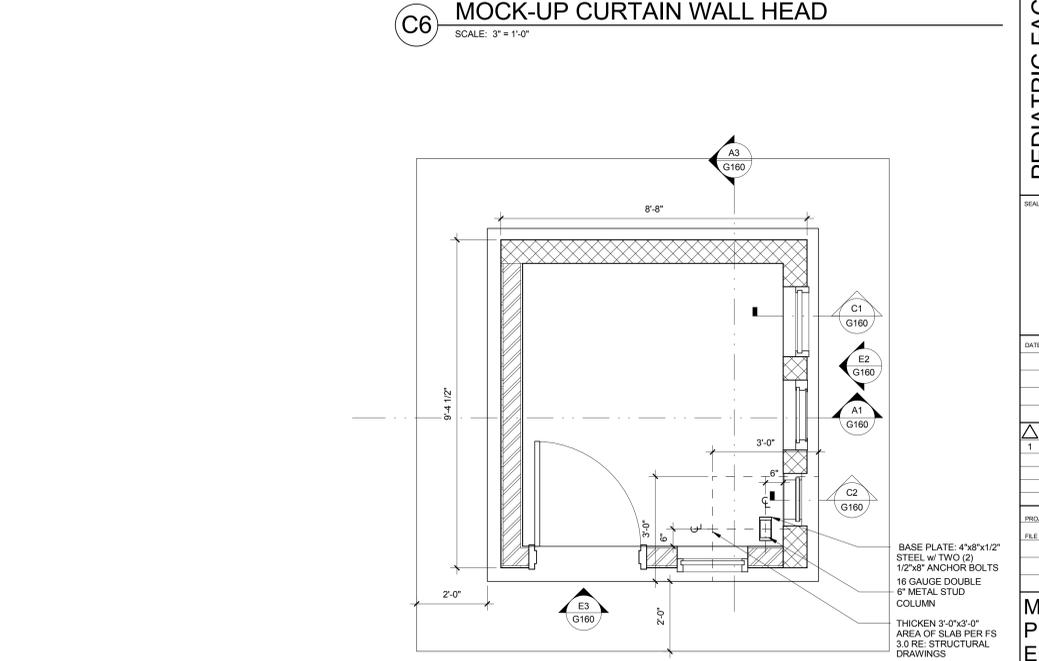
C6 MOCK-UP CURTAIN WALL HEAD
SCALE: 3" = 1'-0"



A1 MOCK-UP SECTION
SCALE: 1/2" = 1'-0"



A3 MOCK-UP SECTION 2
SCALE: 1/2" = 1'-0"



A6 MOCK-UP PLAN
SCALE: 1/2" = 1'-0"

PEDIATRIC FACILITY
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

DATE	STATUS
1 20 SEP 12	ADD 1

DATE	REVISION
1 20 SEP 12	ADD 1

PROJECT NUMBER: 11111
FILE: 11111 USH Pediatric.rvt

MOCK UP PLANS, ELEVATIONS & DETAILS

G160

9/20/2012 1:59:07 PM



ADDENDUM #1

DATE: September 20, 2012

PROJECT NO: 11542

PROJECT: Utah State Hospital - Pediatrics

DIVISION – 22 & 23

GENERAL

1. Steam, condensate, water and soft water, and associated support in tunnels are shown on civil drawings.

DRAWINGS

SHEET - M101A

1. Return duct in Entry V-01 shall transition to 28" round in lieu of 38/20 flat oval as previously shown. Provide necessary duct transitions.
2. Supply duct in Entry V-01 shall transition to 26" round in lieu of 30/20 flat oval as previously shown. Provide necessary duct transitions.
3. Relocate return air grille in Entry V-01 from underneath return duct. Return grille to be west of main return duct. Provide branch duct as necessary.
4. VAV Box, VR-10, in Entry V-01 shall be relocated to run north and south in lieu of east and west as shown. Extend 10" round medium pressure ductwork from main, provide (1) 90 degree elbow and install VAV box downstream of elbow. Provide (1) 14/12 hard elbow downstream of VAV box. Branch ducts to diffusers to occur after hard elbow. Make hot water piping accommodations to reheat coil as necessary.
5. Relocate VAV box, VR-12, serving Conference 127 and supply duct between the 22" round supply and 30" return duct. See supplementary drawing. Modify heating water pipes as necessary.
6. Relocate 10x10 return grille that is west of Clinical Director 128 (located in corridor) to the south. See supplementary drawing.

SHEET - M101B

1. Kitchen Hood, KH-1, shall refer to kitchen hood detail A6/M504 and C6/M504.
2. Provide and install double wall duct on 26" round supply duct from AH-1. Double wall duct to start from Air Handler-1 duct connection and terminate 20 feet downstream.
3. Provide and install double wall duct on 36" round supply duct from AH-1. Double wall duct to start from Air Handler-1 duct connection and terminate 20 feet downstream.
4. Provide and install double wall duct on both 30" round supply ducts from AH-2. Double wall ducts to start from Air Handler-2 duct connection and terminate 20 feet downstream.
5. Provide and install double wall duct on 40/24 flat oval supply duct from AH-3. Double wall duct to start from Air Handler-3 duct connection and terminate at grid line B.2.
6. Provide and install double wall duct on 30 round supply duct from AH-3. Double wall duct to start from Air Handler-3 duct connection and terminate 20 feet downstream.
7. Provide and install double wall duct on both 40/24 flat oval supply ducts from AH-4. Double wall ducts to start from Air Handler-4 duct connection and terminate 20 feet downstream.

SHEET - M101C

1. Provide and install roof mounted exhaust fan, EF-21 over Laundry 470. Provide 10x10 exhaust grille, type EG-1, in Laundry 470 and balance to 250 CFM. Provide 10x10 exhaust grille, type EG-1, in Laundry 409 and balance to 250 CFM. Extend 12/12 exhaust duct from EF-21 and connect to exhaust grille in Laundry 470 and Laundry 409.
2. Return air grille and duct located in Landry 470 shall be deleted.

3. Return air grille and duct located in Landry 409 shall be deleted.

SHEET - M101D

1. Provide and install roof mounted exhaust fan, EF-22 over Laundry 309. Provide 10x10 exhaust grille, type EG-1, in Laundry 370 and balance to 250 CFM. Provide 10x10 exhaust grille, type EG-1, in Laundry 309 and balance to 250 CFM. Extend 12/12 exhaust duct from EF-22 and connect to exhaust grille in Laundry 370 and Laundry 309.
2. Return air grille and duct located in Landry 370 shall be deleted.
3. Return air grille and duct located in Landry 309 shall be deleted.

SHEET - M101E

1. Provide and install roof mounted exhaust fan, EF-23 over Laundry 263. Provide 10x10 exhaust grille, type EG-1, in Laundry 263 and balance to 250 CFM. Provide exhaust grille, type EG-1, in Laundry 209 and balance to 250 CFM. Extend 12/12 exhaust duct from EF-23 and connect to exhaust grille in Laundry 263 and Laundry 209.
2. Return air grille and duct located in Landry 263 shall be deleted.
3. Return air grille and duct located in Landry 209 shall be deleted.

SHEET - M401

1. Refer to B1. Provide and install double wall duct on 30 round supply duct from AH-3. Double wall duct to start from Air Handler-3 duct connection and terminate 20 feet downstream.

SHEET - M402

1. Keyed note 1 shall read, "Provide and install new 4" concrete housekeeping pad."
2. Keyed note 2 shall read, "Plumbing equipment. See plumbing drawings."
3. Keyed note 3 shall read, "See Civil sheet C100 for continuation of piping."
4. Keyed note 4 shall read, "Provide and install differential pressure sensor."
5. Keyed note 4 shall refer to differential pressure sensor south of heating water pumps.

SHEET - M504

1. Add the following details. See attached mechanical sheet.
 - A. Kitchen hood detail A6/M504 and C6/M504.

SHEET - M601

1. Refer to Grilles, Registers and Diffusers Schedule.
 - A. Refer to CD-2. Provide Torx security tamper-proof pin screws for all security grilles.
 - B. Refer to RG-2. Provide Torx security tamper-proof pin screws for all security grilles.
 - C. Refer to EG-2. Provide Torx security tamper-proof pin screws for all security grilles.
2. Refer to Exhaust Fan Schedules
 - A. See attached supplementary drawing for EF-21,22,23 schedule.

SHEET - M602

1. Refer to Kitchen Hood Schedule. KH-1 shall have an airflow of 600 CFM. The hood dimensions shall be 24"x24"x24".

SPECIFICATIONS

SECTION - 232113 - Hydronic Piping and Accessories

1. Add the following subparagraphs to 2.4.N
 - A. Rigid Type: Coupling housings with offsetting, angle-pattern bolt pads shall be used to provide system rigidity and support and hanging in accordance with ANSI B31.1, B31.9, and NFPA 13. 2" (DN50) through 8" (DN200): Installation ready rigid coupling for direct stab installation without field disassembly. Gasket shall be Grade "EHP" EPDM compound with red color code designed for operating temperatures from -30 deg F (-34 deg C) to +250 deg F (+120 deg C).
 - B. Flexible Type: Use in locations where vibration attenuation and stress relief are required. Flexible couplings may be used in lieu of flexible connectors at equipment connections. Three couplings, for each connector, shall be placed in close proximity to the vibration source. 2" (DN50) through 8" (DN200): Installation ready flexible coupling for direct stab installation without field

disassembly. Gasket shall be Grade “EHP” EPDM compound with red color code designed for operating temperatures from -30 deg F (-34 deg C) to +250 deg F (+120 deg C).

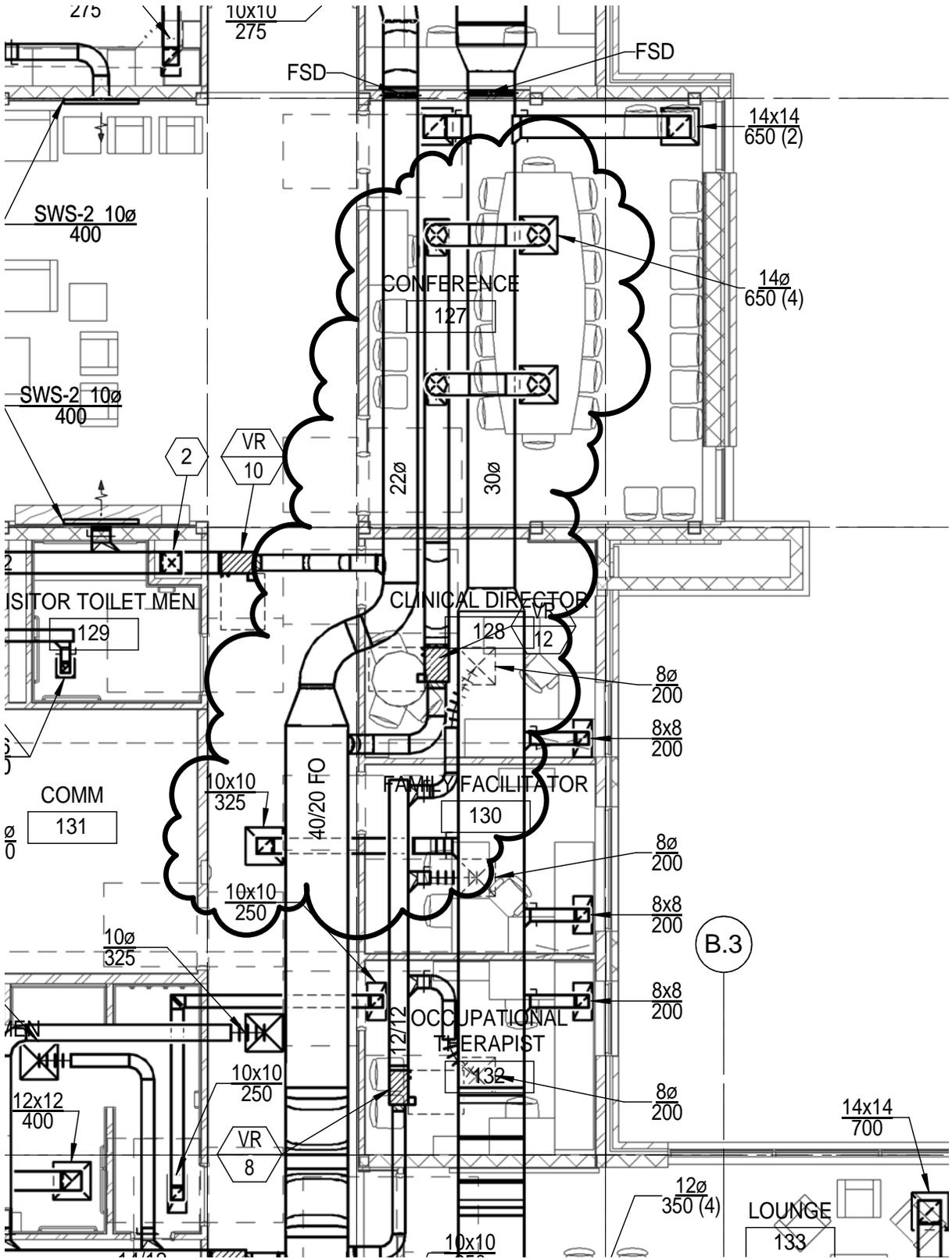
- C. Quality Assurance: To assure uniformity and compatibility of piping components in grooved end piping systems, all grooved products utilized shall be supplied by a single manufacturer. A factory trained representative (direct employee) shall provide on-site training for contractor’s field personnel in the use of grooving tools, application of groove, and product installation. A factory representative shall periodically visit the job site and review installation. Contractor shall remove and replace any improperly installed products.

PRIOR APPROVALS

The following manufacturers, trade names and products are allowed to bid on a name brand only basis with the provision that they completely satisfy all and every requirement of the drawings, specifications and all addenda shall conform to the design, quality and standards specified, established and required for the complete and satisfactory installation and performance of the building and all its respective parts.

<u>Item</u>	<u>Manufacturer</u>	<u>Comments</u>
Air Handling Units	York	Not Approved
Air Handling Units	Pace	Approved
Air Cooled VSD Screw Chiller	York	Approved
Roof Top Units	York	Approved
Split System Air-Conditioners	York	Approved
Plate and Frame Heat Exchanger	Sondex	Approved
Custom Air Handlers	Scott Springfield	Approved
Multipurpose / Triple Duty Valve	Taco	Approved
Steam Traps	Watson McDaniel	Not Approved
Pump Traps	Watson McDaniel	Not Approved
Packaged Pump Trap & HX	Watson McDaniel	Not Approved
Steam Specialties	Watson McDaniel	Not Approved
Thermometers	Miljoco	Approved
Flex Connectors	Twin City House	Approved
Pressure Reducing Valves	Conbraco	Approved
Reduced Pressure Backflow Preventer	Conbraco	Approved
Strainers	Conbraco	Approved
Strainers	Titan	Approved
Wafer Check Valves	Titan	Approved
Swing Check Valves	Nibco	Approved
Manual/Fire / FS / SD	United Air	Approved
Manual/Fire / FS / SD	Air Balance	Approved
Roof Hoods	Air Rite	Approved
Flex Duct	Hart & Cooley	Approved
Rooftop Units 237310	AnnexAir	Approved
Vibration Isolation Roof Curb Rails	Thybar, Micrometl	Approved
Calibrated Balancing Valves	Danfoss	Approved
Automatic Flow Control Valves	Danfoss, Hays	Approved
Remote Operated Zone Dampers	Greenheck, Young Regulator	Approved
Diffusers, Registers & Grilles	Titus	Approved
Louvers & Vents	Greenheck	Approved
Kitchen Hoods	Greenheck	Approved
Chillers	McQuay, Lennox, Greenheck	Approved
Rooftop Units	McQuay, Lennox, Greenheck	Approved
Custom Air Handling Units	Temtrol, Governair	Approved
Split System A/C Units	Daikin	Approved
Fan Coil Units	Williams, McQuay	Approved
Unit Heaters	Beacon Morris, Sigma	Approved
Air Cooled Condensing Units	Lennox, McQuay	Approved
Calibrated Balance Valve	Nexus Valve	Approved
Air Separator	Patterson Pump Company	Not Approved
Expansion Tanks	Patterson Pump Company	Not Approved

Pump Suction Diffusers	Patterson Pump Company	Not Approved
Flexible Connectors	Patterson Pump Company	Not Approved
HVAC Pumps	Patterson Pump Company	Not Approved
Shell & Tube Heat Exchanger	Patterson Pump Company	Not Approved
Unit Heater	Sigma Corporation	Approved
Power Ventilators	Twin City	Approved
Duct free Split Systems	LG	Approved
Gravity Hoods	Air Rite Mfg	Approved
Louvers and Vents	Potorff	Approved

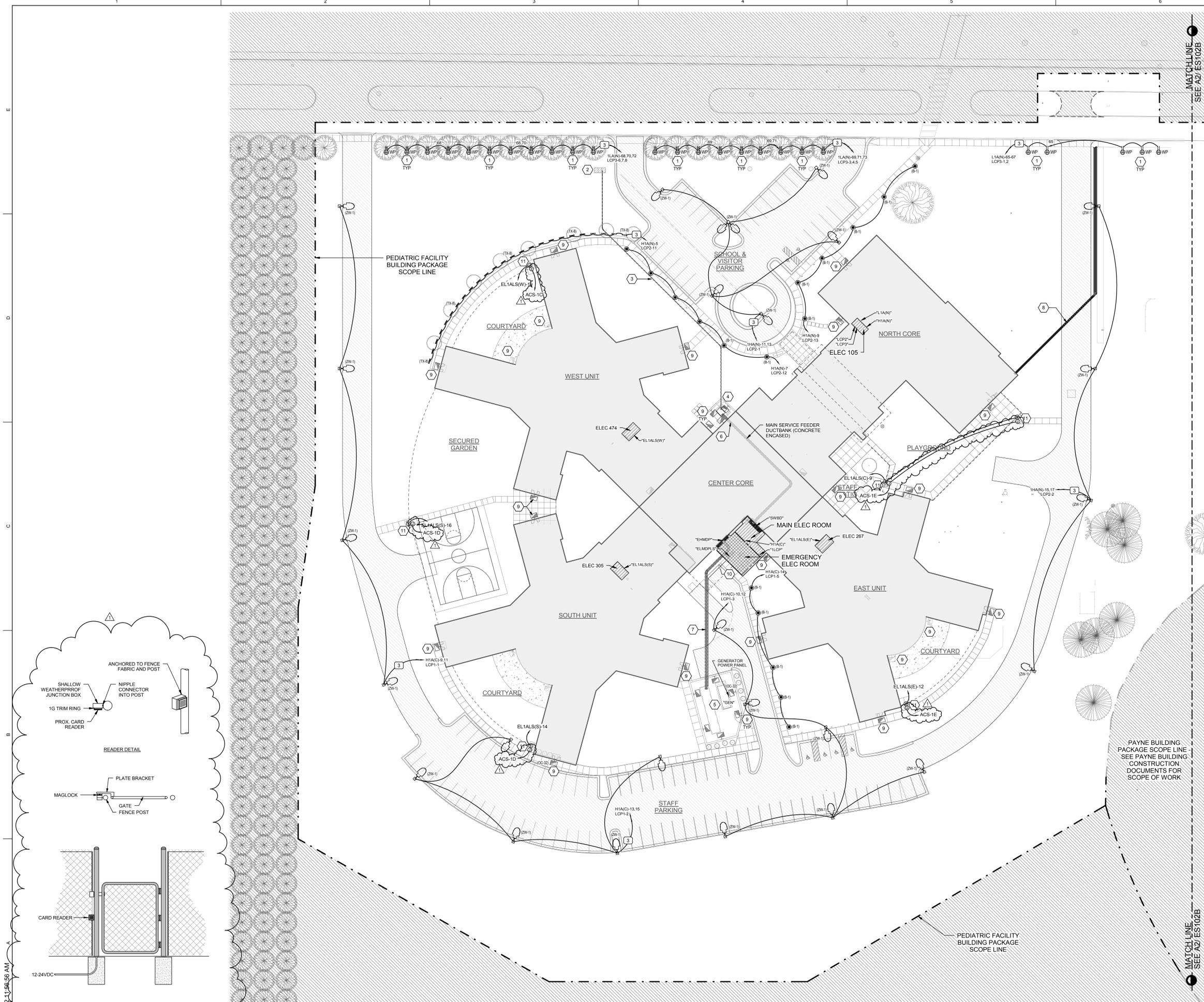


EXHAUST FAN SCHEDULE

ID	MANUFACTURER AND MODEL NUMBER	LOCATION	TYPE	AIR TYPE	AIR			FAN				ELECTRICAL				PHYSICAL		NOTES
					MAXIMUM AIRFLOW RATE (CFM)	STATIC PRESSURE (IN. WATER)	OUTLET VELOCITY (FPM)	FAN SPEED (RPM)	STATIC EFFICIENCY (%)	MOTOR SIZE (HP)	MOTOR BHP (HP)	MOTOR SPEED (RPM)	VOLTS/PH/Hz	WEIGHT (LB)	CONTROL			
EF-1	COOK 120 ACEB	GIRLS 109	NOTE 2	EXH	800	0.60	948	1332	60%	1/4	0.16	1750	120/160	100	B	1.2		
EF-2	COOK 120 ACEB	BOYS 121	NOTE 2	EXH	900	0.60	948	1332	60%	1/4	0.16	1750	120/160	100	B	1.2		
EF-3	COOK 135 ACEB	LOCKER 134	NOTE 2	EXH	1,400	0.60	1173	1274	59%	1/3	0.25	1750	120/160	100	B	1.2		
EF-4	COOK 80 ACEB	CORRIDOR C-26	NOTE 2	EXH	500	0.60	746	1719	46%	1/4	0.19	1750	120/160	75	B	1.2		
EF-5	COOK 120 ACEB	CORRIDOR C-25	NOTE 2	EXH	1,050	0.60	1053	1375	60%	1/4	0.18	1750	120/160	100	B	1.2		
EF-6	COOK 120 ACEB	CORRIDOR C-22	NOTE 2	EXH	1,050	0.60	1053	1375	60%	1/4	0.18	1750	120/160	100	B	1.2		
EF-7	COOK 80 ACEB	CORRIDOR C-23	NOTE 2	EXH	500	0.60	746	1719	46%	1/4	0.19	1750	120/160	75	B	1.2		
EF-8	COOK GC-640	ELEC 267	NOTE 3	EXH	400	0.35	910	1075	22%	1/6	NA	1750	120/160	40	A	1.3		
EF-9	COOK 80 ACEB	CORRIDOR C-36	NOTE 2	EXH	500	0.60	746	1719	46%	1/4	0.19	1750	120/160	75	B	1.2		
EF-10	COOK 120 ACEB	CORRIDOR C-35	NOTE 2	EXH	1,050	0.60	1053	1375	60%	1/4	0.18	1750	120/160	100	B	1.2		
EF-11	COOK 120 ACEB	CORRIDOR C-33	NOTE 2	EXH	1,050	0.60	1053	1375	60%	1/4	0.18	1750	120/160	100	B	1.2		
EF-12	COOK 80 ACEB	CORRIDOR C-32	NOTE 2	EXH	500	0.60	746	1719	46%	1/4	0.19	1750	120/160	75	B	1.2		
EF-13	COOK GC-640	ELEC 305	NOTE 3	EXH	400	0.35	910	1075	22%	1/6	NA	1750	120/160	40	A	1.3		
EF-14	COOK 80 ACEB	CORRIDOR C-42	NOTE 2	EXH	500	0.60	746	1719	46%	1/4	0.19	1750	120/160	75	B	1.2		
EF-15	COOK 120 ACEB	CORRIDOR C-43	NOTE 2	EXH	1,050	0.60	1053	1375	60%	1/4	0.18	1750	120/160	100	B	1.2		
EF-16	COOK 120 ACEB	CORRIDOR C-45	NOTE 2	EXH	1,050	0.60	1053	1375	60%	1/4	0.18	1750	120/160	100	B	1.2		
EF-17	COOK 80 ACEB	CORRIDOR C-46	NOTE 2	EXH	500	0.60	746	1719	46%	1/4	0.19	1750	120/160	75	B	1.2		
EF-18	COOK GC-640	ELEC 472	NOTE 3	EXH	400	0.35	910	1075	22%	1/6	NA	1750	120/160	40	A	1.3		
EF-19	COOK 100 ACEB	CORRIDOR C-48	NOTE 2	EXH	600	0.60	910	1075	22%	1/6	0.14	1750	120/160	75	B	1.2		
EF-20	COOK GC-640	ELEC 105	NOTE 3	EXH	400	0.35	910	1075	22%	1/6	NA	1750	120/160	40	A	1.3		
EF-21	COOK 100 ACEB	LAUNDRY 470	NOTE 2	EXH	500	0.35	750	1311	48%	1/6	0.08	1750	120/160	75	B	1.2		
EF-22	COOK 100 ACEB	LAUNDRY 309	NOTE 2	EXH	500	0.35	750	1311	48%	1/6	0.08	1750	120/160	75	B	1.2		
EF-23	COOK 100 ACEB	LAUNDRY 263	NOTE 2	EXH	500	0.35	750	1311	48%	1/6	0.08	1750	120/160	75	B	1.2		
KEF-1	COOK 150-AGR/HP	OT SERV 140	NOTE 4	EXH	1,000	1.5	294	1675	44%	3/4	0.45	1750	120/160	150	D	1.4		
KEF-2	COOK 150-AGR/HP	OT SERV 140	NOTE 4	EXH	700	1.5	294	1675	44%	3/4	0.45	1750	120/160	150	D	1.4		
KEF-3	COOK 150-AGR/HP	KITCHEN 440	NOTE 4	EXH	700	1.5	294	1675	44%	3/4	0.45	1750	120/160	150	D	1.4		
KEF-4	COOK 150-AGR/HP	KITCHEN 340	NOTE 4	EXH	700	1.5	294	1675	44%	3/4	0.45	1750	120/160	150	D	1.4		
KEF-5	COOK 150-AGR/HP	KITCHEN 238	NOTE 4	EXH	700	1.5	294	1675	44%	3/4	0.45	1750	120/160	150	D	1.4		

- ALL CAPACITIES BASED ON 4500 FEET ELEVATION.
- ROOF MOUNTED EXHAUST FAN, COMPLETE WITH 18" PREFAB ROOF CURB, COUNTER BALANCED BAROMETRIC BACKDRAFT DAMPER, BIRD SCREEN, INTEGRAL THERMAL OVERLOAD PROTECTION.
- CEILING MOUNTED INLINE EXHAUST FAN, PROVIDE GRAVITY BACKDRAFT DAMPER, INTEGRAL THERMAL OVERLOAD PROTECTION, SPEED CONTROLLER.
- ROOF MOUNTED KITCHEN EXHAUST FAN, COMPLETE WITH BIRD SCREEN, 18" HIGH VENTED PREFAB ROOF CURB, PAN DISCHARGE TO BE A MIN. OF 40' ABOVE ROOF AND EXHAUST DUCT INSIDE CURB TO EXTEND A MIN. OF 18' ABOVE ROOF.

- A. CONTROL: THERMOSTAT
- B. CONTROL: ATC - OCCUPIED / UNOCCUPIED SCHEDULE
- C. CONTROL: ON/OFF SWITCH BY ELEC
- D. CONTROL: ATC



FORM APPROVAL STAMP

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ARCHITECTS

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730 pacific avenue
salt lake city
Utah 84104
• 801-521-6186
• 801-539-1916
ffkr.com



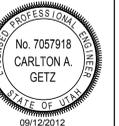
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

GENERAL SHEET NOTES

SHEET KEYNOTES

- 1 PROVIDE GROUND MOUNTED RECEPTACLE WITH WEATHERPROOF ENCLOSURE FOR TREE LIGHTING. MOUNT RECEPTACLE TO WOOD BLOCK SET INTO GROUND. COORDINATE EXACT LOCATION WITH LANDSCAPER PRIOR TO ROUGH-IN. PROVIDE #10 AWG CONDUCTORS FOR TREE LIGHTING BRANCH CIRCUITS.
- 2 EXISTING CAMPUS LOOP SECTIONALIZER SWITCH. PROVIDE NEW MEDIUM VOLTAGE CABLE FROM CAMPUS LOOP SECTIONALIZER TO NEW "PEDIATRIC" BUILDING TRANSFORMER LOCATION.
- 3 PROVIDE (1) 6" CONCRETE ENCASED DUCT BANK FOR MEDIUM VOLTAGE CABLE FROM EXISTING SECTIONALIZER TO NEW TRANSFORMER LOCATION.
- 4 NEW "PEDIATRIC" BUILDING TRANSFORMER.
- 5 NEW "PEDIATRIC" BUILDING EMERGENCY GENERATOR.
- 6 PROVIDE (8) 4" CONDUITS IN CONCRETE ENCASED DUCT BANK FOR BUILDING SECONDARY SERVICE CONDUCTORS.
- 7 PROVIDE (8) 4" CONDUITS IN CONCRETE ENCASED DUCT BANK FOR BUILDING EMERGENCY SERVICE CONDUCTORS.
- a. PROVIDE (1) SINGLE MODE AND (1) MULTIMODE FIBER OPTIC CABLE FROM MAIN COMMUNICATIONS ROOM IN ADMINISTRATION BUILDING TO NEW BUILDING MAIN DISTRIBUTION FACILITY.
- b. PROVIDE (5) COAX CABLES FROM CABLE TELEVISION DISTRIBUTION FACILITY IN ADMINISTRATION BUILDING TO NEW BUILDING MAIN DISTRIBUTION FACILITY.
- c. PROVIDE (1) 50-PAIR COPPER TELECOMMUNICATIONS CABLE FROM TELECOM HUB IN ADMINISTRATION BUILDING TO NEW BUILDING MAIN DISTRIBUTION FACILITY.
- 8 PROVIDE THE FOLLOWING SERVICES TO THE NEW "PEDIATRIC" BUILDING VIA THE NEW UTILITY TUNNEL EXTENSION.
 - 9 SEE "EL" SERIES SHEETS FOR CIRCUITING AND ADDITIONAL INFORMATION.
 - 10 PROVIDE FEEDER FOR EMERGENCY STANDBY GENERATOR POWER PANEL BOARD IN GENERATOR ENCLOSURE.
 - 11 CARD READER ACCESS GATE. PROVIDE POWER AND ACCESS CONTROL DEVICES. SEE DETAIL ON SHEET.

PEDIATRIC FACILITY
 1300 East Center St. Provo, Utah
 UTAH STATE HOSPITAL CONSOLIDATION
 BID DOCUMENTS - 09/12/2012



DATE	STATUS
DATE	REVISION
1 9/20/12	ADD #1

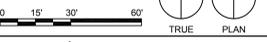
PROJECT NUMBER: 11111
FILE: USH-SITE
DRAWN BY: WRT
CHECKED BY: CAG
SCALE: As indicated

SITE ELECTRICAL PLAN PHASE 1 AREA A

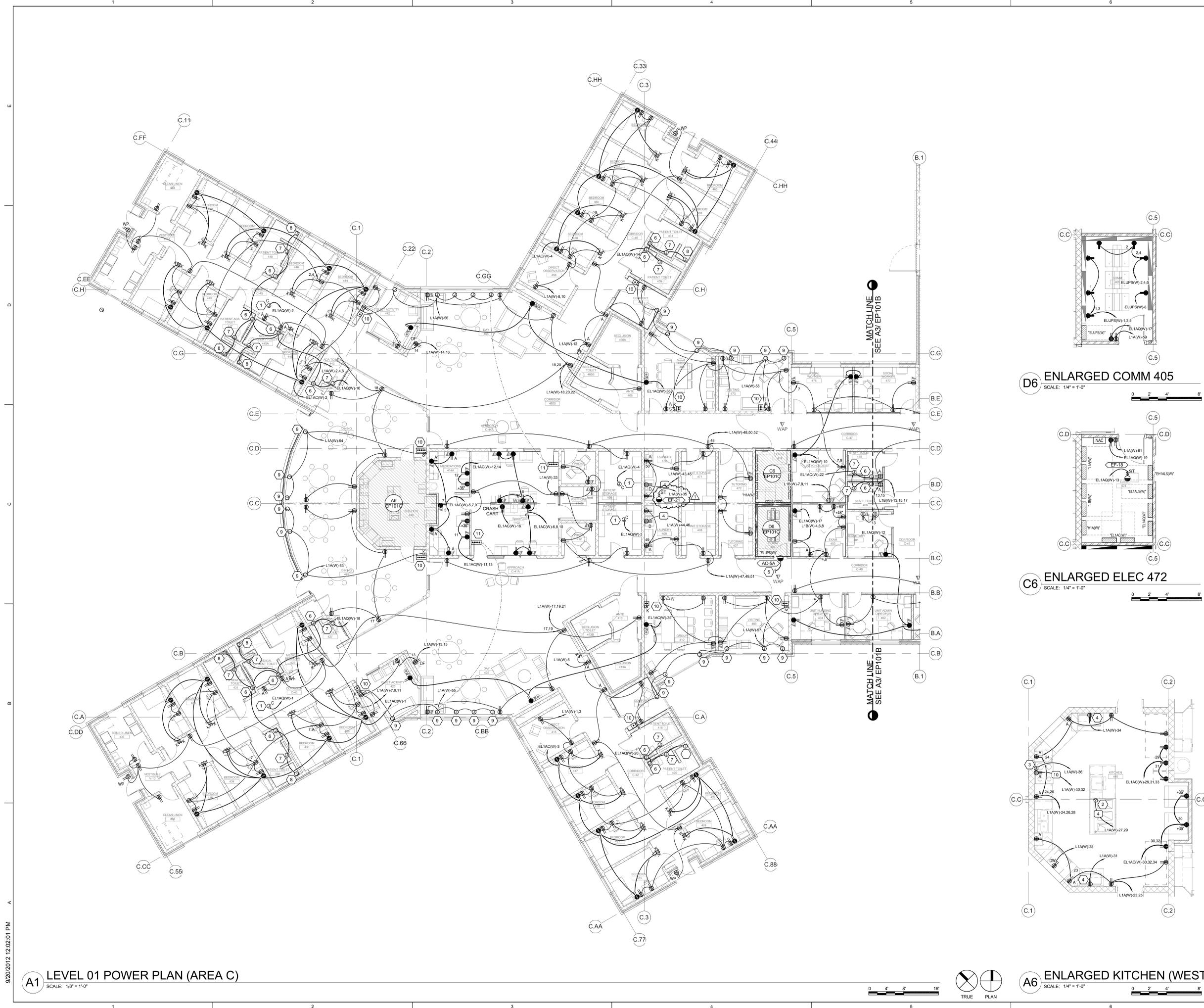
ES102A

A1 CARD READER ACCESS GATE
SCALE: NTS

A2 ELECTRICAL SITE PLAN - PHASE 1 AREA A
SCALE: 1" = 30'-0"



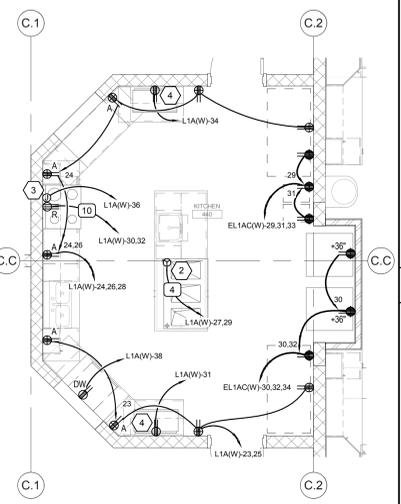
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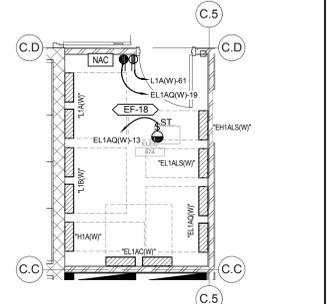
A1 LEVEL 01 POWER PLAN (AREA C)
SCALE: 1/8" = 1'-0"



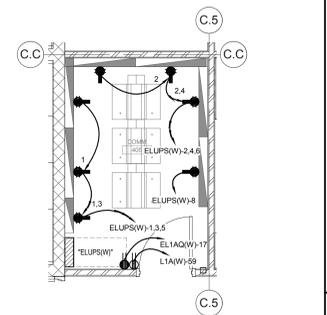
A6 ENLARGED KITCHEN (WEST)
SCALE: 1/4" = 1'-0"



C6 ENLARGED ELEC 472
SCALE: 1/4" = 1'-0"



D6 ENLARGED COMM 405
SCALE: 1/4" = 1'-0"



FFKR

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GENERAL SHEET NOTES

- 1 LOCATIONS OF MECHANICAL EQUIPMENT AND DEVICES SHOWN IS APPROXIMATE. COORDINATE EXACT LOCATIONS WITH MECHANICAL INSTALLER PRIOR TO ELECTRICAL CONNECTION ROUGH-IN.
- 2 REFER TO ELECTRICAL EQUIPMENT SCHEDULE FOR CONDUIT AND CONDUCTOR SIZE REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT CONNECTIONS.
- 3 PROVIDE DEDICATED NEUTRAL CONDUCTOR FOR EACH BRANCH CIRCUIT. DO NOT PROVIDE SHARED OR COMMON NEUTRALS.

SHEET KEYNOTES

- 1 JUNCTION BOX MOUNTED IN ACCESSIBLE LOCATION ABOVE CEILING FOR VAV CONTROL POWER.
- 2 PROVIDE POWER CONNECTION TO HOT FOOD WELL. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT PRIOR TO ROUGH-IN.
- 3 PROVIDE JUNCTION BOX FOR POWER CONNECTION TO RANGE HOOD (SUPPLIED BY OWNER). INTERLOCK FAN CONTROL WITH BOOSTER EXHAUST FAN KEF-5 (ON ROOF) FOR SIMULTANEOUS OPERATION.
- 4 RECEPTACLE FOR MICROWAVE. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT WITH MILLWORK PRIOR TO ROUGH-IN.
- 5 CONNECT TO ASSOCIATED OUTDOOR CONDENSING UNIT LOCATED ON ROOF. PROVIDE CONDUIT AND CONTROL WIRING AS REQUIRED BY MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 6 JUNCTION BOX FOR CONNECTION TO SENSOR OPERATED SINKS. COORDINATE REQUIREMENTS WITH EQUIPMENT PRIOR TO ROUGH-IN.
- 7 JUNCTION BOX FOR CONNECTION TO SENSOR OPERATED TOILETS. COORDINATE REQUIREMENTS WITH EQUIPMENT PRIOR TO ROUGH-IN.
- 8 JUNCTION BOX FOR CONNECTION TO BRAINWAVE SHOWER. COORDINATE REQUIREMENTS WITH EQUIPMENT PRIOR TO ROUGH-IN.
- 9 JUNCTION BOX FOR MOTORIZED MECHOSHADOWS. COORDINATE EXACT LOCATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
- 10 KEYED AND BUTTON CONTROL SWITCHES FOR CONTROLS TO MECHOSHADOWS IN THIS ROOM. MOUNT SWITCHES ADJACENT TO ROOM LIGHT SWITCHES.
- 11 CONTROL SWITCH FOR CONTROLS TO MECHOSHADOWS IN DAY ROOM. MOUNT SWITCH ADJACENT TO ROOM LIGHT SWITCHES.

KEY PLAN

DATE	STATUS
1	9/20/12
1	ADD #1

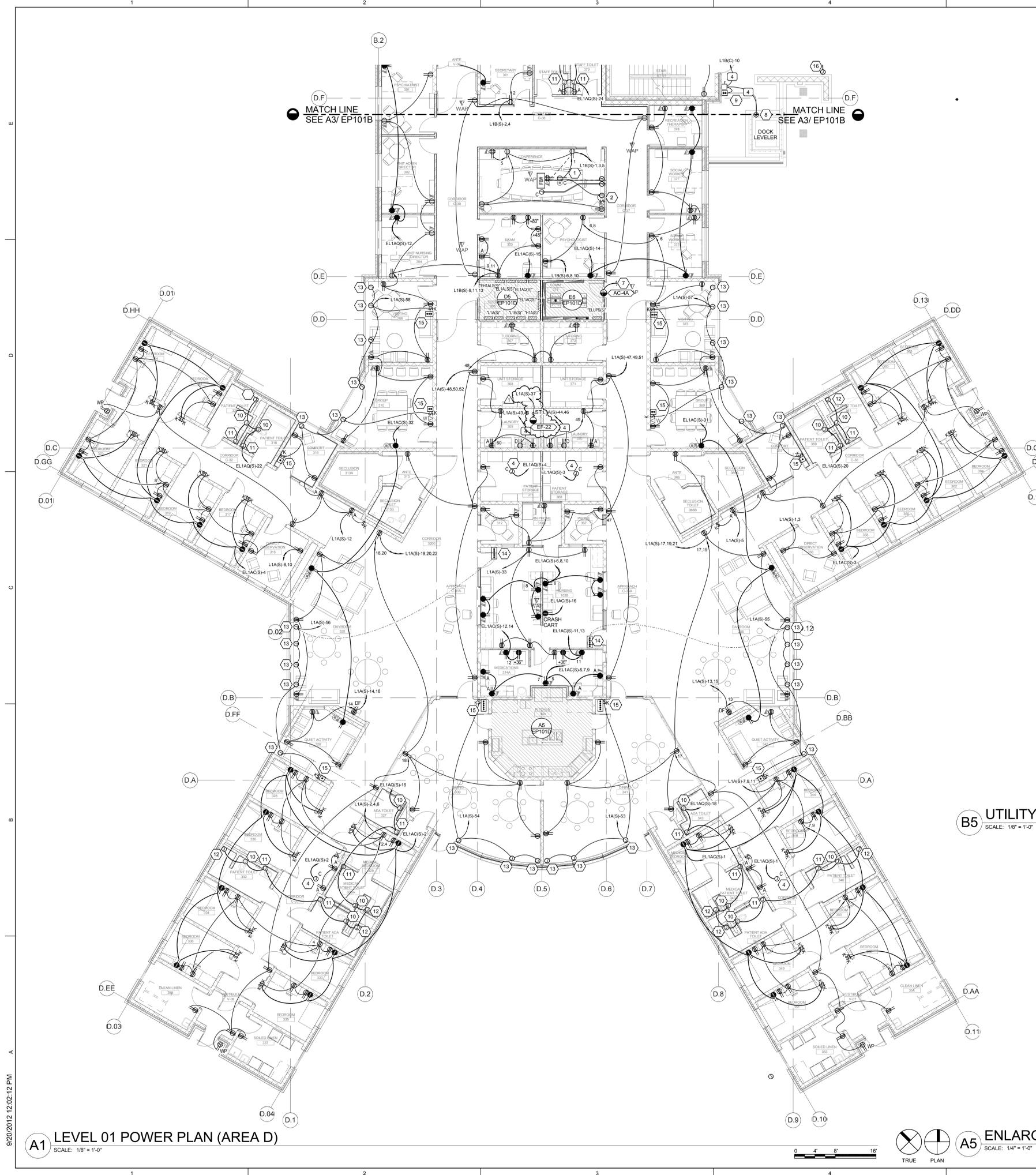
PROJECT NUMBER	11111
FILE	11111 USH Pediatric.rvt
DRAWN BY	WRT
CHECKED BY	CAG
SCALE	As indicated

LEVEL 1 POWER PLAN AREA C (WEST)

EP101C

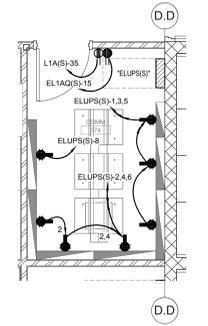
PEDIATRIC FACILITY
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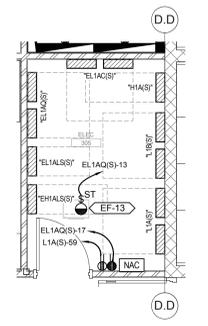


A1 LEVEL 01 POWER PLAN (AREA D)
SCALE: 1/8" = 1'-0"

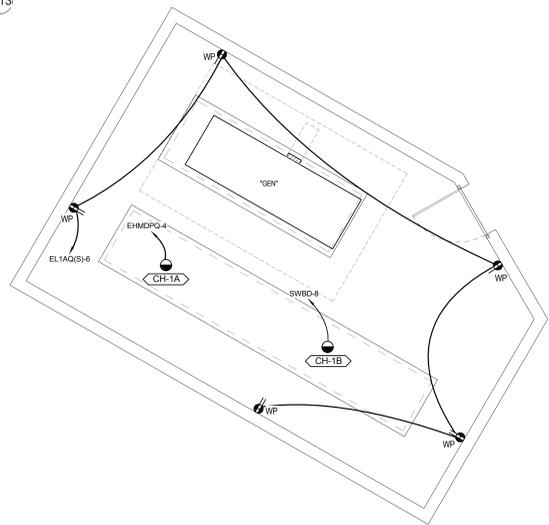
E6 ENLARGED COMM 372
SCALE: 1/4" = 1'-0"



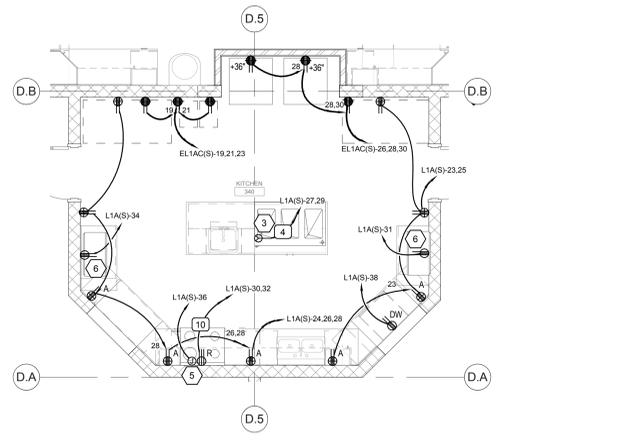
D5 ENLARGED ELEC 305
SCALE: 1/4" = 1'-0"



B5 UTILITY YARD
SCALE: 1/8" = 1'-0"



A5 ENLARGED KITCHEN 339 (SOUTH)
SCALE: 1/4" = 1'-0"



FORM APPROVAL STAMP

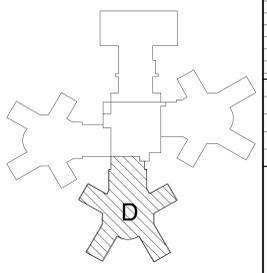
GENERAL SHEET NOTES

- 1 LOCATIONS OF MECHANICAL EQUIPMENT AND DEVICES SHOWN IS APPROXIMATE. COORDINATE EXACT LOCATIONS WITH MECHANICAL INSTALLER PRIOR TO ELECTRICAL CONNECTION ROUGH-IN.
- 2 REFER TO ELECTRICAL EQUIPMENT SCHEDULE FOR CONDUIT AND CONDUCTOR SIZE REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT CONNECTIONS.
- 3 PROVIDE DEDICATED NEUTRAL CONDUCTOR FOR EACH BRANCH CIRCUIT. DO NOT PROVIDE SHARED OR COMMON NEUTRALS.

SHEET KEYNOTES

- 1 CEILING MOUNTED RECEPTACLE AND TELE/DATA FOR PROJECTOR.
- 2 JUNCTION BOX FOR MOTORIZED SCREEN. COORDINATE EXACT LOCATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
- 3 PROVIDE POWER CONNECTION TO HOT FOOD WELL. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT PRIOR TO ROUGH-IN.
- 4 JUNCTION BOX MOUNTED IN ACCESSIBLE LOCATION ABOVE CEILING FOR VAV CONTROL POWER.
- 5 PROVIDE JUNCTION BOX FOR POWER CONNECTION TO RANGE HOOD (SUPPLIED BY OWNER). INTERLOCK FAN CONTROL WITH BOOSTER EXHAUST FAN KEF-4 (ON ROOF) FOR SIMULTANEOUS OPERATION.
- 6 RECEPTACLE FOR MICROWAVE. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT WITH MILLWORK PRIOR TO ROUGH-IN.
- 7 CONNECT TO ASSOCIATED OUTDOOR CONDENSING UNIT LOCATED ON ROOF. PROVIDE CONDUIT AND CONTROL WIRING AS REQUIRED BY MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 8 POWER CONNECTION TO SERVICE DOCK-LIFT. COORDINATE EXACT LOCATION PRIOR TO ROUGH-IN.
- 9 PUSH-BUTTON CONTROLLER FOR DOCK-LIFT. PROVIDE CONTROL WIRING AS REQUIRED BY MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 10 JUNCTION BOX FOR CONNECTION TO SENSOR OPERATED TOILETS. COORDINATE REQUIREMENTS WITH EQUIPMENT PRIOR TO ROUGH-IN.
- 11 JUNCTION BOX FOR CONNECTION TO SENSOR OPERATED SINKS. COORDINATE REQUIREMENTS WITH EQUIPMENT PRIOR TO ROUGH-IN.
- 12 JUNCTION BOX FOR CONNECTION TO BRAINWAVE SHOWER. COORDINATE REQUIREMENTS WITH EQUIPMENT PRIOR TO ROUGH-IN.
- 13 JUNCTION BOX FOR MOTORIZED MECHSHADES. COORDINATE EXACT LOCATION WITH EQUIPMENT PRIOR TO ROUGH-IN.
- 14 CONTROL SWITCH FOR CONTROLS TO MECHSHADES IN DAY ROOM. MOUNT SWITCH ADJACENT TO ROOM LIGHT SWITCHES.
- 15 KEYS AND BUTTON CONTROL SWITCHES FOR CONTROLS TO MECHSHADES IN THIS ROOM. MOUNT SWITCHES ADJACENT TO ROOM LIGHT SWITCHES.
- 16 JUNCTION BOX FOR POWER CONNECTION TO DRAIN HEAT TRACE. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.

KEY PLAN



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UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

SEAL
LICENSED PROFESSIONAL ENGINEER
No. 7057918
CARLTON A. GETZ
STATE OF UTAH

DATE: 09/12/2012
STATUS:

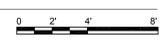
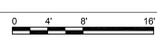
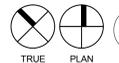
DATE	REVISION
1 9/20/12	ADD #1

PROJECT NUMBER: 11111
FILE: 11111 USH Pediatric.rvt
DRAWN BY: WRT
CHECKED BY: CAG
SCALE: As indicated

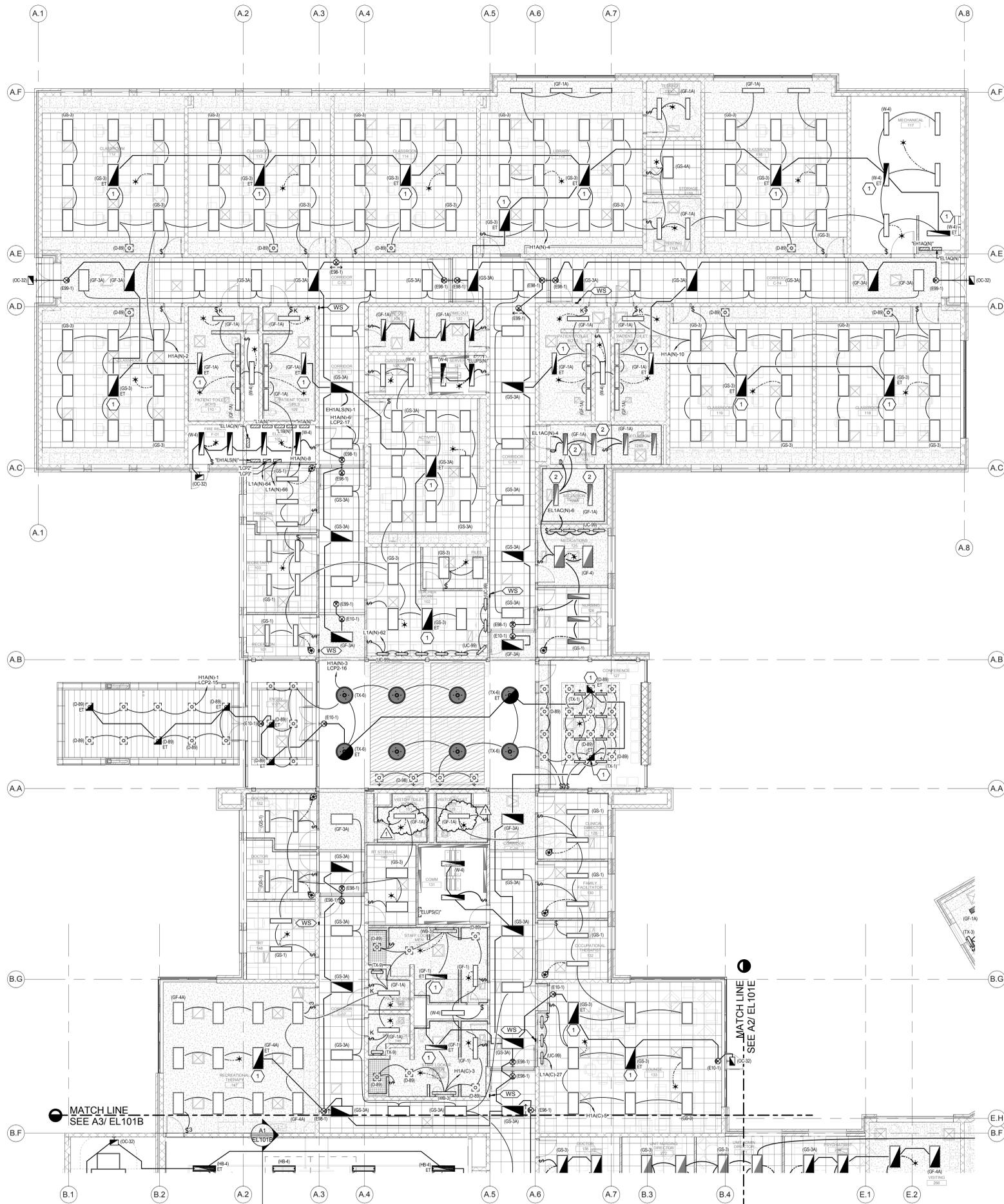
LEVEL 1
POWER
PLAN AREA D
(SOUTH)

EP101D

9/20/2012 12:02:12 PM



9/20/2012 12:01:51 PM



A2 LEVEL 01 LIGHTING PLAN (AREA A)
SCALE: 1/8" = 1'-0"



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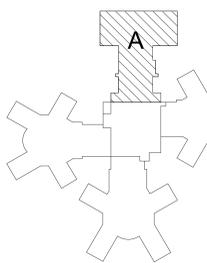
GENERAL SHEET NOTES

1 PROVIDE DEDICATED NEUTRAL CONDUCTOR FOR EACH BRANCH CIRCUIT. DO NOT PROVIDE SHARED OR COMMON NEUTRALS.

SHEET KEYNOTES

1 PROVIDE GENERATOR TRANSFER SWITCH FOR AUTOMATIC CONNECTION TO EMERGENCY LIGHTING BRANCH CIRCUIT UPON LOSS OF NORMAL POWER.
2 PROVIDE FIXTURE WITH DIMMING BALLAST.

KEY PLAN



PEDIATRIC FACILITY
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012



DATE	STATUS
09/12/2012	

DATE	REVISION
1 9/20/12	ADD #1

PROJECT NUMBER: 11111
FILE: 11111 USH Pediatric.rvt
DRAWN BY: WRT
CHECKED BY: CAG
SCALE: 1/8" = 1'-0"

LEVEL 1 LIGHTING PLAN AREA A (NORTH)

EL101A

LIGHTING FIXTURE SCHEDULE

REFER TO SPECIFICATIONS FOR IMPORTANT TECHNICAL REQUIREMENTS FOR LIGHTING FIXTURES, BALLASTS, AND LAMPS. THE CATALOG NUMBERS LISTED BELOW HAVE BEEN CAREFULLY PREPARED TO ASSIST BIDDERS IN SELECTING PRODUCTS TO ACHIEVE THE DESIGN CONCEPT. HOWEVER, PRIOR TO BIDDING, EACH MANUFACTURER SHALL COMPARE THE CATALOG NUMBERS SHOWN WITH THE DESCRIPTION AND REQUIREMENTS ON THE DRAWINGS, AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES. SPECIFICALLY INCLUDED IN THIS EVALUATION SHALL BE THE VERIFYING OF PROPER MOUNTING KITS OR ACCESSORIES TO FACILITATE INSTALLATION AS SHOWN AT EACH LOCATION ON THE DRAWINGS. NO ALLOWANCE OR REDRESS WILL BE ALLOWED FOR DISCREPANCIES THAT WERE NOT REPORTED TO THE ARCHITECT/ENGINEER IN TIME FOR CORRECTION OR CLARIFICATION BEFORE THE BID. THE REPORTING OF ANY AMBIGUITY IS THE RESPONSIBILITY OF THE BIDDER. PROVIDE UNIT PRICES AND FIXTURE BRAND SELECTED FOR ADD/DELETE CHANGES FOR EACH FIXTURE TYPE(S) SHOWN WITHIN 48 BUSINESS HOURS OF THE BID DATE. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY DISQUALIFY THE PRODUCTS AND EMPOWER THE ENGINEER TO DETERMINE FAIR VALUE FOR FIXTURE AND INSTALLATION CHANGES, WITHOUT FURTHER INPUT FROM THE CONTRACTOR OR INSTALLER. SUBMITTAL PACKAGE SHALL INCLUDE LAMP MANUFACTURER AND CATALOG NUMBER ON EACH FIXTURE SHEET. ON ALL PENDANT MOUNTED FIXTURES, PROVIDE A SECOND SET OF PENDANTS, OF A DIFFERENT LENGTH, AS DIRECTED BY THE ARCHITECT/ENGINEER, PROVIDED AND INSTALLED AT NO ADDITIONAL CHARGE. ALL FIXTURES SHALL BE APPROVED BY UL OR ANOTHER ACCEPTABLE TESTING LAB FOR THE PURPOSE INTENDED AND WITH THE LAMP AND BALLAST PROPOSED. CONTRACTOR ALLOWANCE PRICES ARE ACCURATE WHEN THIS JOB WAS SPECIFIED. CONTRACTOR AND ELECTRICAL DISTRIBUTOR SHALL VERIFY THIS ALLOWANCE AND REPORT ANY PROBLEMS TO THE ENGINEER BEFORE THE BID. ALLOWANCE PRICE MAY OR MAY NOT INCLUDE LAMP(S) OR FREIGHT AS NOTED, AND DO NOT INCLUDE ANY TAXES. UNIVERSAL VOLTAGE (120/277) BALLASTS REQUIRED UNLESS NOTED OTHERWISE. DIMENSION SEQUENCE = (LENGTH X WIDTH X DEPTH) IN INCHES.

SYMBOL	MARK	FIXTURE CHARACTERISTICS BODY / AIR / MOUNTING / DOOR LENS/COVER/REFLECTOR/OTHER	LAMP	WATTS	VOLTS	MANUFACTURER	CATALOG NUMBER	NOTES
B		BOLLARD; ALUMINIUM HOUSING						
B-1		BOLLARD, CONCRETE FORM, CLEAR LENS	1-50MH	50W	120V	ARCH. AREA	CB18R-23-CUTOFF-50MH-M5B-RAL7023-INT	(OR APPROVED EQUAL PRIOR TO BID)
D		DOWNLIGHT, THERMALLY PROTECTED HOUSING; TO ACCOMMODATE MULTIPLE ALUMINIUM TRIMS AND REFLECTOR ASSEMBLIES AS LISTED BELOW; MAX 8" DEEP, NON-IC HOUSINGS EXCEPT AS NOTED.						
D-89		LED DOWNLIGHT, SELF-FLANGED TRIM, PHOSPHOR LENS, DIMMABLE WHERE INDICATED BY SWITCHING, 1500 LUMENS (8" APERTURE)	LED 3500K	30W 3500K	277V	LIGHTOLIER LITHONIA OMEGA	C6L1520DL-CCL-W / C6L15-N-2 OM6LED-27-277-R6LED-39K-WD-CS	
D-98		LED WALLWASH, SELF-FLANGED TRIM, PHOSPHOR LENS, DIMMABLE WHERE INDICATED BY SWITCHING, 1500 LUMENS (8" APERTURE)	LED 3500K	38W 3500K	277V	OMEGA LIGHTOLIER PORTFOLIO OMEGA	OM6LED-27-277-R6LED-39K-W-C5 C6L1520-LW-39K-CCL-W / C6L15-N-2 LD6-15-D010-ERM6-835-6L111-U OMEGA	(OR APPROVED EQUAL PRIOR TO BID)
E		EXIT SIGNS, LED, A/C POWER ONLY (NO BATTERY)						
E10-1		SINGLE FACE:	LED	20W	120/277V	DUAL-LITE HUBBELL MCPHILBEN EELP ISOLITE LITHONIA LIGHTOLIER	LECSGWA CVER-1-G-N-E 45V-1-GC-XX EDG 1 GC W EM EDGL-S-S-G-BK (BLACK HOUSING) EDGRW-1-GMR LGA1GMW	
E98-1		SINGLE FACE:	LED	20W	120/277V	LITHONIA LITHONIA CHLORIDE	LR-A-1-G-W-TP-VRS LRE-S-W-1-G-120/277-TP-VR SC-A-1-G-W-FRW-TP	
E99-1		SINGLE FACE:	LED	20W	120/277V	KENALL DUAL-LITE FAILSAFE LIGHTOLIER CHLORIDE LITHONIA	METSU-MM-G-DT-EL SEWL-S-G-W XLH-1-GW LD2A-1-G-W-TP-VRS 60MLA-1-G-W-115TP-TOOL LV-S-W-1-G-120/277-UM	
GF		TROFFERS, RECESSED FOR FLANGE MOUNTED CEILING; STATIC, HINGED AND LATCHED STEEL DOOR; 125 ACRYLIC PRISMATIC LENS, MINIMUM 1/8" PRORAM START ELECTRONIC BALLASTS; 78 LAMPS; ONE BALLAST PER FIXTURE WHERE POSSIBLE, UNLESS TWO LEVEL SWITCHING IS SHOWN ON THE PLANS. MAX 5" DEEP. SPECIFICATION GRADE.						
GF-1		1X4, 2 LAMP. (TER VALUE: -75)	2-F32T8 RE835	65W	277/120V	LITHONIA LSI METALLUX DAYBRITE COLUMBIA LIGHTOLIER	SPF 232 A12125 MVOLT TUBRHP 1TFA125 232 SD SSO10PS UE FP-232A125-UNV-EB81-PROGRAM START 1D232-FS21-UNV-1/2EB-SPEC ST824-332F-FSA12.125-EBBLHPRUNV XT1FV1232-U-SOP	
GF-1A		1X4, 2 LAMP, WITH MAXIMUM SECURITY ENCLOSURE (MINIMUM 1/4 GAUGE STEEL DOOR AND FRAME WITH MINIMUM 1/4" EXTERIOR AND 1/8" INTERIOR LENS)	2-F32T8 RE835	65W	277/120V	KENALL KIRLIN MORLITE CD LIGHTING	RC44-00-2-F32T8-RS-1-XXX-2/9-1 VRT-12028-58-47 SMA-X-FDPH-14-2-78-EB10IS-A-FS-PF-UNV DFA-14-F-2-32-UNV-EB-25CF15FP-SHP-SFP	(OR APPROVED EQUAL PRIOR TO BID)
GF-3		2X4, 2 LAMP (TER VALUE: -75)	2-F32T8 RE835	95W	277/120V	LITHONIA METALLUX DAYBRITE COLUMBIA LSI LIGHTOLIER	2SP8F 232 A12125 1/3 MVOLT 2FP-232A125-UNV-EB81-PROGRAM 2DPG332-FS21-UNV-1/2EB-SPEC ST824-332F-FSA12.125-EBBLHPRUNV FLA125 232 SD SSO10PS UE XT2FV1232-U-03P	
GF-3A		2X4, 2 LAMP, WITH MAXIMUM SECURITY ENCLOSURE (MINIMUM 1/8 GAUGE STEEL DOOR AND FRAME WITH MINIMUM 1/4" EXTERIOR AND 1/8" INTERIOR LENS)	2-F32T8 RE835	65W	277/120V	KENALL KIRLIN MORLITE	RMCD4-FLXX-4-232IS-0-0-XXX-2/9-1 MED-FDPH-24-3-78-EB10RD-3-E-F1-PF-UNV	(OR APPROVED EQUAL PRIOR TO BID)
GF-4		2X4, 3 LAMP (TER VALUE: -75)	3-F32T8 RE835	95W	277/120V	LITHONIA METALLUX DAYBRITE COLUMBIA LSI LIGHTOLIER	2SP8F 332 A12125 1/3 MVOLT 2FP-332A125-UNV-EB81-PROGRAM 2DPG332-FS21-UNV-1/2EB-SPEC ST824-332F-FSA12.125-EBBLHPRUNV FLA125 332 SD SSO10PS UE XT2FV1332-U-03P	
GF-4A		2X4, 3 LAMP, WITH MAXIMUM SECURITY ENCLOSURE (MINIMUM 1/8 GAUGE STEEL DOOR AND FRAME WITH MINIMUM 1/4" EXTERIOR AND 1/8" INTERIOR LENS)	3-F32T8 RE835	95W	277/120V	KENALL KIRLIN MORLITE	RMCD4-FLXX-4-332IS-0-0-XXX-2/9-1 MED-RDPH-24-3-78-EB10RD-3-E-F1-PF-UNV	(OR APPROVED EQUAL PRIOR TO BID)
GS		TROFFERS, RECESSED FOR LAY-IN GRID; STATIC, HINGED AND LATCHED STEEL DOOR; 125 ACRYLIC PRISMATIC LENS, MINIMUM 1/8" EARTHQUAKE CLIPS; MAX 5" DEEP; SPECIFICATION GRADE; PROGRAM START ELECTRONIC BALLASTS, 78 LAMPS; ONE BALLAST PER FIXTURE WHERE POSSIBLE, UNLESS TWO LEVEL SWITCHING IS SHOWN ON THE PLANS.						
GS-1		1X4, 2 LAMP. (TER VALUE: -75)	2-F32T8 RE835	65W	277/120V	LITHONIA LSI METALLUX DAYBRITE COLUMBIA LIGHTOLIER	SPG 232 A12125 MVOLT TUBRHP 1TGA125 232 SD SSO10PS UE GP-232A125-UNV-EB81-PROGRAM START 1D232-FS21-UNV-1/2EB-SPEC ST814-232G-FSA12.125-EBBLHPRUNV XT1GV1232-UNV-SOP	
GS-1A		1X2, 2 LAMP, WITH TAMPER RESISTANT ENCLOSURE AND ACCESS (SCREW ACCESS IN LIEU OF CLIP ACCESS) (TER VALUE: -75)	2-F32T8 RE835	65W	277/120V	LITHONIA LSI METALLUX DAYBRITE COLUMBIA LIGHTOLIER	SPG 232 A12125 MVOLT TUBRHP 1TGA125 232 SD SSO10PS UE GP-232A125-UNV-EB81-PROGRAM START 1D232-FS21-UNV-1/2EB-SPEC ST814-232G-FSA12.125-EBBLHPRUNV XT1GV1232-UNV-SOP	
GS-3		2X4, 2 LAMP. (TER VALUE: -75)	2-F32T8 RE835	65W	277/120V	LITHONIA METALLUX DAYBRITE LSI LIGHTOLIER COLUMBIA	2 SP8G 232 A12125 MVOLT TUBRHP 2GP-232A125-UNV-EB81-PROGRAM START 2DPG332-FS21-UNV-1/2EB-SPEC LA125 232 SD SSO10PS UE XT2GV1232-UNV-SOP ST824-232G-FSA12.125-EBBLHPRUNV	
GS-3A		2X4, 2 LAMP, WITH TAMPER RESISTANT ENCLOSURE AND ACCESS (SCREW ACCESS IN LIEU OF CLIP ACCESS) (TER VALUE: -75)	2-F32T8 RE835	95W	277/120V	LITHONIA METALLUX DAYBRITE LSI LIGHTOLIER COLUMBIA	2 SP8G 232 A12125 MVOLT TUBRHP 2GP-232A125-UNV-EB81-PROGRAM START 2DPG332-FS21-UNV-1/2EB-SPEC LA125 232 SD SSO10PS UE XT2GV1232-UNV-SOP ST824-232G-FSA12.125-EBBLHPRUNV	
GS-4A		2X4, 3 LAMP, WITH TAMPER RESISTANT ENCLOSURE AND ACCESS (SCREW ACCESS IN LIEU OF CLIP ACCESS) (TER VALUE: -75)	3-F32T8 RE835	95W	277/120V	LITHONIA METALLUX DAYBRITE COLUMBIA LIGHTOLIER LSI	2 SP8G 332 A12125 1/3 MVOLT TUBRHP 2GP-332A125-UNV-EB81-PROGRAM START 2DPG332-FS21-UNV-1/2EB-SPEC ST824-332G-FSA12.125-EBBLHPRUNV XT2GV1332-UNV-03P LA125 332 SD SSO10PS UE	

HB		HIGH BAY INDUSTRIAL HID FIXTURES: CAST ALUMINIUM BALLAST HOUSING; HIGH POWER FACTOR BALLAST; ADJUSTABLE SPUN ALUMINIUM REFLECTOR; MANUFACTURER SHALL RECOMMEND SETTINGS FOR EACH SPACE AND/OR REFLECTOR SIZE WHERE MORE THAN ONE IS OFFERED TO ACHIEVE ACTUAL S/MH REQUIREMENTS; FUSED; PROVIDE MULTI-TAP BALLASTS (120,208,240,277 VOLT) UNLESS SPECIFIED OTHERWISE. USE LAMP APPROVED FOR USE IN OPEN FIXTURES IF FIXTURE USED IS OPEN, OTHERWISE USE ENCLOSED FIXTURE. PROVIDE CAST POWER HOOK WITH RECEPTACLE, POWER CORD WITH PLUG, AND SAFETY CABLE FOR SUSPENDING FIXTURES FLUSH WITH THE BOTTOM OF THE TRUSSES, UNLESS OTHERWISE INDICATED. RATED FOR 55 DEGREES C. PROVIDE WIREGUARDS FOR OPEN FIXTURES, AND HINGED LENSES/COVERS FOR ENCLOSED FIXTURES.						
HB-4		HIGH BAY FLOURESCENT W/ POLYCARBONATE LENS AND WIREGUARD MOUNT WITH JACK CHAINS. HIGH EFFICIENCY. PROVIDE TUBE SLEEVES FOR LAMPS	4-F32T8 RE835	120W	277/120V	LITHONIA	IB2-432L-WD-PCL-125-MVOLT-GBE10PS-LP835-WGX-WGBZ14	DAYBRITE METALLUX LSI LA LIGHTING COLUMBIA
OC		WALL PUCK: ADJUSTABLE CUT OFF; FULL PERIMETER GASKETING; WET LOCATION; STAINLESS STEEL HINGES AND LATCHES; PROJECTING LENS; LED; SEE ELEVATION FOR MOUNTING HEIGHT, COLOR AS SPECIFIED BY ARCHITECT.						
OC-32		LED, RECESSED 1/2 BOX, MEDIUM THROW, SHAPED; DECORATIVE, PROVIDE INTEGRAL PHOTOCELL	LED 40W	277/120V	LITHONIA	CSXW LED-1-30B530/40K-SR3-MVOLT-PE-DBLXD QLW-1861-700-NW-3L-UNV-SM-PCB-TBK ISW-802L-LED-E1-BLS-SK-P MCGRAW GARDCO 102L-3-35LA-NW-UNV-BLP-PCB (OR APPROVED EQUAL PRIOR TO BID)		
TX		SPECIAL FIXTURES AS INDICATED. MEET ALL REQUIREMENTS OF SPECIFICATIONS AND FIXTURE SCHEDULE. VISUAL AND FINISH APPROVAL REQUIRED.						
TX-1		SEMIRECESSED ADJUSTABLE LINEAR FLOURESCENT WALL WASH FIXTURE (OR APPROVED EQUAL PRIOR TO BID)	1-F14T5	15W	277V	ELLIPTIPAR	F210-TX14-L-02-2-000	
TX-2		NOT USED						
TX-3		SURFACE MOUNTED FLOURESCENT FIXTURE, HIGH ABUSE; PROVIDE TWO BALLASTS PER FIXTURE (PATIENT ROOM DESK)	2-F40BX RE835	80W	120V	KENALL FALSFAE CD LIGHTING KIRLIN MORLITE	WCBU-2-3/3-1/1-40B-RS-2-120-2/9-1-H4 MAX-WDPH4-2-1-1-BX-2EB10RS-3-E-F1-BN-UNV (OR APPROVED EQUAL PRIOR TO BID)	
TX-4		MAXIMUM SECURITY WALL MOUNTED DOWN LIGHT, PROVIDE 24 VOLT POWER CONVERTER FOR INTERCONNECTION (PATIENT BATH ALERT LIGHT)	LED 5W	120V	JERON			(OR APPROVED EQUAL PRIOR TO BID)
TX-5		SURFACE MOUNTED CORNER FLOURESCENT FIXTURE, HIGH ABUSE (PATIENT ROOM BATH)	2-F32T8 RE835	65W	120V	KENALL FALSFAE KIRLIN CD LIGHTING MORLITE	CD-4-3/2-32-RS-1-120-2/9-1-H4 FCC-X-232-UNV-8087-EB81-VRS MAX-CDPH89-4-2-TB-EB10RS-3-E-F1-UNV (OR APPROVED EQUAL PRIOR TO BID)	
TX-6		LOBBY PENDANT FIXTURE (LOBBY PENDANT FIXTURE)	LED 60W	277V	LOUIS POULSON	CHA-K-60W LED4000K/120-277V/GREY ALU COL /MEDIUM OPAL POLY.		(OR APPROVED EQUAL PRIOR TO BID)
TX-7		RECESSED LED NIGHT LIGHT, HIGH ABUSE, LENSED, AMBER (PATIENT ROOM NIGHT LIGHT)	LED 5W	120V	KIRLIN KENALL MORLITE COLE LTG. HEALTHCARE CD LIGHTING	LNW-07126 RFW-A-0-LED-120-2/9-1 STLED3000-DC-HL-C-UNV-WT-TP-WT LA-158-TP HNL610-MVOLT-LED30-TR-AM	(OR APPROVED EQUAL PRIOR TO BID)	
TX-8		GROUND MOUNTED LINEAR SIGN FIXTURE, BASE EQUIVALENT TO BOLLARD BASE; COORDINATE ORIENTATION IN FIELD	2-F54T5HO	110W	277V	AMETRIX WINONA ARCH AREA	A08-SO-A-2-F-054-277-K-MGF SB2-SSW-248T5HO-277V-P1-SGB-X-STD PVT5HO-48-BLK-HB (OR APPROVED EQUAL PRIOR TO BID)	
TX-9		SURFACE MOUNTED FLOURESCENT FIXTURE, HIGH ABUSE (PATIENT BATH VANITY)	2-F40BX RE835	80W	120V	KENALL FALSFAE CD LIGHTING KIRLIN MORLITE	WCBU-2-3/3-1/1-40B-RS-1-120-2/9-1-H4 MAX-WDPH4-2-1-1-BX-EB10RS-3-E-F1-BN-UNV (OR APPROVED EQUAL PRIOR TO BID)	
UC		UNDERCABINET LIGHT; LOW PROFILE X 5 1/4" DEEP X LENGTH AS NOTED; HIGH IMPACT RESISTANT ACRYLIC DIFFUSER						
UC-99		18" NOMINAL LENGTH WITH INTEGRAL ROCKER SWITCH; LED; PROVIDE POWER PAKS AS REQUIRED	LED 4100K	18W	120V	KENALL LIGHTOLIER DECO LTG. PHILIPS GM LIGHTING	MAULED-X-M-18-120-SW LLP20XBK DUS-LED-24-42-SP-MC 523-000027-52 UCLED-16-WH (OR APPROVED EQUAL PRIOR TO BID)	
W		LOW PROFILE WRAPAROUND SURFACE MOUNTED FIXTURE; ACRYLIC PRISMATIC DIFFUSER; WHITE ENAMEL ENDPLATES; MINIMUM CU OF 70 @ 80/50/20 AND RCR=1; PROGRAM START ELECTRONIC BALLASTS; 78 LAMPS; ONE BALLAST PER FIXTURE WHERE POSSIBLE UNLESS TWO LEVEL SWITCHING IS SHOWN ON THE PLANS.						
W-4		WIDE BODY WRAPAROUND; 2-LAMP, APPROX; 3" X 16" X 48"	2-F32T8 RE835	65W	277/120V	LITHONIA DAYBRITE METALLUX LIGHTOLIER LSI COLUMBIA	2LB232-MVOLT-TUBHP CAW232-UNV-1/2-EB-SPEC WSA-232A-UNV-PROGRAM START WB232-U-SOP PR 232 SSO10PRS W UE WCAW4-232-EBPS120/277	
WB		WALL MOUNTED FLOURESCENT AT LOCATIONS AS INDICATED ON DRAWINGS; WITH ACRYLIC INJECTION MOLED; PROGRAM START ELECTRONIC BALLASTS; 78 LAMPS; ONE BALLAST PER FIXTURE WHERE POSSIBLE, UNLESS TWO LEVEL SWITCHING IS SHOWN ON THE PLANS.						
WB-3		2-LAMP, WALL MOUNT 48" STEEL ENCLOSURE, DOWNLIGHT ONLY; ACRYLIC INJECTION MOLED PRISMATIC DIFFUSER.	2-F32T8 RE835	65W	277/120V	DAYBRITE LIGHTOLIER METALLUX L.A.L. COLUMBIA LITHONIA LSI	CD232W-UNV-1/2-EB-SPEC CW6232-WB-U-SOP BI-232-UNV-PROGRAM START BSQ100-2-4R-INI-WHT-T8EB-120/277-UPS WAL4-232-EBPS120/277 WP 232 DO MVOLT-TUBHP WB 232 SSO10PRS UE	
ZW		LIGHT POLES: TOTALLY ENCLOSED RAINIGHT, DUST-TIGHT AND CORROSION RESISTANT; POLE AS SHOWN IN DETAIL WITH HANDHOLE, COVER, BOLT COVER, AND BASE; PAINTED COLOR TO BE SELECTED BY ARCHITECT/ENGINEER WHICH MAY DIFFER FROM CATALOG NUMBER SHOWN); PROVIDE DRIVERS CAPABLE OF ACCEPTING 120, 208, OR 277 VOLTS. LIGHT POLES NOT INCLUDED IN THE LISTED CONTRACTOR ALLOWANCE.						
ZW-1		LED SITE LIGHTING FIXTURE, DIRECTIONAL REMOVABLE LED SOCKET BOARDS, TYPE III DISTRIBUTION, HEAD CONFIGURATION AS SHOWN ON DRAWINGS	LED 140W	480V	KIM LIGHTING	XSA-WP9-L-E-3-L-5K-480-SG-DB-A-30		CONTRACTOR ALLOWANCE: \$1,475.00 (EXCLUDING POLE)

FORM APPROVAL STAMP



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PEDIATRIC FACILITY
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012



DATE	STATUS
09/12/2012	
DATE	REVISION
1 9/20/12	ADD #1

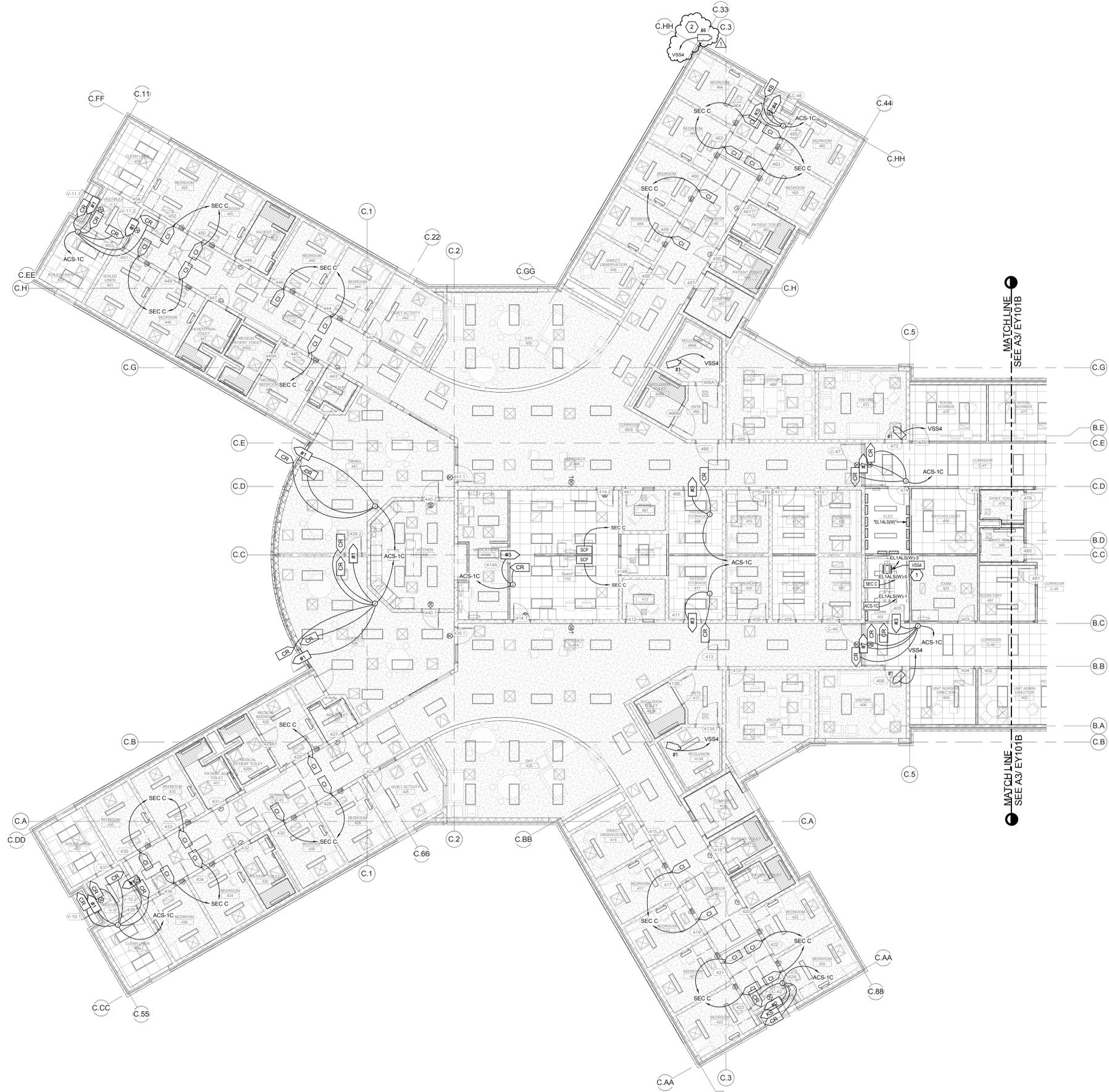
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CHECKED BY: CAG
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FIXTURE SCHEDULE

EL601

9/20/2012 12:01:52 PM

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A2 LEVEL 01 AUXILIARY PLAN (AREA C)
SCALE: 1/8" = 1'-0"



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GENERAL SHEET NOTES

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SHEET KEYNOTES

- 1 PROVIDE FOR RACK MOUNT SPACE (2 RU) FOR VIDEO IP SWITCH IN DATA RACK.
- 2 CORNER MOUNT THIS FIXED DOME CAMERA WITH VIEW OF NE PARKING AND TURNABOUT. MOUNT CAMERA AT 16" BELOW TOP OF WALL.

KEY PLAN

PEDIATRIC FACILITY
1300 East Center St. Provo, Utah
UTAH STATE HOSPITAL CONSOLIDATION
BID DOCUMENTS - 09/12/2012

DATE: 09/12/2012

STATUS:

DATE	REVISION
1 9/20/12	ADD #1

PROJECT NUMBER: 11111
FILE: 11111 USH Pediatric.rvt
DRAWN BY: WRT
CHECKED BY: CAG
SCALE: 1/8" = 1'-0"

**LEVEL 1
AUXILIARY
PLAN AREA C
(WEST)**

EY101C

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PROFESSIONAL ENGINEER
No. 7057918
CARLTON A. GETZ
STATE OF UTAH

DATE: 09/12/2012

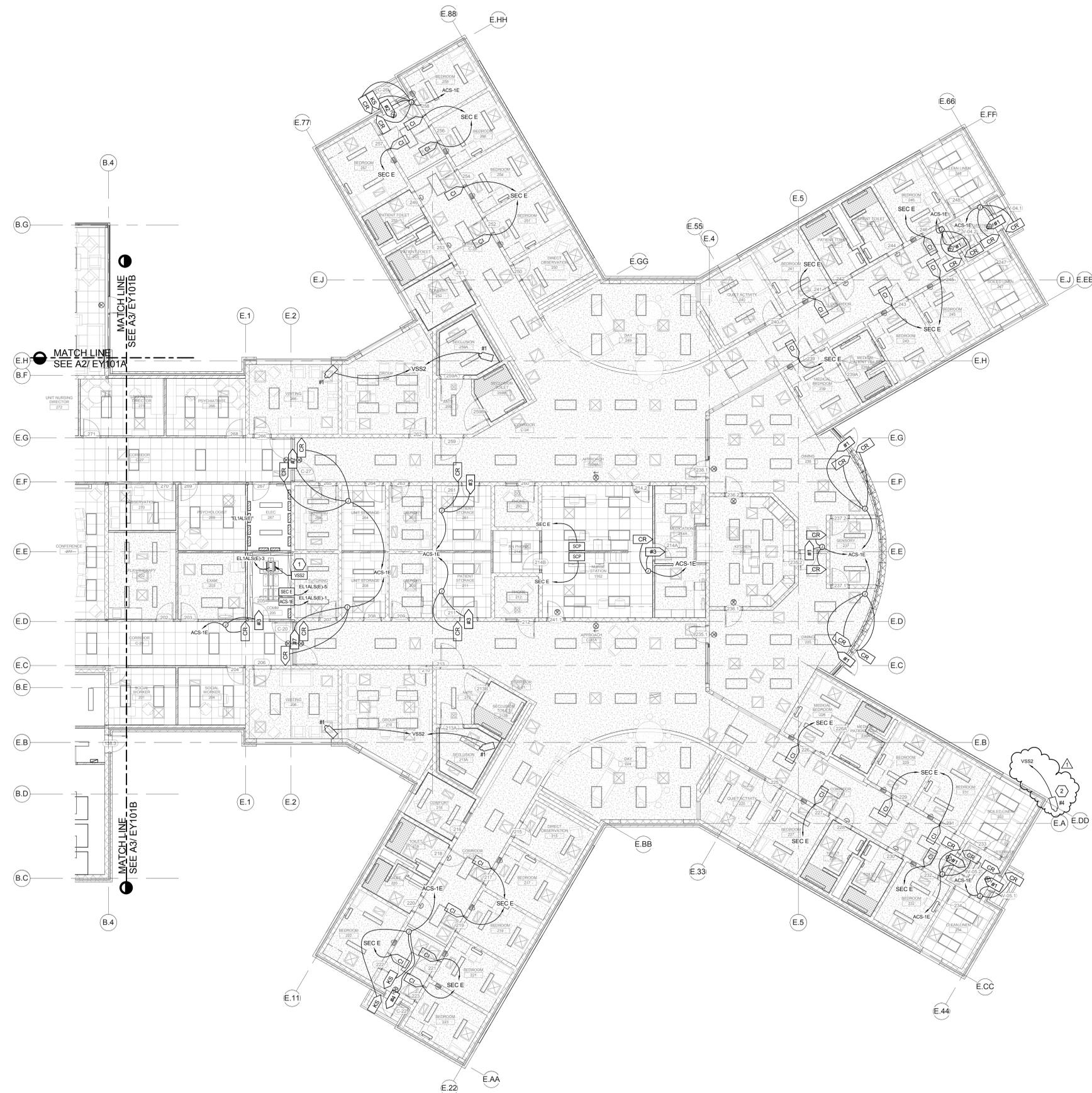
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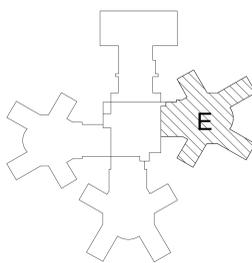
**LEVEL 1
AUXILIARY
PLAN AREA C
(WEST)**

EY101C

9/20/2012 12:03:01 PM



A2 LEVEL 01 AUXILIARY PLAN (AREA E)
SCALE: 1/8" = 1'-0"



KEY PLAN

GENERAL SHEET NOTES

SHEET KEYNOTES

- 1 PROVIDE FOR RACK MOUNT SPACE (2 RU) FOR VIDEO IP SWITCH IN DATA RACK.
- 2 CORNER MOUNT THIS FIXED DOME CAMERA WITH VIEW OF SOUTH PARKING, LOOKING SOUTHWEST. MOUNT CAMERA AT 16" BELOW TOP OF ROOF.

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DATE	STATUS
09/12/2012	

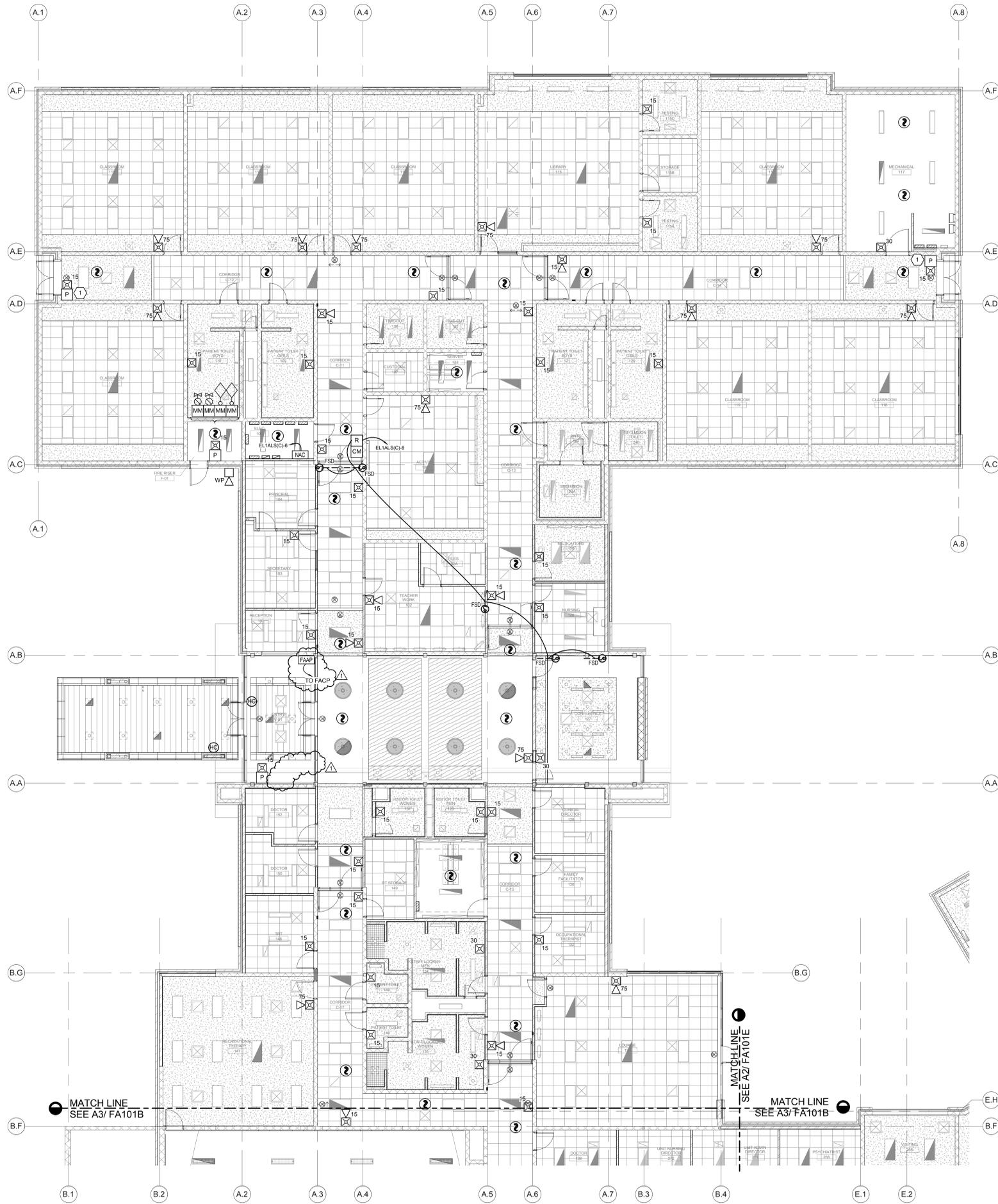
DATE	REVISION
1 9/20/12	ADD #1

PROJECT NUMBER: 11111
FILE: 11111 USH Pediatric.rvt
DRAWN BY: WRT
CHECKED BY: CAG
SCALE: 1/8" = 1'-0"

LEVEL 1
AUXILIARY
PLAN AREA E
(EAST)

EY101E

9/20/2012 12:01:39 PM



A2 LEVEL 01 FIRE ALARM PLAN (AREA A)
SCALE: 1/8" = 1'-0"



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GENERAL SHEET NOTES

- LOCATIONS OF DUCT SMOKE DETECTORS AND FIRE SMOKE DAMPERS SHOWN APPROXIMATE. COORDINATE EXACT LOCATIONS WITH MECHANICAL DRAWINGS PRIOR TO ROUGH-IN.
- LOCATIONS OF FLOW AND TAMPER SWITCHES SHOWN IS APPROXIMATE. FIELD VERIFY EXACT LOCATIONS OF FIRE SPRINKLER FLOW AND TAMPER SWITCHES WITH FIRE SPRINKLER INSTALLER PRIOR TO ROUGH-IN.

SHEET KEYNOTES

- PROVIDE FULL STATION WITH ENCLOSURE AND BUZZER ALARM THAT IS ACTIVATED UPON OPENING FOR ACCESS.

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SEAL
CARLTON A. GETZ
No. 7057918
STATE OF UTAH
09/12/2012

KEY PLAN

LEVEL 1 FIRE ALARM PLAN AREA A (NORTH)

DATE	REVISION
1 9/20/12	ADD #1

PROJECT NUMBER: 11111
FILE: 11111 USH Pediatric.rvt
DRAWN BY: WRT
CHECKED BY: CAG
SCALE: 1/8" = 1'-0"

FA101A