

Donald L. Welch  
Architect

February 24, 2017      (Revised 03-20-2017;  
Revised 04-12-2017)

Salt Lake County  
Planning & Development  
2001 South State Street  
Salt Lake City, Utah 84190

RE:      Brighton Recovery Campus  
Plan Review Comment Responses  
Building 'C'  
4905 South 900 East  
Salt Lake County, Utah  
SECOND REVIEW  
WC3 Project #: 217-534-008  
SLCO Project #: 170178

**CODE REVIEW COMMENT RESPONSES:**

**OCCUPANCY & BUILDING SUMMARY:** Building 'C' will be fire sprinkled with an NFPA 13 fire sprinkling system.

**A4.      Sheet A2.3A**

- A.      Please refer to Sheet A2.3A for Door C120 revised from a pocket door to a swinging door, swinging into the toilet room.
- C.      Please refer to sheet A2.3A and Sheet A7.1C for location of Tactile Exit signs, and Exit sign detail and information.

**Mechanical Review Comments:**

Please refer to attached Mechanical drawings, for information concerning Mechanical review comments.

**Electrical Review Comments:**

Please refer to attached Electrical drawings, for information concerning Electrical review comments.

**Energy Review Comments:**

- N1.      Please refer to RESCheck, attached to the end of the Mechanical/Plumbing pdf files, for extent of thermal envelope and corresponding R-values, and the energy compliance.
- N3.      Please refer to Mechanical drawings for this comment.

7533 SANDY LAND LANE  
MIDVALE, UTAH 84047

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**Structural Comments:**

General:

S3. Sheet A2.4C is associated with Building 'D', for a make-up air unit. And will be resolved with Building 'D' comment responses.

Thank you.



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MIDVALE, UTAH 84047





UTAH OFFICES

Sandy  
Layton  
St. George

Project Number: L0133-001-171

March 17, 2017

Brighton Land Holdings  
1275 East Fort Union Blvd. Ste 210  
Cottonwood Heights, UT 84047

ATTENTION: Thomas Godfrey

REFERENCE: **Brighton Recovery Campus, Building C (4905 S 900 E, SLC, UT)  
Interior Demolition & New Wall Openings**

Mr. Godfrey:

Per your request, we have reviewed the architectural drawings for the above-referenced project. We also visited the above-referenced site on December 20, 2016. Please be advised as follows:

- 1) From our observation, the roof structure appeared to be manufactured wood roof trusses, bearing at the exterior perimeter walls and/or exterior overhang beams. In addition, there is an interior beam running the length of the building, supporting the roof trusses at or near their mid-span. See the enclosed "Demolition Plan," for approximate location of existing beams and posts. Interior partitions are non-bearing non-shear walls and can, therefore, be removed without adversely affecting the structure.
- 2) Three new openings may be constructed at exterior walls, as shown in the enclosed "Demolition Plan." The new headers, trimmers, and king studs are also specified on sheet 2. Supporting calculations are provided on sheets 3 and 4, enclosed. The contractor is responsible for shoring the existing roof framing during construction.

We hope this meets your needs. If you have any further questions regarding this matter, please call this office at your convenience.

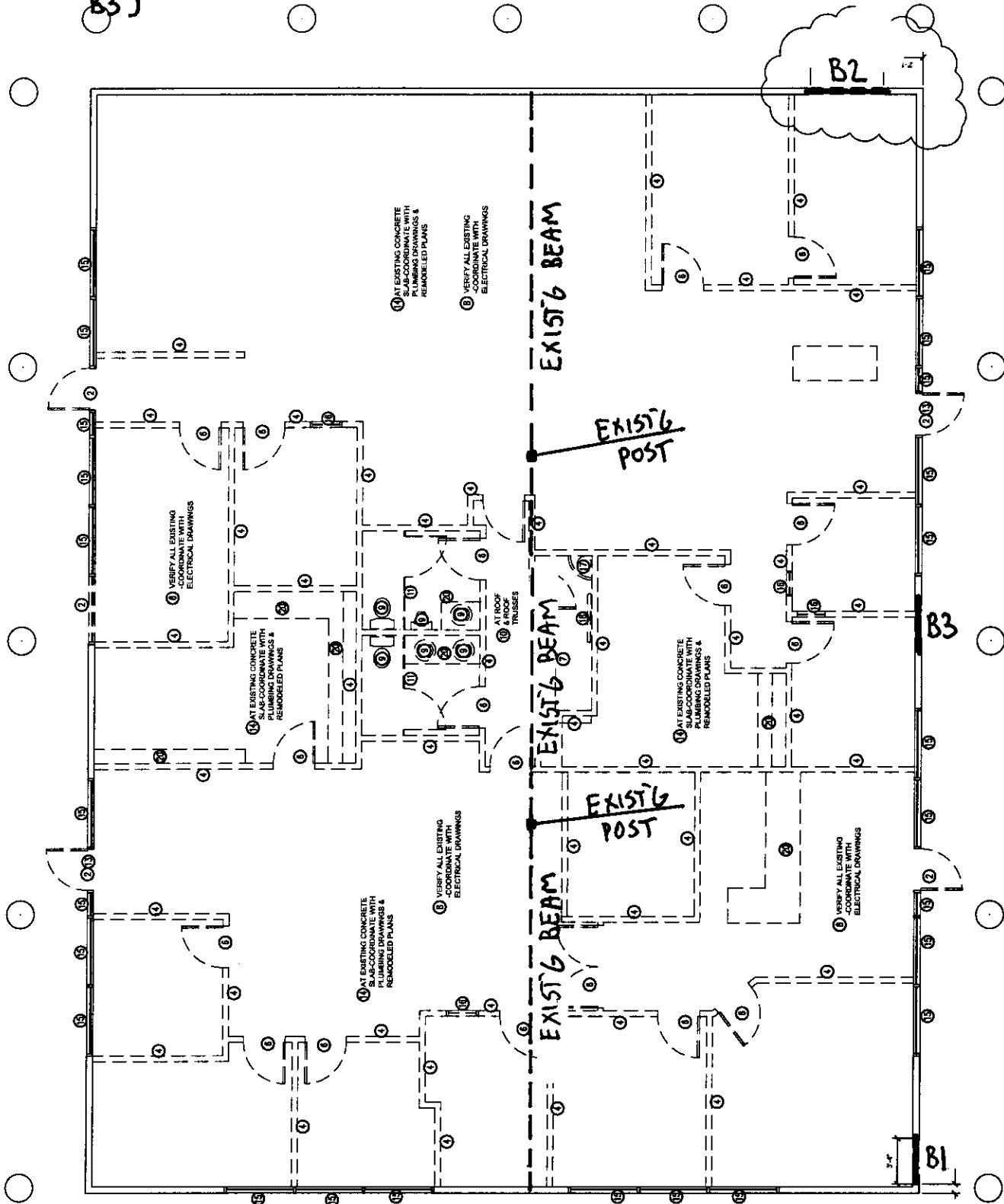
Very truly yours,  
VECTOR STRUCTURAL ENGINEERS



David H. Fotheringham, S.E.  
Principal

Enclosures

B1 } (3) 2x6 HDR w/ 2x6 TRIMM & 2x6 KING STUD EA- END  
B2 }  
B3 }



## DEMOLITION PLAN

$$3/32'' = 1-0''$$



JOB NO.: L0133-001-171

DATE: 3/17/2017

SHEET 3

DESIGNED: DHF

CHECKED: DHF

PROJECT: BRIGHTON RECOVERY CAMPUS

SUBJECT: GRAVITY LOADS

		Increase due to pitch	Original loading
<b>ROOF</b>			
ROOF PITCH/12	4		
ASPHALT SHINGLES	4.22	1.05	4.00
1/2" PLYWOOD	1.58	1.05	1.50
FRAMING	3.00		
INSULATION	2.00		
1/2" GYPSUM CLG.	2.20		
M, E & MISC	2.00		
	DL	15.00	
	LL	20.00	
	SNOW	30.00	
SNOW INCLUDED IN LATERAL	0.0		

**2ND FLOOR (WHERE OCCURS)**

FLOOR COVERING	1.00
3/4" T&G PLYWOOD	2.30
MFG TRUSSES / FRAMING	2.00
INSULATION	1.00
1/2" GYPSUM CEILING	2.20
PARTITION	2.00
M, E & MISC.	1.50
OTHER	0.00
	DL 12.00
	LL 40.00

**EXTERIOR WALLS**

STUCCO/SIDING	3.50
2x FRAMING W/3 PLATES	1.30
INSULATION	1.00
1/2" GYPSUM	2.20
1/2" PLYWOOD	1.50
OTHER	0.50
DL	10.00

**OVERFILL**

ASPHALT SHINGLES		4.00
1/2" PLYWOOD		1.50
RAFTERS & MISC		3.50
OTHER		0.00
	DL	9.00
	LL	20.00

TYPICAL ROOF OVERBUILD MAX SPAN TABLE

Grade	Size	Spacing (ft)	L <sub>max</sub> (ft)
DFL#2	2X4	2	5.80
DFL#2	2X6	2	8.80
DFL#2	2X8	2	10.80
DFL#2	2X10	2	13.20

C <sub>r</sub>	C <sub>D</sub>	C <sub>F,V</sub>	M <sub>allow</sub> (ft-lb)	V <sub>allow</sub> (lb)	Ctrl'g factor
1.15	1.00	1.50	385	382	Moment
1.15	1.00	1.40	888	601	Moment
1.15	1.00	1.20	1322	792	Moment
1.15	1.00	1.10	1973	1011	Moment



JOB NO.: L0133-001-171  
DATE: 3/17/2017

DESIGNED: DHF  
CHECKED: DHF

PROJECT: BRIGHTON RECOVERY CAMPUS

SUBJECT: BEAMS

DESIGN LOADS:				Load Types: Snow <sup>1</sup> s				Live				Dead			
				Roof				30				18			
				Floor				40				15			
				Wall				12							

Add 2<sup>nd</sup> Sps to dead load? Yes 0.2267 = 2<sup>nd</sup> Sps  
note: 'a' must be less than or equal to 'L/2'

CRITERIA (L)			
	D <sub>TL</sub>	D <sub>LL</sub>	D <sub>DL</sub>
A <sub>(BLANK)</sub>	240	360	
B	240	480	
C	600		800



PROJECT:

# Tenant Finish for New Brighton Recovery Campus

4905 South, 4911 South, 4915 South, 4925 South, 4931 South, 4953 South 900 East, Salt Lake County, Utah

BUILDING 'C' 4905 South 900 East PARCEL #22081850140000

## BUILDING CODE SUMMARY

### APPLICABLE CODES

-BUILDING CODE: 2015 INTERNATIONAL BUILDING CODE  
-PLUMBING CODE: 2015 IPC  
-ELECTRICAL CODE: 2015 NATIONAL ELECTRICAL CODE  
-FIRE CODE: 2015 IFC  
-LIFE SAFETY CODE: 2015 NFPA 101  
-ACCESSIBILITY CODE: ICC & NFPA GUIDELINES

### EXISTING BUILDING 'C'

#### BUILDING PLANNING

OCCUPANCY: BUSINESS OCCUPANCY GROUP "B" (OFFICES, OUTPATIENT, LABORATORY)

MIXED (NON SEPARATED) OCCUPANCY YES /NO

REQUIRED FIRE SEPARATION: 0 HR. (FIRE SPRINKLER SYSTEM)

#### TYPE OF CONSTRUCTION

CONSTRUCTION TYPE: VB NS 1 LEVEL; 9,000 SQ. FT. ALLOWED—OCCUPANCY 'B'

RISK CATEGORY II

#### CHANGE OF OCCUPANCY

WORK BEING DONE: WORK AREA METHOD, LEVEL 2

#### GENERAL BUILDING LIMITATIONS

-HEIGHT OF BUILDING: 22 FEET MAXIMUM NUMBER OF STORIES: 1 STORY

-TOTAL AREA OF BUILDING: 4,800 SQ. FT. — OCCUPANCY "B"

-OCCUPANCY PER PERSON: 4,800 SQ. FT.; 100 SQ. FT./PERSON = 48 OCCUPANTS

UP TO 48 STAFF MEMBERS AND CAMPUS RESIDENTS ALLOWED

#### FIRE PROTECTION SYSTEMS

FIRE EXTINGUISHING SYSTEM: YES/NO TYPE: NFPA 13 SPRINKLER SYSTEM

-FIRE ALARM SYSTEM: YES/NO

### FIRE RESISTANT CONSTRUCTION / FIREPROOFING SCHEDULE

ITEM	REQ'D RATING / HR
-EXTERIOR WALLS: LOAD BEARING	0 HRS.
NON-LOAD BEARING	0 HR.
-FIRE/PARTY WALLS	0 HR. (W/ APPROVED FIRE SPRINKLING SYSTEM)
-SHAFTS	N.A.
-INTERIOR WALL: LOAD BEARING	0 HR.
NON-LOAD BEARING	0 HR.
-BEAMS	0 HR.
-ROOF/CEILING	0 HR.

SEE SHEET A1.1 FOR FIRE RATED WALLS AT EXISTING BUILDINGS ADJACENT TO BREEZEWAYS. ALSO FOR FIRE SPRINKLING SYSTEM AT EXISTING ROOF OVERHANGS AND BREEZEWAY STRUCTURES.

SECTION 903 CONSTRUCTION CLASSIFICATION  
TABLE 903 FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE









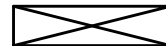
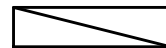





FIRE SEPARATION DISTANCE = X (FEET)	TYPE OF CONSTRUCTION	OCCUPANCY GROUP B
10+ X <30	VB	0



### 708.4 Continuity

The supporting construction shall be protected to afford the required fire-resistance rating of the wall supported, except for walls separating tenant spaces in covered and open mall buildings, walls separating dwelling units, walls separating sleeping units and corridor walls, in buildings of Type IIB, IIIB, and VB construction.

#### Exceptions:

6. Fireblocking or draftstopping is not required at the partition line in buildings, equipped with an automatic sprinkler system installed throughout in accordance with Section 9033.3.1.1 or 903.3.1.2, provided that automatic sprinklers are installed in combustible floor/ceiling and roof/ceiling spaces.

MATERIALS / LEGEND	INTENT OF PLANS:
 CONCRETE MASONRY UNIT	IT IS THE INTENT OF THESE DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS TO DESCRIBE ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO COMPLETE THE WORK CALLED FOR, INDICATED OR REASONABLY IMPLIED BY THEM, INCLUDING PARTITIONING, MECHANICAL AND ELECTRICAL WORK, AIR CONDITIONING AND ALL OTHER ITEMS DESCRIBED. FAILURE TO SHOW DETAILS OR REPEAT ON ANY DRAWINGS THAT FIGURES, NOTES OR DETAILS GIVEN ON ANOTHER DRAWING SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO PERFORM THE WORK (AT NO ADDITIONAL COST) AS IF SHOWN ON EACH AND EVERY DRAWING.
 BRICK VENEER	
 STONE VENEER	
 CONCRETE	
 GYPSUM BOARD OR GROUT MORTAR	
 BATT INSULATION	
 RIGID INSULATION	
 PLYWOOD	
 ROUGH WOOD—CONTINUOUS	
 ROUGH WOOD—BLOCKING	
 WOOD TRIM	ALL WORK SHALL BE IN A FIRST CLASS WORKMANSHIP MANNER, NEAT AND COMPLETE IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS AND THE UNIFORM BUILDING CODE, THE STATE ENERGY EFFICIENCY CODE AND ALL AUTHORITIES HAVING JURISDICTION. CONTRACTOR SHALL ENDEAVOR TO PROTECT THE OWNER'S AND ADJACENT OWNER'S PROPERTY FROM DAMAGE DUE TO THE CONSTRUCTION PROCESS AT ALL TIMES AND REPAIR AT NO COST TO THE OWNER ANY DAMAGE THAT DOES OCCUR.
 STEEL	
 GRAVEL	
 EARTH	
 TILE	
	CONTRACTOR SHALL ARRANGE FOR INSPECTIONS AND TESTS SPECIFIED OR REQUIRED BY THE CITY/COUNTY BUILDING DEPARTMENT AND SHALL PAY ALL FEES AND COSTS FOR THE SAME. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SECURE AND PAY FOR ALL PERMITS AND UPON COMPLETION OF THE WORK (PRIOR TO FINAL PAYMENT) DELIVER TO THE OWNER A CERTIFIED CERTIFICATE OF OCCUPANCY FROM THE CITY/COUNTY BUILDING AND ZONING DEPARTMENT.
	CONTRACTOR SHALL BE REQUIRED TO CARRY COMPREHENSIVE LIABILITY INSURANCE IN THE AMOUNT OF THE CONTRACT AND WORKMAN'S COMPENSATION INSURANCE AT HIS OWN EXPENSE. THE A.I.A. GENERAL CONDITIONS OF THE CONTRACT FORM A201 (LATEST EDITION) ARE HEREBY MADE A PART OF THIS CONTRACT AS IF WRITTEN ON THE DOCUMENTS.

PROJECT TEAM		ABBREVIATIONS		GRAPHIC SYMBOLS		DRAWING INDEX	
Project Architect							
Donald L. Welch Architect							
7533 Sandy Land Lane Midvale, Utah 84047-2799							
801-548-6391 dvelch5977@msn.com							
Civil Engineers							
							
David Jenkins, PE, SE							
45 West 10000 South, Suite 500 Sandy, UT 84070							
Phone: 801-255-0529							
Fax: 801-255-4449							
Mechanical/Plumbing/ Electrical Engineers							
							
Benjamin J. Schlup -Mechanical/Plumbing Engineer							
Peter E. Johansen, P.E. - Electrical Engineer							
324 South State Street, Suite 400 Salt Lake City, UT 84111							
[p] 801-328-5151							
info@spectrum-engineers.com							



SPECIFICATIONS AND GENERAL NOTES

DIVISION 1 - GENERAL REQUIREMENTS

01010 - SUMMARY OF WORK

PART I - GENERAL

- A. The Architect considers these plans to be generally accu- rate, reliable, and free of defect, but does not guarantee their absolute accuracy to the last detail; ac- cordingly, the contractor shall verify all dimensions and conditions before starting work, and shall immediately notify the Architect and/or Engineers of any omissions, discrepancies, or errors found.
- B. In the event any conflicting items should occur in the drawings, general notes, specifications, building codes, or soils report, that condition or requirement which is the most stringent shall govern.

- C. Any construction technique, process, or specialty not specifically dealt with in these plans shall be in ac- cordance with the minimum requirements set forth in the 2015 edition of the International Building Code, 2015 International Existing Building Code, any applicable local municipal code, or manufacturer's or trade association's recommendations; the most stringent shall govern.
- D. Any proposed modifications or changes to these plans are subject to review by the Architect. The Architect shall NOT BE RESPONSIBLE FOR ANY CHANGES made without his knowledge and written approval.

- E. The contractor shall abide by the requirements set forth in the "General Conditions of the Contract for Construction", A.I.A. Document A-201, dated 2012.
- F. ALL MATERIALS MENTIONED HEREIN MAY NOT BE USED IN EVERY BUILDING (coordinate with drawings).
- G. Any "or equal" note shall mean "If approved by the Des- igner in advance.
- H. For all applicable Specification Sections: Comply with gov- erning codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

DIVISION 2 - SITEWORK

02010 - SUBSURFACE INVESTIGATION

PART I - GENERAL

-NOT APPLICABLE

SECTION 02419 - SELECTIVE DEMOLITION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Selective Site Demolition:
1. Demolition of designated site improvements including paving, curbing, site walls, and utility structures.
  2. Demolition of below-grade foundations and site improvements to depth to avoid conflict with new construction or site work.
  3. Removal of hollow items or items which could collapse.
  4. Salvage of designated items.
  5. Protection of site work and adjacent structures.
  6. Disconnection, capping, and removal of utilities.
  7. Pollution control during building demolition, including noise control.
  8. Removal and legal disposal of materials.
  9. Designated site improvements and adjacent construction.
  10. Interruption, capping or removal of utilities as applicable.
- B. Selective Building Demolition:
1. Selective demolition of interior partitions, systems, and building components designated to be removed.
  2. Selective demolition of exterior facade, structures, and removed, components designated to be removed.
  3. Protection of portions of building adjacent to or affected by selective demolition.
  4. Removal of abandoned utilities and wiring systems.
  5. Notification to Owner of schedule of shut-off of utilities which serve occupied spaces.
  6. Pollution control during selective demolition, including noise control.
  7. Removal and legal disposal of materials.
  8. Protection of designated site improvements and adjacent construction.
  9. Salvage of designated items.
  10. Interruption, capping or removal of utilities as applicable.
- C. Hazardous Materials:
1. Not present.
  2. Removed under separate prior contract.
  3. Removed as a part of this contract.

- 1.2 QUALITY ASSURANCE
- A. Codes and Regulations: Comply with governing codes and regulations. Use experienced workers.
- 1.3 SEQUENCING
- A. Immediate areas of work will not be occupied during selective demolition. The public, including children, may occupy adjacent areas.
- B. No responsibility for buildings and structures to be demolished will be assumed by the Owner.
- C. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

- PART 3 EXECUTION
- 3.1 SELECTIVE DEMOLITION
- A. Demolition Operations: Do not damage building elements and improvements indicated to remain. Items of salvage value, not included on schedule of salvage items to be returned to Owner, shall be removed from structure. Storage or sale of items at project site is prohibited.
- B. Utilities: Locate, identify, disconnect, and seal or cap off utilities in buildings to be demolished.
- C. Shoring and Bracing: Provide and maintain interior and exterior shoring and bracing.
- D. Occupied Spaces: Do not close or obstruct streets, walks, drives or other occupied or used spaces or facilities without the written permission of the Owner and the authorities having jurisdiction. Do not interrupt utilities serving occupied or used facilities without the written permission of the Owner and authorities having jurisdiction. If necessary, provide temporary utilities.
- E. Operations: Cease operations if public safety or remaining structures are endangered. Perform temporary corrective measures until operations can be continued properly.
- F. Security: Provide adequate protection against accidental trespassing. Secure project after work hours.
- G. Restoration: Restore finishes of patched areas.

- 3.2 SCHEDULE
- A. Items to be Salvaged for Delivery to Owner:
1. Doors and hardware.
- D. Utilities Requiring Interruption, Capping, or Removal:
1. Electric.
  2. Heat.
  3. Water.
  4. Gas.
  5. Sewerage

02730 - SANITARY SEWERAGE

PART I - GENERAL

- A. The contractor and plumber shall check actual sewer depth PRIOR to foundation excavation. If sewer depth is inadequately shallow for construction according to plans, the contractor shall notify the Architect in writing, and obtain Architect's response before proceed- ing with excavation work.

DIVISION 3 - CONCRETE

03300 - CAST-IN-PLACE CONCRETE

PART I - GENERAL

- A. If requested, submit concrete mix designs to general con- tractor for approval prior to any pours.
- B. Concrete compressive strength of all footings, stem walls, crawlspace foundation walls, and interior slabs-on-grade shall be equal to at least 2500 psi within 28 days after pouring; whereas full basement walls and retain- ing walls shall attain a compressive strength of at least 3000 psi. Minimum strength for exterior flatwork shall be 2500 psi, but 3000 psi is recommended.

PART II - PRODUCTS

- A. Cement shall be gray Portland Type II, low alkaline. Slump shall be 3 to 4 maximum for stem walls and foot- ings, 4 to 5 maximum for walls, and slabs-on-grade, in- cluding interior slabs-on-grade, self-supporting slabs, exterior concrete porches, driveways and sidewalks.
- B. Continuous footings shall be 10" deep x 20" wide, w/ (2) #4 bars x cont., and #4 J-bar dowels at 24" o.c. (unless noted otherwise on drawings).
- C. Foundation walls shall be 8" wide (typical unless otherwise noted on drawings).
- D. All foundation walls shall be reinforced with #4 bars @ 24" o.c. horizontally & vertically, with every other ver- tical bar tied to footing dowel (unless noted otherwise on drawings).
- E. Fly ash content shall not exceed 15% in any mix design.
- F. All metal reinforcing bars shall be ASTM A-615 grade 60 (Fy=60 ksi).
- G. Welded wire fabric/mesh shall comply with ASTM A 185.
- H. Where 6" x 6" welded wire mesh is recommended, slabs shall be 4" thick and have "chairs" @ 3'-0" o.c. each way to hold mesh 1" minimum above bottom of slab.

PART III - EXECUTION

- A. All concrete work shall comply with A.C.I. Standard Spec- ification for Structural Concrete for Buildings (A.C.I. 301-72; revised 1981).
- B. All walls shall be shored prior to backfilling.
- C. Maximum spacing of horizontal bars in stem walls shall be 12" o.c.
- D. All reinforcing bars shall be anchored and spaced from the forms (unless otherwise noted) as follows: 3/4" in protected walls and suspended slabs, 2" in unprotected walls, and 3" above bottom of footings.
- E. All splices in continuous reinforcing bars are to be lapped a minimum of 40 bar diameters.
- F. Horizontal reinforcing shall run continuous around found- ation wall corners, or shall be tied to corner rebar dowels.
- G. All lumber in contact with concrete to be pressure treated lumber or redwood. See 06 610 - Rough Carpentry.

DIVISION 5 - METALS

05120 - STRUCTURAL STEEL

PART I - GENERAL

See DIVISION 1

- A. All structural steel shall conform to ASTM a-36, Fy = 36 ksi, and anchor bolts shall conform to ASTM A-307.

05500 - METAL FABRICATIONS

PART I - GENERAL

See DIVISION 1

PART II - PRODUCTS

- A. Materials:
1. Steel plates, shapes, and bars: ASTM A 36.
  2. Steel bar grating: ASTM A569.
  3. Bolts: ASTM A 325.
  4. Fasteners: Zinc coated fasteners designed for loading and use.

PART III - EXECUTION

- A. Take field measurements prior to fabrication. Do not delay job; allow for cutting and fitting if field measurement not practical.
- B. Form work true to line with sharp angles and edges. Weld continuously, grind flush and make smooth on exposed surfaces.
- C. Lintels: Provide sizes indicated with 8" bearing each end.

DIVISION 6 - WOOD AND PLASTICS

06100 - ROUGH CARPENTRY

PART I - GENERAL

See DIVISION 1

- A. All lumber shall conform to PS20-70 (the American Lumber Standard) and be graded by the latest edition of the WPPA. Each piece of lumber shall bear an official grade stamp and trademark.
- B. Assumed floor and roof loads (verify with local jurisdiction and coordinate w/ Struct. Drawings and notes.

PART II - PRODUCTS

- A. Unless otherwise noted in structural drawings, all structural members shall be of Douglas Fir No. 2 grade or better.
- B. Timber in contact with concrete shall be redwood or pressure treated fir.
- C. Exposed wood columns and timbers shall be Douglas Fir Larch, Construction Grade, and "Free of Heart Center", with edges lightly eased. Concealed columns and timbers may be Douglas Fir Larch No. 1 (Fb=1200 psi, Fv=85, and E = 1,600,000 psi, minimum.
- D. Framing anchors shall be "Simpson Strong-Tie", "Teco", or "Silver Metal Products, Inc.". Provide Simpson connectors at locations as required or where indicated on or framing drawings. Use "Simpson Ornamental Connectors" or equal, at front entry porch posts and beams (unless otherwise directed by Owner).
- E. All headers shall be (2) x 12's minimum, unless otherwise noted.
- F. Provide cross bridging at midspan for all spans over 8'-0", and at one-third points for spans over 16'-0" (bridging not required with TJI floor system, unless noted otherwise.
- G. Provide and install tie-down clips as per code on each truss, alternate ends.
- H. Provide diagonal bracing at all truss gable ends.
- I. Bearing walls supporting two floors shall be 2 x 6 studs @ 16" o.c. structural studs.
- J. Interior (non-bearing) interior walls shall be 2 x 4 studs @ 16" o.c. (Non-bearing) prefabricated "Marbeline columns to be as directed, selected and approved by Owner & Designer.

PART III - EXECUTION

- A. All built-up beams and typical headers shall be nailed together with 16d nails at each end, and construction adhesive between members. Typical headers shall, in addition, contain a single solid layer of 1/2" CDX plywood between members.
- B. Crown all framing members.
- C. Provide solid fire blocking at floor and roof lines for fireplace chase.
- D. Double framing members shall be provided directly below roof-mounted equipment plates, hangers for heavy equipment, and hangers for any and all piping 4" in diameter or larger, unless otherwise detailed.
- E. Double joists under all parallel partitions.
- F. All wood stud bearing walls over 10'-0" high shall have horizontal herringbone bridging, not less than 2" nominal thickness x same width as studs, fitted tight and spiked to studs. Bridging shall be at mid-height of partition, or not more than 7'-0" o.c. in any situation. For walls over 10'-0" in height studs shall be minimum 2 x 6 studs at 16" o.c. with horizontal herringbone bridging of same dimension, fitted tight and spiked to studs. Bridging shall be spaced at one-third points.
- G. Provide solid blocking at all bearing walls, midheight.
- H. Cross bridging or bracing shall be provided at floor and roof joist locations where the span exceeds 8'-0" clear. Span locations that exceed 16'-0" clear shall receive bridging at one-third points. Bridging shall be Simpson Strong-Tie (or equal) Nailless Metal Bridging, min. 16 gauge steel with "V" section, or solid bridging not less than one size smaller than joist.
- I. Minimum nailing of lumber members shall be installed in accordance with U.B.C. tables or other applicable local building codes.
- J. Bearing walls shall have double top plates with joints lapped a minimum of 48", and fastened together with a minimum of (10) 16d nails each side of lap; nails shall be driven in pairs at a maximum spacing of 12" o.c.
- K. Provide bracing at all corners and at every 25' minimum, along all exterior walls unless otherwise noted on structural plans. Braced area shall be not less than 25% of total exterior wall area.
- L. Wood Treatment: Preservative treatment: Pressure treated with waterborne preservatives, to comply with AWPB LP-2 for above-ground items. Kiln dry after treatment to 19% max. moisture content for lumber and 15% for plywood. Treat above-ground wood exposed to deterioration by moisture and all wood in contact with the ground or fresh water.

06112 - PLYWOOD AND DIAPHRAGMS

PART I - GENERAL

See DIVISION 1

PART II - PRODUCTS

- A. Unless otherwise noted in structural drawings, Roof sheathing shall be 5/8" waterboard sheathing or 5/8" CDX plywood with exterior glue, bearing a 42/20 span index. "Simpson Strong-Tie" plywood sheathing clips shall be installed at midspan at all locations where spacing of trusses exceeds 24" o.c. Fasten plywood at edges with 8d commons at 6" o.c. or 14 gauge 1 1/2" staples. Fasten field of panels with 8d commons at 12" o.c., or 14 gauge 1 1/2" staples.
- B. Floor sheathing shall be 3/4" C.D.X. T & G plywood or waterboard with exterior glue, bearing a 42/20 span index, minimum. Fasten with 10d ring shank nails at 6" o.c. at edges and boundary, and 10" o.c. in field, or use 16 gauge 1 5/8" x 7/16" staples at 2 1/2" o.c. at edges and 4" o.c. in field.
- C. Structural shear panels at exterior and interior walls shall be 1/2" C.D.X. plywood or waterboard 24/0 nailed same as roof sheathing above. Solid block above shear panels, and nail through sheathing with (4) 8d nails and toenail with (3) 16d nails minimum.
- D. Non-structural shear panels at walls may be 1/2" colotex.
- E. Provide metal hurricane ties at each rafter or truss.

PART III - EXECUTION

- A. All sheathing shall be installed with joints staggered, and face grain running perpendicular to framing direction, with a two-span minimum.

06190 - PREFABRICATED WOOD TRUSSES

PART I - GENERAL

See DIVISION 1

THIS SECTION PERTAINS TO ANY EXISTING WOOD TRUSSES THAT MAY BE NECESSARY TO BE REPLACED-FIELD VERIFY AND INSPECT ALL EXISTING ROOF TRUSSES

- A. Provide prefabricated and pre-engineered wood trusses.
- B. Comply with recommendations of TPI Design Specifications for Metal Plate Connected Wood Trusses.

PART II - PRODUCTS

- A. Trusses: Standard dimensional lumber connected by metal plates.
- B. Wood: Softwood meeting stress rating and design requirements.
- C. Metal Plates: Galvanized sheet steel, ASTM A 446, Grade A, coating G60.
- D. Accessories: Wind anchors and bracing.

06200 - FINISH CARPENTRY AND MILLWORK

PART I - GENERAL

See DIVISION 1

- A. Provide finish carpentry for exterior items exposed to view:
1. Running and standing trim and moldings.
  2. Door frames.
  3. Decorative elements.
- B. Provide finish carpentry for interior items exposed to view:
1. Running and standing trim and moldings, door and window casing, paneling, wood shelving and closet accessories, wood stair treads, rails and balusters, wood valances, decorative elements, and fireplace mantel.
- C. Provide custom millwork with flat finish:
1. Wood casework and cabinets, plastic laminate casework and countertops. Quality standard for fabrication and products: Architectural Woodwork Institute Quality Standards, Premium grade unless noted otherwise.

PART II - PRODUCTS

- A. Exterior finish carpentry:
1. Trim and boards for transparent finish: N.A.
  2. Trim and boards for painted finish: Clear pine or fir, or other softwood suitable for exposure and use.
- B. Interior finish carpentry and millwork:
1. Trim and boards for transparent finish: N.A.
  2. Trim and boards for opaque finish: Softwood suitable for exposure and use. Base and door casing shall be 3" colonial profile (coordinate with Owner). Profile to be approved by Owner.
  3. Plastic Laminate: NEMA LD-3, 0.050" thick horizontal grade. At counters, adhere to 3/4" particle substrate.
  4. Wood shelving and closet accessories.
  5. Wood stair treads, risers, stringers (including circular stair-to be designed by stair manuf. as directed by same Designer), rails and balusters.
  6. Fireplace mantels as directed by Owner and Designer.
- C. Shelving and closets:
1. Service and closet shelving: Melamine with round nosing.
  2. Wall brackets: Knape and Vogt or approved equal.
  3. Closet bars: Telescoping steel with chrome finish.

PART III - EXECUTION

- A. Provide work to sizes, shapes, and profiles indicated.
- B. Install work to comply with quality standards referenced. Back prime work and install plumb, level and straight with tight joints; scribe work to fit.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

07196 - NON WOVEN AIR RETARDERS

PART I - GENERAL

See DIVISION 1

- A. Furnish and install air retarder on the exterior side of exterior wall sheathing.

PART II - PRODUCTS

- A. Approved Manufacturers:
1. Barracade by Simplex Products Division, Adrian, MI.
  2. Rufocwrap by Raven Industries, Sioux Falls, SD.
  3. Tyvek Housewrap by DuPont Company, Wilmington, DE.

PART III - EXECUTION

- A. Install in accordance with manuf. instructions over exterior wall sheathing. Seal penetrations through air infiltration retarder immediately prior to installation of finish material.
- B. Vapor retarder is to be air tight and free from holes, tears, and punctures.
1. At completion of air infiltration retarder installation, inspect exposed air infiltration retarder for holes, tears, and punctures and repair damaged areas.

07200 - INSULATION

PART I - GENERAL

See DIVISION 1

- A. Provide building insulation of blanket and loose-fill types as applicable:
1. Roofs and attics (interior), fiberglass batt or loose fill type insulation.
  2. Exterior stud walls, fiberglass, mineral fiber batt or loose fill type insulation.
  3. Soffits (where occurs at structural overhang), floors of living spaces above garage & crawlspace.
- B. Provide vapor barrier at building perimeter.
- C. Use experienced installers.

PART II - PRODUCTS

- A. Blanket/fill type insulation: Unfaced, 4 mil visqueen (vapor barrier), glass fiber blanket insulation types; Owens Corning Fiberglass Corp. or approved equal (ALTERNATE: Loose fill type insulation).
1. Roof:
    - a. 12" fiberglass batt, R-38 (or loose fill type insul.), 4 mil visqueen.
  2. Exterior stud walls and floors over crawlspace, garage, or overhang:
    - a. 6" fiberglass batt, R-19 (or loose fill type insul.), 4 mil visqueen; 3 1/2" fiberglass batt, R-11 (min.) @ basement fndn. walls (Coord. w/ Owner).
  3. Alternate loose fill type insulation: Loose, granular perlite or vermiculite.
- C. Vapor barrier: 4 mil clear polyethylene sheet.

PART III - EXECUTION

- A. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with work of other sections. Provide full thickness in one layer over entire area, tightly fitting around penetrations.
- B. Install vapor barrier over entire area of inside face of exterior walls and elsewhere as indicated. Seal all seams and around perimeter and penetrations with duct tape to form a continuous vapor barrier free of holes.
- C. Protect installed insulation and vapor barrier.
- D. Blow loose insulation into required areas; take great care to provide uniform coverage at correct density and thickness to obtain specified R-value.

SECTION 07320  
CLAY ROOF TILE

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Replacement of existing Clay roof tiles and roof system components if required and determined necessary.
- B. Underlayment.
- C. Related roof accessories.
- 1.5 QUALITY ASSURANCE
- A. Manufacturer Qualifications: Minimum five years documented experience producing concrete roof tile and member of Tile Roof Institute.
- B. Installer Qualifications: Minimum five years documented experience installing products specified in this section and/or supervision by a manufacturer's authorized installation representative.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging with labels intact until ready for installation.
- B. Deliver products to project site in manufacturer's unopened pallets, labeled with data indicating compliance with specified requirements.
- C. Maintain dry storage area for products of this section until installation of products.

1.7 SEQUENCING

- A. Ensure that locating templates and other information required for installation of products of this section are furnished to affected trades in time to prevent interruption of construction progress.
- B. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.8 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
- B. Do not overload the roof. Distribute stacks of tile uniformly on roof at not greater than 12 inches (305 mm) in height.

1.9 WARRANTY

- A. 50-Year Limited Warranty is available on all MCA Tiles.

1.10 EXTRA MATERIALS

- A. Provide an additional 1 percent of installed roof tiles, but not less than one full square, for Owner's use in roof maintenance.
- C. Furnish extra materials packaged with protective covering for storage and identified with labels clearly describing contents.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: MCA Clay Roof Tile, which is located at: 1985 Sampson Ave.; Corona, CA 92879; Toll Free Tel: 800-736-6221; Tel: 951-736-9590 ; Fax: 951-736-6052; Email: request info (sales@mca-tile.com); Web: www.mca-tile.com
- B. Substitutions: As approved
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
- 2.2 CLAY ROOF TILE
- A. Clay Tile General:
1. Made with up to 59 percent recycled raw materials and are 100 percent recyclable.
  2. Class A fire rated.
  3. Cool Roof and Energy Star rated.
- B. One Piece "S" Mission Roofing Tile: Type I, ASTM C 1167 Grade 1 and ASTM E 108 (UL790), Class A.
1. Complexes with Uniform Evaluation Report IPAMO ES 0356 (covers City of Los Angeles and is in lieu of ICC-ES), Florida Building Code - FL1109-R, Miami-Dade County Approval 12-0320.32 and TDI Approval RC-21.

- Size: 19 inches by 14-1/2 inches (463 mm by 368 mm)
- Exposed Size: 16 inches by 12 inches (406 mm by 305 mm) O.C.
- Weight per square: 788 lbs (38 kg/m2).
- Weight per piece: 10.5 lbs (4.8 kg).
- Pieces per square: 75 pcs (pieces per M2: 8.073 pcs).
- Color: Color to match existing unless otherwise determined owner.

2.3 ACCESSORY MATERIALS

- A. Substrate Materials:
1. Nailer Boards: Decay resistant, nominal 2 inches (50 mm) by sufficient height to satisfy project conditions, not bowed or twisted.
- B. Underlayment:
1. No. 30 asphalt felt or equivalent complying with ASTM D 226, Type I.
  2. Fasteners: Sized to penetrate deck minimum 3/4 inch (19 mm) or through thickness of deck or batten.
  1. Minimum No. 11 gauge, 5/16 inch-diameter-head (7.9 mm), corrosion-resistant nails.
- D. Rake and Gable End:
1. Prefabricated Rake and Ridge tile. Choose to match tile profile and color.

\*\* NOTE TO SPECIFIER \*\* Select the required flashing material from the following paragraphs and delete those not required. Coordinate with flashing specified in other sections of the specification.

- E. Flashings:
1. Ribbed Valley Metal, minimum 0.016-inch (26 gauge galvanized sheet) corrosion resistant metal flashing.
  2. Other Flashing: At the juncture of the roof and vertical surfaces, flashing and counter-flashing shall be provided per roofing manufacturer's instructions, and when the flashing and counterflashing are of metal, they shall be not less than 0.019-inch (No. 26 galvanized sheet gage) corrosion-resistant metal.
  3. Plumbing Stacks and Other Pipes Penetrating Roofs as recommended by the manufacturer.

NOTE TO SPECIFIER: Select adhesive if required, delete if not required.

- F. Mortar materials, plastic cement and sealant: Code approved adhesive suitable to bond to clay roof tile.
1. Cement Mortar: ASTM C 270, Type M
  2. Sand: ASTM C 144.
  3. Portland cement: ASTM C 150, Type 1.
  4. Plastic cement: ASTM D 2822.
  5. Silicone sealant: ASTM D 1002.
- G. Snow Retention: Provide as required per local code and snow loads for metal and concrete roofing decks.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Verify surfaces are uniform free of ridges, warp or voids, smooth, clean and dry.
- C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result under the project conditions.

3.3 INSTALLATION - GENERAL

- A. Install in accordance with manufacturer's instructions and the following:
1. IAPMO UES Evaluation Report 0356 - Clay Roof Tiles.
  2. IAPMO UES ER-2015 - TRI Concrete and Clay Roof Tile Installation Manual (TRI Installation Manual).
  3. TRI Cold & Snow Concrete and Clay Tile Design Criteria for Cold and Snow Regions.
- 3.4 INSTALLATION
- A. Install in accordance with manufacturer's instructions and the applicable building code.
1. Deck surfaces must be clean and dry prior to installation of underlayment. Foreign particles must be cleaned from all interlocking areas to ensure proper seating and to prevent water damming.
  2. Fascia boards or cant strips must be installed to properly elevate the first tile course.

- B. On vertical applications, and on extremely steep pitches where wind currents may cause lift:
1. Set the butt of each tile in a bead of the specified plastic cement or sealant, or provide stainless steel "Wind Locks" as required.
  2. Use plastic cement and sealant carefully, and avoid smearing the exposed tile surface.
- NOTE TO SPECIFIER: Select paragraphs applicable to the tile specified under Products and delete the paragraphs that are not applicable.
- 3) Completely and neatly fill and point up all voids.
- C. Visual Inspection: Avoid color patterning, checkerboarding, spotting, and startstepping:
1. After the installation of each 80 roofing tiles, make a visual inspection from the ground level and at a distance from the building of about 40 feet (12 m).
  2. Verify that tile courses follow straight and true lines.
  3. Verify that color range is smooth with no abrupt changes.
  4. Make necessary corrections before proceeding with further installation.

3.5 CLEANING

- A. Remove all broken tile, debris and excess tile from roof.
- B. Sweep out tiles clean.
- 3.6 REPAIR AND REPLACEMENT
- A. Damaged Tile:
1. Break out damaged roof tile.
  2. Repair torn underlayment.
  3. Drive fastener flush.
  4. Apply minimum 3/8 inch (10 mm) by 2 inch (51 mm) bead of approved adhesive on tile in course below replacement tile.
  5. Immediately set replacement tile in position assuring proper contact.

- B. Damaged Small Valley and Hip Cuts:
- \*\* NOTE TO SPECIFIER \*\* For hip cuts on roof pitches greater than 7:12, mechanical fastening may be required.
1. Apply a minimum of 3/8 inch (10 mm) by 2 inch (51 mm) bead of approved adhesive at head of cut tile
  2. Immediately set tile in course above in position assuring proper contact.
- 3.7 PROTECTION
- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion

07600 - FLASHING AND SHEET METAL

PART I - GENERAL

See DIVISION 1

- A. Provide flashing and sheet metal components for building construction.
2. Metal counter-flashing.
  3. Gutters and downspouts.
  4. Exposed metal trim units.
  5. Miscellaneous sheet metal accessories.

PART II - PRODUCTS

- A. Flashing (including preformed metal fascia):
1. 20 gauge galvanized steel, G90 galvanizing, ASTM A 525. Flashing and fascia to be painted. Color as selected by Owner.
  2. Aluminum: 20 gage alloy 3003 anodized aluminum. Color as selected by Owner.
  3. Aluminum clad fascia and soffits (coord. w/ Owner & Architect).
- B. Gutters and downspouts:
1. Galvanized Steel: 20 gage galvanized steel, G90 galvanizing, ASTM A 525.
  2. Downspouts connected to 24" long concrete splashblock.

PART III - EXECUTION

- A. Follow recommendations



DIVISION 8 - DOORS AND WINDOWS  
08210 - WOOD AND METAL DOORS

PART I - GENERAL See DIVISION 1

PART II - PRODUCTS

- A. Exterior Doors:
1. Solid core flush wood (oak veneer) door (w/insul. glass) at entire - coord. w/ Architect with AWI PC-7 particleboard core for exterior use; AWI premium grade. a. Face for transparent finish: Rift cut red oak veneer, book matched for transparent finish. End match transoms (coord. w/ Owner & Architect) b. Face for painted finish: Birch veneer.
  2. Metal doors shall be of insulated hollow core construction with surfaces not less than the equivalent of 16 gauge (0.06") sheet metal in thickness. Fire rated at garage/house opening.
- B. Interior Doors:
1. Solid core flush panel masonite doors for interior use with sealed finish and applied molding.
- C. Shop Finish: Sand and provide first coat of finish system specified in painting section. Wrap and protect.
- D. NOT USED.
- E. All door hardware shall be as noted on hardware schedule and notes. Finish as noted.

PART III - EXECUTION

- A. All pin-type hinges which are accessible from outside the secured area when the door is in the closed position shall have non-removable hinge pins.
- B. Top and bottom hinges shall have 1/4" steel jamb studs which project a minimum of 1/4".
- C. Deadbolts shall be hardened steel, or shall contain hardened inserts.
- D. Straight deadbolts shall have a minimum throw of 1" and an embedment of not less than 5/8".
- E. A hook-shaped or expanding lug-type deadbolt shall have a minimum throw of 3/4".
- F. Sliding doors and windows shall have a locking device, and shall be constructed and installed, or equipped, with a device to prohibit the raising and removing of the active panel from the track while unit is in the closed position.
- G. Strike plates shall be secured to the jamb with a minimum of (2) screws no less than 1 1/2" long.
- H. Upward-acting doors shall be secured with either a cylinder lock, a padlock with hardened steel shackle and hasp, a metal slide bar or bolt, or any equivalent device.
- I. Prefit doors to frames. Factory bevel doors. Adjust, clean, and protect from damage.
- J. Install doors with not more than 1/8" clearance at top and sides, 1/2" at bottom.

08813 - GLASS AND GLAZING

PART I - GENERAL See DIVISION 1

- A. Provide mirrors in bathrooms (coordinate with Owner); all glass in doors and shower enclosures and within 5'-0" of bathtub, and glass within 24" of floor or swinging doors shall be tempered.
- B. Mount mirror against gypsum board with suitable construction mastic.

PART II - PRODUCTS

- A. Glass and Mirrors: meet requirements of ASTM C 1036-85, "Specification for Flat Glass".
1. Type I, Class I-Clear.
  2. Quality: q2 Mirror or q1 Mirror select.
  3. Thickness: 0.16 inch minimum (Double Strength).
  4. Size: Field Verify.

DIVISION 9 - FINISHES

09250 - GYPSUM DRYWALL

PART I - GENERAL See DIVISION 1

- A. Tolerances: Not more than 1/16" difference in true plane at joints between adjacent boards before finishing. After finishing, joints shall not be visible. Not more than 1/8" in 10' (10 feet) deviation from true plane, plumb, level and proper relation to adjacent surfaces in finished work.

PART II - PRODUCTS

- A. Gypsum board:
1. Interior use: ASTM C 36, 1/2" thick regular, water resistant, and fire resistant types as required; U.S. Gypsum, Gold Bond Div. National Gypsum, Domett Gypsum or approved equal.
  - a. Provide waterproof gypsum board at all tubs and showers.
  - b. Provide 5/8" type 'X' gypsum board at garage-side surface of all walls and ceilings of attached garage which adjoin any living space, screwed 7" o.c. maximum. Firetape all joints. Smooth finish. Also Type 'X' gyp. bd. below all stairways.
- B. Fasteners: ASTM C 514 and ASTM C 646. Provide Type S bugle head screws at interior, cadmium plated at humid and exterior areas. Provide additional anchors and fasteners as required.
- C. Joint reinforcement: ASTM C 687 paper or fiberglass tape and ready-mixed vinyl compound.
- D. Accessories: Galvanized steel corner beads, casing beads, control joints; U.S. Gypsum 800 series as applicable.

PART III - EXECUTION

- A. Comply with ASTM C 840 and GA 216, "Recommended Specifications for the Application and Finishing of Gypsum Board". Fill wall cavities with insulation. Include blocking for accessories and similar items.
- B. Install boards vertically. Do not allow butt-to-butt joints and joints that do not fall over framing members.

09300 - TILE

PART I - GENERAL See DIVISION 1

- A. Provide and install ceramic and marble tile (coord. w/ Architect).
- B. Submit to Architect or Owner for approval samples, product data, mock-ups.
- C. DIVISION 1 - GENERAL REQUIREMENTS.

PART II - PRODUCTS

- A. Unglazed porcelain ceramic mosaic tile: 2" x 2" x 1/4" factory mounted, plain face, square edges except cushion edge at corner; Porcelain Ceramics by American Clean or approved equal, price range 3, color as selected by Owner.
- B. Glazed wall tile: 4 1/4" x 4 1/4" x 5/16", plain with modified square edges, factory mounted; Bright Glazed Tile by American Clean or approved equal, color as selected by Owner.
- C. Quarry Tile: 12" x 12" x 1/2", unglazed slip-resistant square edged tile; Dal Tile or approved equal, color as selected by Owner.
- D. Trim: Matching field tile color, size, texture; coved base.
- E. Setting Methods:
1. Floors or horizontal surfaces: Thick set latex Portland cement mortar over waterproof membrane or Latitcrete System as per manuf. recommendations.
  2. Walls: Thin set latex Portland cement mortar.
  3. Grout: Colored latex Portland cement grout.
- C. Quarry Tile: 12" x 12" x 1/2", unglazed slip-resistant square edged tile; Dal Tile or approved equal, color as selected by Owner.
- D. Trim: Matching field tile color, size, texture; coved base.
- E. Setting Methods:
1. Floors or horizontal surfaces: Thick set latex Portland cement mortar over waterproof membrane or Latitcrete System as per manuf. recommendations.
  2. Walls: Thin set latex Portland cement mortar.
  3. Grout: Colored latex Portland cement grout.

PART III - EXECUTION

- A. Comply with Tile Council of America and and ANSI Standard Specifications for Installation for substrate and installation required. Comply with manufacturer's instructions and recommendations.
- B. Lay tile in grid pattern with alignment grids. Layout to provide uniform joint widths and to minimize cutting; do not use less than 1/2 tile units.
- C. Provide sealant joints where recommended by TCA and approved by Designer.
- D. Grout and cure, clean and protect.

09550 - WOOD FLOORING (If applicable - coordinate with Owner)

PART I - GENERAL See DIVISION 1

- A. Provide finished wood flooring.
1. Wood strip flooring (coord. w/ Owner & Designer.
- B. Comply with recommendations of National Oak Flooring Manuf. Association and the American Parquet Association.
- C. DIVISION 1 - GENERAL REQUIREMENTS.

PART II - PRODUCTS

- A. Wood strip flooring: Select grade pine-sawn white oak, 25/32" thick, 2 1/4" face width with standard random lengths; tongue and groove edges; Bruce Hardwood Floors or approved equal.
1. Field finish: Sand to level using successively finer sandpaper; Benjamin Moore Benwood Paste Wood Filler or approved equal. Stain: 1 coat Benjamin Moore Benwood Architectural Penetrating Stain or approved equal. Varnish: 3 coats Benjamin Moore Satin Finish Varnish or approved equal.
- B. Trim and accessories: Provide wood trim, saddles, nosing, thresholds matching wood flooring.

PART III - EXECUTION

- A. Comply with National Oak Flooring Manufacturer's Association Installation Manual. Provide adequate expansion space.
- B. Restore damaged finishes. Clean and protect work from damage.

09650 - RESILIENT FLOORING

PART I - GENERAL See DIVISION 1

- A. Provide resilient flooring and base.
- B. Submit for approval samples, product data, extra stock.
- C. DIVISION 1 - GENERAL REQUIREMENTS.
- D. Provide materials and adhesives which do not contain asbestos.

PART II - PRODUCTS

- A. Sheet Flooring: (coord. the following tile with the Owner)
1. Vinyl sheet flooring: 0.085" overall gage, 0.050" vinyl wear layer; Custom Corlon by Armstrong World Industries, or approved equal.

PART III - EXECUTION

- A. Comply with manufacturer's instructions and recommendations. Install in proper relation to adjacent work.
- B. Prepare surfaces by cleaning, leveling and priming as required. Test adhesive for bond before general installation. Level to 1/8" in 10' tolerance.
- C. Sheet flooring: Install sheets with tight joints and pattern in adjoining areas running in the same direction. Layout to minimize seams as practical.
- D. Install accessories to minimize joints.
- E. Clean, polish, and protect.

09680 - CARPET

PART I - GENERAL See DIVISION 1

- A. Provide and install carpeting:
1. Carpet and pad for tackless installation.
- B. DIVISION 1 - GENERAL REQUIREMENTS.
- C. Submit for approval samples, product data, warranty, maintenance data, extra stock, proposed seaming layout.

PART II - PRODUCTS

- A. Carpet:
1. Manufacturer and Style: As approved by Owner.
  2. Color: As selected by Owner.
- B. Mounting:
1. Tackless on pad: a. As approved by Owner.
- C. Accessories:
1. Edge guard: Rubber or vinyl. a. Exceptions: 1) At tile use bullnose tile.
  2. Reducer strip: Vinyl or rubber.

PART III - EXECUTION

- A. Comply with recommendations of Carpet and Rug Institute "Specifier's Handbook".
- B. Prepare surfaces and install materials in accordance with manufacturer's instructions and approved submittals. Clean, patch, and level substrate. Install materials in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.
- C. Install edge guards and reducer strips as required; clean and protect materials during and after installation.

SECTION 07320

CLAY ROOF TILE

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Replacement of existing Clay roof tiles and roof system components if required and determined necessary.
- B. Underlayment.
- C. Related roof accessories.
- 1.5 QUALITY ASSURANCE
- A. Manufacturer Qualifications: Minimum five years documented experience producing concrete roof tile and member of Tile Roof Institute.
- B. Installer Qualifications: Minimum five years documented experience installing products specified in this section and/or supervision by a manufacturers authorized installation representative.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging with labels intact until ready for installation.
- B. Deliver products to project site in manufacturer's unopened pallets, labeled with data indicating compliance with specified requirements.
- C. Maintain dry storage area for products of this section until installation of products.

1.7 SEQUENCING

- A. Ensure that locating templates and other information required for installation of products of this section are furnished to affected trades in time to prevent interruption of construction progress.
- B. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.8 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
- B. Do not overload the roof. Distribute stacks of tile uniformly on roof at not greater than 12 inches (305 mm) in height.
- 1.9 WARRANTY
- A. 50-Year Limited Warranty is available on all MCA Tiles.
- 1.10 EXTRA MATERIALS
- A. Provide an additional 1 percent of installed roof tiles, but not less than one full square, for Owner's use in roof maintenance.
- C. Furnish extra materials packaged with protective covering for storage and identified with labels clearly describing contents.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: MCA Clay Roof Tile, which is located at: 1985 Sampson Ave.; Corona, CA 92879; Toll Free Tel: 800-736-6221; Tel: 951-736-9590 ; Fax: 951-736-6052; Email: request info (sales@mca-tile.com); Web: www.mca-tile.com
- B. Substitutions: As approved
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 CLAY ROOF TILE

- A. Clay Tile General:
1. Made with up to 59 percent recycled raw materials and are 100 percent recyclable.
  2. Class A fire rated.
  3. Cool Roof and Energy Star rated.
- B. One Piece "S" Mission Roofing Tile: Type I, ASTM C 1167 Grade 1 and ASTM E 108 (UL790), Class A.
1. Complies with Uniform Evaluation Report IAPMO ES 0356 (covers City of Los Angeles and is in lieu of ICC-ES), Florida Building Code - FL1109-R. Miami-Dade County Approval 12-0320.32 and TDI Approval RC-21.
  2. Size: 19 inches by 14-1/2 inches (483 mm by 368 mm)
  3. Exposed Size: 16 inches by 12 inches (408 mm by 305 mm) O.C.
  4. Weight per square: 788 lbs (38 kg/m2).
  5. Weight per piece: 10.5 lbs (4.8 kg).
  6. Pieces per square: 75 pcs (pieces per M2: 8.073 pcs).
  7. Color: Color to match existing unless otherwise determined by owner.

2.3 ACCESSORY MATERIALS

- A. Substrate Materials:
1. Nailer Boards: Decay resistant, nominal 2 inches (50 mm) by sufficient height to satisfy project conditions, not bowed or twisted.
- B. Underlayment:
1. No. 30 asphalt felt or equivalent complying with ASTM D 226, Type I.
  - C. Fasteners: Sized to penetrate deck minimum 3/4 inch (19 mm) or through thickness of deck or batten. 1. Minimum No. 11 gage, 5/16 inch-diameter-head (7.9 mm), corrosion-resistant nails.
  - D. Rake and Gable End: 1. Prefabricated Rake and Ridge tile. Choose to match tile profile and color.
  - E. Flashings: 1. Ribbed Valley Metal, minimum 0.016-inch (26 gauge galvanized sheet) corrosion resistant metal flashing.
  2. Other Flashing: At the juncture of the roof and vertical surfaces, flashing and counter-flashing shall be provided per roofing manufacturer's instructions, and when the flashing and counterflashing are of metal, they shall be not less than 0.019-inch (No. 26 galvanized sheet gage) corrosion-resistant metal.
  3. Plumbing Stacks and Other Pipes Penetrating Roofs as recommended by the manufacturer.
  - F. Mortar materials, plastic cement and sealant: Code approved adhesive suitable to bond to clay roof tile.
  1. Cement Mortar: ASTM C 270, Type M
  2. Sand: ASTM C 144.
  3. Portland cement: ASTM C 150, Type 1.
  4. Plastic cement: ASTM D 2822.
  5. Silicone sealant: ASTM D 1002.
  - G. Snow Retention: Provide as required per local code and snow loads for metal and concrete roofing decks.

- C. Fasteners: Sized to penetrate deck minimum 3/4 inch (19 mm) or through thickness of deck or batten.
1. Minimum No. 11 gage, 5/16 inch-diameter-head (7.9 mm), corrosion-resistant nails.
- D. Rake and Gable End:
1. Prefabricated Rake and Ridge tile. Choose to match tile profile and color.
- E. Flashings:
1. Ribbed Valley Metal, minimum 0.016-inch (26 gauge galvanized sheet) corrosion resistant metal flashing.
  2. Other Flashing: At the juncture of the roof and vertical surfaces, flashing and counter-flashing shall be provided per roofing manufacturer's instructions, and when the flashing and counterflashing are of metal, they shall be not less than 0.019-inch (No. 26 galvanized sheet gage) corrosion-resistant metal.
  3. Plumbing Stacks and Other Pipes Penetrating Roofs as recommended by the manufacturer.
  - F. Mortar materials, plastic cement and sealant: Code approved adhesive suitable to bond to clay roof tile.
  1. Cement Mortar: ASTM C 270, Type M
  2. Sand: ASTM C 144.
  3. Portland cement: ASTM C 150, Type 1.
  4. Plastic cement: ASTM D 2822.
  5. Silicone sealant: ASTM D 1002.
  - G. Snow Retention: Provide as required per local code and snow loads for metal and concrete roofing decks.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Verify surfaces are uniform free of ridges, warp or voids, smooth, clean and dry
- C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result under the project conditions.
- 3.3 INSTALLATION - GENERAL
- A. Install in accordance with manufacturer's instructions and the following:
1. IAPMO UES Evaluation Report 0356 - Clay Roof Tiles.
  2. IAPMO UES ER-2015 - TRI Concrete and Clay Tile Design Criteria for Cold and Snow Regions.
  3. TRI Cold & Snow Concrete and Clay Tile Design Criteria for Installation Manual (TRI Installation Manual).
- A. Install in accordance with manufacturer's instructions and the applicable building code.
1. Deck surfaces must be clean and dry prior to installation of underlayment. Foreign particles must be cleaned from all interlocking areas to ensure proper seating and to prevent water damming.
  2. Fascia boards or cant strips must be installed to properly elevate the first tile course.
- B. On vertical applications, and on extremely steep pitches where wind currents may cause lift:
1. Set the butt of each tile in a bead of the specified plastic cement or sealant, or provide stainless steel "Wind Locks" as required.
  2. Use plastic cement and sealant carefully, and avoid smearing the exposed tile surface.
  - 3) Completely and neatly fill and point up all voids.
- C. Visual Inspection: Avoid color patterning, checkerboarding, spotting, and stairstepping:
1. After the installation of each 80 roofing tiles, make a visual inspection from the ground level and at a distance from the building of about 40 feet (12 m).
  2. Verify that tile courses follow straight and true lines;
  3. Verify that color range is smooth with no abrupt changes.
  4. Make necessary corrections before proceeding with further installation.

3.5 CLEANING

- A. Remove all broken tile, debris and excess tile from roof.
- B. Sweep out tiles clean.

3.6 REPAIR AND REPLACEMENT

- A. Damaged Tile:
1. Break out damaged roof tile.
  2. Repair torn underlayment.
  3. Drive fastener flush.
  4. Apply minimum 3/8 inch (10 mm) by 2 inch (51 mm) bead of approved adhesive on tile in course below replacement tile.
  5. Immediately set replacement tile in position assuring proper contact.
- B. Damaged Small Valley and Hip Cuts:
1. Apply a minimum of 3/8 inch (10 mm) by 2 inch (51 mm) bead of approved adhesive at head of cut tile.
  2. Immediately set tile in course above in position assuring proper contact.
- 3.7 PROTECTION
- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion

09200 - EXTERIOR INSULATION & FINISH SYSTEM (EIFS)

PART I - GENERAL See DIVISION 1

- A. Provide EIFS for exterior walls, to match existing stucco finish and thickness.
1. Exterior Insulation & Finish System, for exterior use.
- B. DIVISION 1 - GENERAL REQUIREMENTS
- C. Contractor to provide submittal (deferred submittal) for EIFS system to Architect, then to city, for review and approval.

PART II - PRODUCTS

- A. Finish System: Per Manuf.'s instructions and recommendations.
1. Prepare finish coat for Top Coat Acrylic Finish (texture to be chosen by Owner).
  2. Color to be chosen by Owner.
- B. Provide submittals to Architect and to Local Jurisdiction that will meet IBC 1704.12 for a water management system, with a water resistive barrier, or provide special inspection for non-water management EIFS systems.
- C. Accessories: Galvanized steel corner beads, casing beads, control joints, expansion joints, trim.
- D. Bonding agent for patching: Compatible with substrate.
- E. Exterior rigid insulation per Manuf.'s instructions & recommendations.

PART III - EXECUTION

- A. Install EFIS in accordance with ASTM C 926 and in accordance with manufacturer's instructions.
- B. At patching, prepare surface to sound substrate, apply bonding agent and patching materials in accordance with manufacturer's instructions.
- C. Install metal trims at perimeters and joints. At scratch coat form full keys. At second and third coats, ensure tight contact between coats. Tool edges at windows, doors, other openings to small "V" to control spalling.
- D. Apply Top Coat per manufacturer's instructions and recommendations.
- E. Clean adjacent surfaces soiled during installation. Touch-up damaged surfaces. Protect work from damage.

09900 - PAINTING

PART I - GENERAL See DIVISION 1

- A. Provide surface preparation and painting for all unfinished interior and exterior surfaces, including electrical and mechanical equipment with shop primed surfaces.
- B. The use of paint containing more than the percent of lead by weight permitted by law is prohibited.
- C. First-line standard products for all systems by Benjamin Moore, Pratt and Lambert, Glidden, Sherwin-Williams, Devco, Howells, or approved equal.

PART II - PRODUCTS

- A. Exterior paint systems:
1. Concrete and masonry: N/A.
  2. Wood for opaque finish (walls): N/A.
  3. Wood for opaque finish (trim): Acrylic latex stain 2 coats.
  4. Wood for semi-transparent finish: N/A. Latex primer, 1 coat; interior latex (semi-gloss finish), 2 coats.
  5. Ferrous metal: Alkyd primer, 1 coat; alkyd enamel, gloss finish, 2 coats.
  6. Galvanized metal: N/A.
- B. Interior paint systems:
1. Concrete: N/A. Latex primer, 1 coat; interior latex (semi-gloss finish), 2 coats.
  2. Drywall (general): N/A. Latex primer, 1 coat; interior latex (semi-gloss finish), 2 coats.
  3. Drywall (Bath Room): Latex primer, 1 coat; interior latex (flat appearing finish), 2 coats.
  4. Wood opaque finish (walls): Latex primer, 1 coat; interior latex (flat finish), 2 coats.
  5. Wood opaque finish (trim): N/A.
  6. Wood transparent finish: Oil stain, 1 coat; sanding sealer, 1 coat; alkyd varnish (gloss finish), 2 coats.
  7. Ferrous metal: Alkyd metal primer, 1 coat; alkyd enamel (gloss finish), 2 coats.
  8. Garage (walls & ceiling): Latex primer, 1 coat; latex (semigloss finish), 2 coats.

PART III - EXECUTION

- A. Match approved mock-ups for color, texture, and pattern. Re-coat or remove and replace work which does not match or shows loss of adhesion. Clean-up, touch-up, and protect work.

DIVISION 10 - SPECIALTIES

SECTION 10310  
MANUFACTURED FIREPLACES  
PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Vent Free Gas Burning Manufactured Fireplaces.
- B. Direct Vent Gas Burning Manufactured Fireplaces.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
1. Preparation instructions and recommendations.
  2. Storage and handling requirements and recommendations.
  3. Installation methods, including: a. Fireplace unit rough opening dimensions, rough opening sizes for flue, and installation details.
  - b. Fireplace unit cabinet dimensions, clearances required from adjacent construction, and applicable regulatory agency approvals
- D. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
- E. Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for periodic checking and adjustment and periodic cleaning and maintenance of all components.

1.7 SEQUENCING

- A. Ensure that locating templates and other information required for installation of products of this section are furnished to affected trades in time to prevent interruption of construction progress.
- B. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.8 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.9 WARRANTY

- A. Provide manufacturer's limited lifetime warranty covering combustion chamber heat exchanger, stainless steel burner, logs, ceramic glass against thermal breakage, gold plated parts against tarnishing, porcelain enameled surfaces and aluminum extrusion trim.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Napoleon Fireplaces , which is located at: Wolf Steel USA 103 Miller Dr.; Crittenden, KY 41030; Toll Free Tel: 800-461-5681 ; Email: request info (gthomas@napoleonproducts.com); Web: www.napoleonfireplaces.com
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 VENT FREE GAS BURNING MANUFACTURED FIREPLACES (OPTION 1)

- A. General:
1. Comply with applicable building codes.
- B. Model: Plasma Fire VF31
1. Type: Vent free.
  2. Fuel type: a. Natural gas
  3. Dimensions: 43-5/16 inches wide by 28 inches high by 9-1/8 inches deep.
  4. BTU rating: 6,000 BTU (natural gas and propane).
  5. Fronts and Frame Finish: a. Painted metallic black.
  6. Mounting Cabinets Finish: a. Painted metallic black.
  7. Standard Features: a. MIRRO-FLAME Porcelain Reflective Radiant Panels
  8. Options: a. LED Accent Light Kit. b. Safety Barrier.
  9. Standard Features: a. Electronic Ignition

2.3 DIRECT VENT GAS BURNING MANUFACTURED FIREPLACES (OPTION 2)

- A. General:
1. Comply with applicable building codes.
  2. Comply with ANSI Z21.88/CSA 2.33.
  3. WHI listed.
  4. Safety Barriers are "Safety Barrier Approved".
- B. Model: Ascent Linear BL36
1. Type: Direct Vent.
  2. Fuel type: a. Natural gas
  3. Dimensions: a. 34-1/2 inches high by 35 inches wide by 16-1/4 inches deep.
  4. BTU rating: a. Up to 16,000 BTU (natural gas and propane).
  5. Standard Features: a. Flame heat adjustment. b. Safety Barrier. c. Prewired for wall switch. d. Glass ember bed.
  6. Options: a. Decorative Front: 3) 4-Sided Surround with painted black finish. b. MIRRO-FLAME Porcelain Reflective Radiant Panels. c. On/off or Modulating Remote with Digital Screen d. Shore fire media kit a. Decorative Front:

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- \*\* NOTE TO SPECIFIER \*\* Include the following paragraph if powered ventilators are provided. Delete if not required.
- C. Verify proper power supply and fuel source are available.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions, ANSI Z21.44 and the requirements of authorities having jurisdiction.
- B. Use manufacturer's guidelines for minimum clearances to combustibles, walls, and finishes.
- C. Set fireplace units plumb, level, and rigid
- D. Anchor all components firmly in position.
- E. Connect to natural gas system in accordance with NFPA 54.
- F. Upon completion of installation, visually inspect all exposed surfaces. Touch up scratches and abrasions with touch up paint recommended by the manufacturer; make imperfections invisible to the unaided eye from a distance of 5 feet.

3.4 PROTECTION

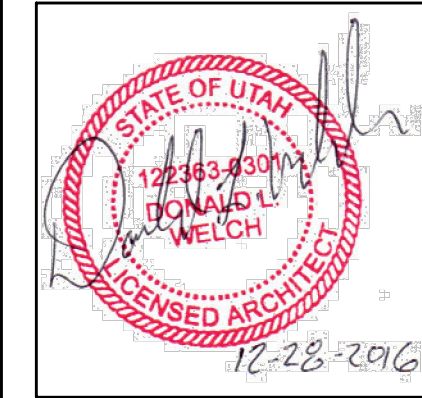
- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

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Architect  
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midvale utah 84047  
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consultant:



project:

Tenant Finish  
for  
Brighton Recovery  
Campus

4905, 4911, 4915, 4925,  
4931, 4953 South 900 East  
Salt Lake County, Utah

date

DECEMBER 28, 2016

revisions

				JANUARY 3, 2017
				SECOND SUBMITTAL FOR
				EACH SEPARATE BUILDING PARCEL
				JANUARY



10800 - TOILET ACCESSORIES

PART I - GENERAL

See DIVISION 1

- A. Provide and install toilet accessories.
- B. DIVISION 1 - GENERAL REQUIREMENTS
- C. Submit for approval samples, product data, accessory schedule.

PART II - PRODUCTS

- A. Units: Stainless steel fabrication with AISI No. 4 bright directional polish finish; Bobrick Washroom Equipment, Inc. or approved equal.
- B. Mounting:
  - 1. Surface Mounted.
  - 2. Semi-recessed.
- C. Types and quantities:
  - 1. Toilet tissue dispenser, double roll.
  - 2. Towel bars.

PART III - EXECUTION

- A. Restore damaged finishes and test for proper operation. Clean and protect from damage.

11450 - RESIDENTIAL EQUIPMENT

RESIDENTIAL APPLIANCES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Residential Appliances:
  - 1. Refrigeration.
  - 2. Cooking products.
  - 3. Microwave ovens.
  - 4. Dishwashers.
  - 6. Food waste disposers.
  - 7. Clothes care.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
  - 1. Model number and selected options for each appliance.
  - 2. Preparation instructions and recommendations.
  - 3. Storage and handling requirements and recommendations.
  - 4. Installation methods.
  - 5. List of maintenance parts.

1.5 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with referenced standards and the Americans with Disabilities Act as applicable for fixtures for the disabled.
- B. Energy Rating: Provide appliances with the EPA Energy Star label where applicable.
- C. Coordinate rough-in requirements with adjacent construction. Coordinate components and fittings to ensure compatible parts are installed.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.

1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.8 WARRANTY

- A. Provide manufacturer's standard written limited one-year warranty for each type of appliance specified.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: GE Appliances, which is located at: 4000 Buichel Bank Rd., Louisville, KY 40225; Toll Free Tel: 800-628-2000; Email: request info (tyler.martin@ge.com ); Web: www.geappliances.com | www.geappliances.com/pro
- B. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 REFRIGERATION

- A. Refrigerators and Freezers: As manufactured by GE Appliances, as determined by Owner.

2.3 COOKING PRODUCTS

- A. Built-In Ovens: Models, standard accessories/kits and custom accessories/kits as manufactured by GE Appliances, as determined by Owner.
- C. Built-In Cooktops: Models, standard accessories/kits and custom accessories/kits as manufactured by GE Appliance, as determined by Owner..
- E. Venting Systems: Models, standard accessories/kits and custom accessories/kits as manufactured by GE Appliances, as determined by Owner.

2.4 MICROWAVE OVENS

- A. Microwave Ovens: Models, standard accessories/kits and custom accessories/kits as manufactured by GE Appliances, as determined by Owner.

2.5 DISHWASHERS

- A. Dishwashers: Models, standard accessories/kits and custom accessories/kits as manufactured by GE Appliances, as determined by Owner.

2.6 CLOTHES CARE

- A. Clothes Care: Models, standard accessories/kits and custom accessories/kits as manufactured by GE Appliances, as determined by Owner.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared. Coordinate rough-in with appliance sizes and utility requirements.

- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Assemble appliances and trim and install in accordance with manufacturer's instructions and the following:
  - 1. Securely mount to substrate.
  - 2. Install appliances plumb and level and in proper relationship to adjacent construction.
  - 3. Connect appliances to building utility, supply and waste systems as applicable.
  - 4. Test for proper operation and drainage. Adjust until proper operation is achieved.

3.4 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

\*\* NOTE TO SPECIFIER \*\* Delete paragraph below if data sheets from the GE website are not attached.

3.5 APPLIANCE DATA SHEETS

- A. Refer to the manufacturer's data sheets as attached to this Section for required features and additional requirements.

DIVISION 15 - MECHANICAL

15400 - PLUMBING (coordinate with Plumbing Drawings)

PART I - GENERAL

and drawings) See DIVISION 1

- A. Provide plumbing systems including supply, waste and vent systems for:
  - 1. Bath and toilet rooms.
  - 2. Kitchen.
  - 3. Utility room.
  - 4. Water heaters.
  - 5. Floor drains.
  - 6. Access panels.
- B. DIVISION 1 - GENERAL REQUIREMENTS
- C. Coordinate with Owner's room uses to provide adequate system for all contract areas.
- D. Coordinate location of plumbing systems to avoid interference with location of structure and other building systems. Notify Owner prior to construction of conflicts which cannot be resolved.
- E. Arrangement of systems indicated on the drawings is diagrammatic, and indicates the minimum requirements for plumbing work. Site conditions shall determine the actual arrangement of runs, bends, offsets, and similar items. Take field measurements before fabrication. Be responsible for accuracy of dimensions and layout. Overhead piping shall be laid out to obtain maximum head room.

PART II - PRODUCTS (coord. w/ plumbing notes & dwgs.)

- A. Provide plumbing systems' components and all required accessories including shut-offs and clean-outs. Provide components which prevent back-siphonage or cross connections.
- B. Sanitary, waste and vent piping: Schedule 40 A.B.S. to street. Sewage disposal: Public; House drain (inside): Schedule 40 A.B.S.
- C. Hot and cold water piping: Supply lines under slab shall be type "L" seamless hard drawn copper tubing assembled with solder fittings. Lines above slab shall be type "M" support piping with grade to drain to drainoff cocks. Service from meter to house shall be 3/4" (unless utility co. requires otherwise) copper.
- D. Water supply: Public. 1" (one inch) copper.
- E. Water Meter size: 3/4" (three quarter inch).
- F. Hangers: For water piping, provide adjustable wrought iron copper plated hangers at 6' intervals maximum. Provide hangers to allow for full thickness of insulation.
- G. Covering and insulation (Owner's option): For domestic hot water piping provide 1/2" flexible foamed tubing by Owens Corning or Armstrong 1/2" Armaflex or approved equal. Seal joints vapor tight. Insulate valves and fittings including water service piping with equal thickness of pipe insulation. Provide 18 gauge protection saddles between insulation and pipe hangers. comply with fire hazard regulations. For water piping, provide adjustable wrought iron copper plated hangers at 6' intervals maximum. Provide hangers to allow for full thickness of insulation.
- H. Valves and shut-offs: Full size bronze gate valves for hot and cold water branches. provide drainage valves. Provide units by Hammond, Jenkins, Nilco or approved equal.
- I. Hose bibbs: Anti-siphon hose bibbs by Woodford or approved equal.
- J. Floor drains and cleanouts: Units with bronze strainer and copper flashing by Zurn or approved equal.
- K. Provide pressure reducing valve if required by local jurisdiction.
- L. Domestic water mixing valve: N/A.
- M. Water heater: (1) Domestic gas water heaters, quick recovery 100 degree rise, 100 gallon capacity. Glass lined storage type for utility service at site. Provide baked enamel steel jacket, fiberglass insulation, and UL flame retention burner; 10 year warranty.
- N. Access panels: Metal units with locks by Karp, Milcor, Nystrom, or approved equal. Configuration and trim as required by finish wall surface or trimmed wood panel may be acceptable with Owner's approval.
- O. Plumbing Fixtures: (coordinate with plumbing schedules)
- P. Gas piping to furnaces, water heater(s), and fireplace(s), and connection to meter: Carbon , Schedule 40 black steel pipe, ASTM A 53, Grade A.
- Q. Provide pressure regulator at water main shut-off valve, with copper ground from electrical service attached each side of regulator.

PART III - EXECUTION

- A. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials in proper relation with adjacent construction and with uniform appearance for exposed work. Coordinate with work of other sections. Comply with applicable regulations and building code requirements.
- B. Support piping properly. Pitch to drain points. Install with pipe expansion loops, mechanical expansion joints, and anchors.
- C. Install shut-off valves on each piece of equipment on both hot and cold water supply.
- D. Clearly label all valves and components.
- E. Sterilize water distribution system. Flush and test all systems for proper operation. Adjust system to prevent water hammer.
- F. Install gas piping in accordance with local gas utility company regulations and specifications.
- G. Restore damaged finishes. Clean and protect work from damage.
- H. Instruct Owner in proper operation of systems.
- I. Install steam room equipment (if applicable) per manufacturer's requirements and instructions.

15500 - HEATING, VENTILATING, & AIR CONDITIONING

(coordinate with mechanical drawings and notes)

PART I - GENERAL

See DIVISION 1

- A. Provide and install mechanical systems including:
  - 1. Ventilating system including fans, sheet metal work, registers, grilles and diffusers.
  - 2. Exhaust system for kitchen, kitchenettes, wet bar, and laundry equipment.
  - 3. Air conditioning system (optional-verify w/ Owner).
  - 4. Piping distribution system and insulation.
  - 5. Temperature controls.
  - 6. Testing, adjusting and balancing.
- B. Coordinate with Owner's room uses to provide adequate system for all contract areas.
- C. Coordinate location of mechanical systems to avoid interference with location of other systems. Notify Owner prior to construction of conflicts which cannot be resolved.
- D. DIVISION 1 - GENERAL REQUIREMENTS.
- E. Arrangement of systems indicated on the drawings is diagrammatic, and indicates the minimum requirements for mechanical work. Be responsible for accuracy of dimensions and layout. Overhead ductwork shall be laid out to obtain maximum head room.

PART II - PRODUCTS (coord. w/ mech. dwgs. & sched's)

- A. Valves: Provide valves required by service intended including gate, globe, check, and ball valves. Provide valves by Kennedy, Crane, Nilco, or approved equal.
- B. Hangers and supports: Comply with ANSI B31.1.
- C. Convector: Copper tubes with aluminum fins, 16 gauge steel front and top panels by Trane, Airtherm or approved equal.
- D. Sheet metal work and accessories: Comply with "SMACNA Duct Manual and Sheet Metal Construction for Ventilating and Air Conditioning Systems".
- E. Fans and air handling units:
  - 1. (1) 80% or 90% efficient furnaces (Owner's option) designed for service intended by Carrier, Trane, Payne or approved equal.
  - 2. Air conditioning system (Owner's option).
- F. Fan coil units: 22 gauge galvanized steel with seamless copper tube and aluminum fin coil by Trane, Carrier, Airtherm or approved equal.
- G. Grilles and registers: Units with approved face and frame design, gaskets, and baked enamel finish by Agitair, Titus or approved equal.
- H. Controls: Automatic temperature control system with thermostats as required, by Honeywell, Johnson Controls or approved equal.
- I. Mechanical subcontractor shall provide ducting of all exhaust fans, range hoods and dryer vents to exterior (flex ducting allowable only for bath exhausts).
- J. Mechanical subcontractor shall size furnace and all plenums, ducts, registers, vents, flues, etc.
- K. Provide (2) combustion air vents to (each) furnace; (1) no lower than 12" below ceiling, and (1) no higher than 12" above floor.

PART III - EXECUTION

- A. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials in proper relation with adjacent construction and with uniform appearance for exposed work. Coordinate with work of other sections. Comply with applicable regulations and building code requirements.
- B. Install ductwork in accordance with SMACNA recommendations. Seal duct seams with sealer. Provide splitters and balancing dampers. Provide fire dampers and automatic smoke and fire dampers where required. Provide flexible connectors and inlet and discharge connections. Clean before testing and balancing.
- C. Clearly label and tag all components.
- D. Test and balance all systems for proper operation.
- E. Restore damaged finishes. Clean & protect work from damage.
- F. Instruct Owner in proper operation of systems.

DIVISION 16 - ELECTRICAL

16000 - ELECTRICAL (coord. w/ elec. dwgs. & notes)

PART I - GENERAL

See DIVISION 1

- A. Provide electrical systems including:
  - 1. Power.
  - 2. Lighting.
  - 3. Cable TV System (optional)
  - 4. Telephone.
  - 5. Security System (coordinate w/ Owner).
  - 6. Smoke Detectors.
- B. DIVISION 1 - GENERAL REQUIREMENTS
- C. Include primary service, transformers, distribution center, grounding, power and lighting panels, wiring, outlet boxes, receptacles, lighting fixtures, switches, conduits, and raceways and all accessories.
- D. Provide telephone and data outlets with cutout, box and pull string only.
- E. Service panel shall be 200 amp, and shall comply with NEC 110-16.
- F. Coordinate with Owner's room uses to provide adequate system for all contract areas.
- G. Coordinate location of ductwork and to avoid interference with location of designated lighting fixture locations. Notify Owner prior to construction of conflicts which cannot be resolved.
- H. Coordinate schedule of telephone outlet completion with Owner's communications requirements and installer as applicable.
- I. Arrangement of systems indicated on the drawings is diagrammatic, and indicates the minimum requirements for electrical work. Site conditions shall determine the actual arrangement of conduits, boxes, and similar items. Take field measurements before fabrication. Be responsible for accuracy of dimensions and layout.
- J. Comply with the National Electrical Code and applicable local regulations.

PART II - PRODUCTS (coord. w/ elec. drawings & notes)

- A. Conduit: At service panel only.
- B. Exposed metal raceways: N/A.
- C. Boxes: Plastic or metal.
- D. Conductors and wiring: Romex or equal.
- E. Wiring devices: Receptacles, lighting switches, ground fault receptacles, dimmers, and coverplates as required. Color: Standard almond.
- F. All electrical outlets in firewall at garage shall be GFCI in metal boxes.

PART III - EXECUTION

- A. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials in proper relation with adjacent construction and with uniform appearance for exposed work. Coordinate with work of other sections. Comply with applicable regulations and building code requirements.
- B. Comply with National Electrical Code and building code requirements. Maintain continuity of circuits required to supply new equipment in service.
- C. Test all systems for proper operation. Restore damaged finishes. Clean and protect work from damage.
- D. Smoke detectors shall comply with UBC 43-6, shall be wired in series, and shall be placed a minimum of 36" from nearest duct opening and within 12" of ceiling.
- E. Provide ground fault interruptor (GFI) circuits to all exterior outlets and all interior outlets within 72" of water source.
- F. Service grounding shall be a minimum of (20) linear feet of #4 copper conductor, placed in footing with a minimum clearance of 2".
- G. Interior metal water piping shall be grounded by electrically continuous bonding with a minimum #4 copper conductor connected to the grounding electrode conductor at the service panel. Bridge over pressure reducing valve (if installed).
- H. Electrician shall pre-wire for blower unit at all fireplace locations and pushbutton control(s) for automatic garage door opener(s).

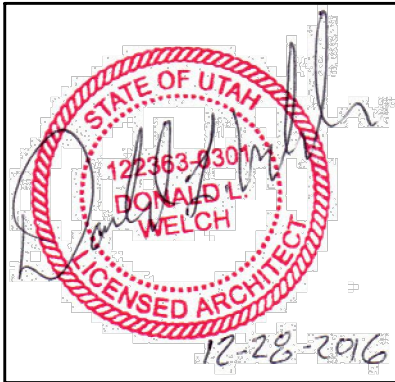
Donald L. Welch  
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THE DESIGNS SHOWN AND DESCRIBED HEREIN INCLUDING ALL TECHNICAL DRAWINGS, GRAPHIC REPRESENTATION & MODELS THEREOF, ARE PROPRIETARY & CAN NOT BE COPIED, DUPLICATED, OR COMMERCIALY EXPLOITED IN WHOLE OR IN PART WITHOUT THE SOLE AND EXPRESS WRITTEN PERMISSION FROM DONALD L. WELCH ARCHITECT

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consultant:



project:

Tenant Finish  
for  
Brighton Recovery  
Campus  
4905, 4911, 4915, 4925,  
4931, 4953 South 900 East  
Salt Lake County, Utah

date

DECEMBER 28, 2016

revisions

- JANUARY 3, 2017 SECOND SUBMITTAL FOR EACH SEPERATE BUILDING PARCEL
- JANUARY 6, 2017 ADDENDUM #2-BUILDING 'C'
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- BUILDING 'F', 'B', 'C', 'D', 'E'
- MARCH 20, 2017 ADDENDUM #8-BUILDING 'A'
- BUILDING 'F'

data  
project no:  
drawn by:  
checked by:  
title

SPECIFICATIONS

sheet

A0 4





LAYTON  
Phone: 801.547.1100

TOOELE  
Phone: 435.843.3590

CEDAR CITY  
Phone: 435.865.1453

**RICHFIELD**  
Phone: 435.896.2983

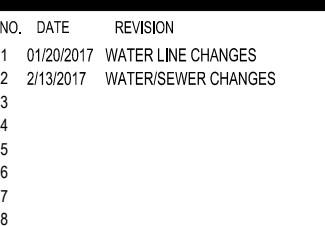
FOR

**CONTACT:**

PHONE:

**BRIGHTON RECOVERY CENTER**

4895 S 900 E  
SALT LAKE COUNTY, UTAH



## UTILITY PLAN

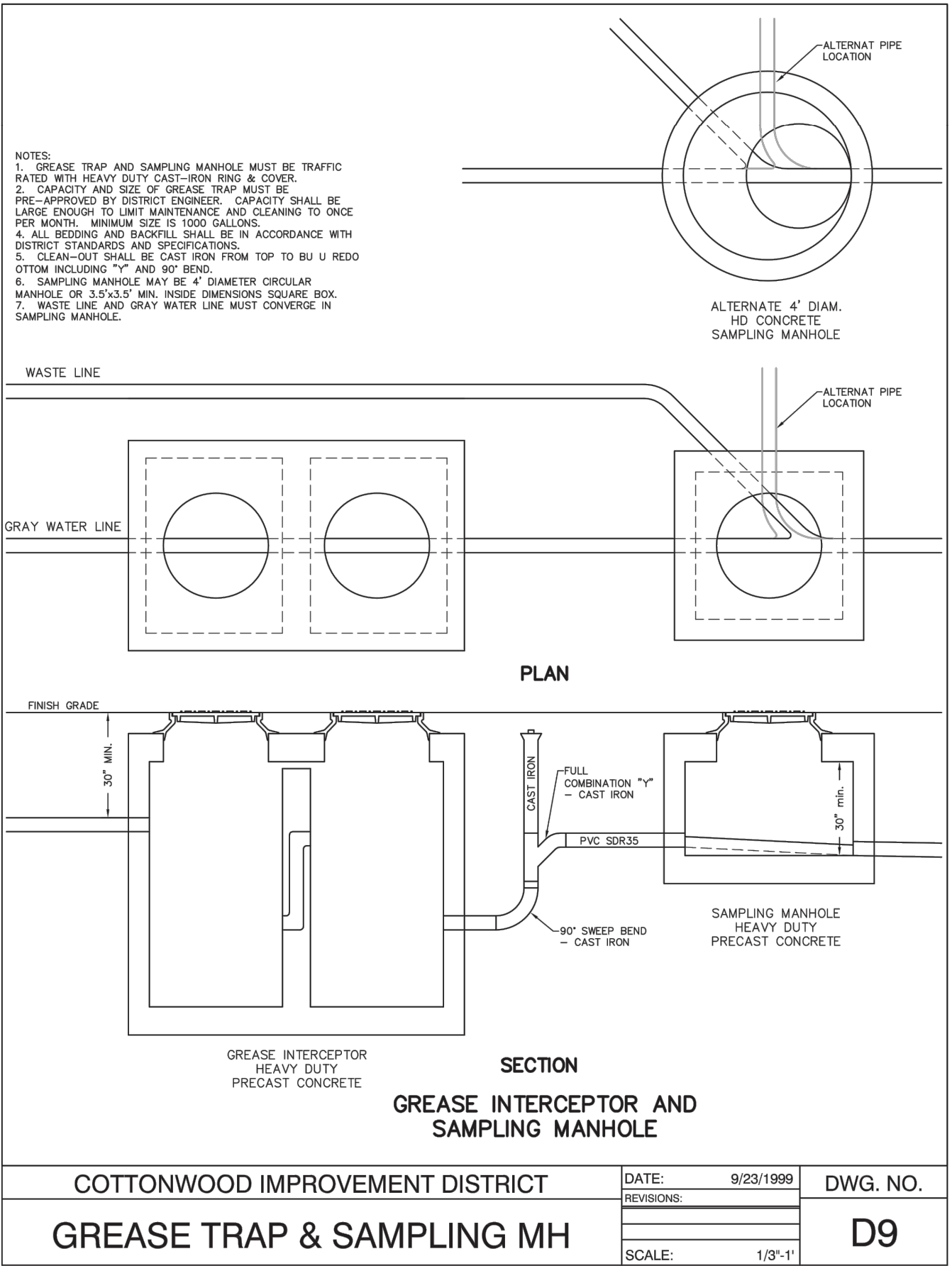
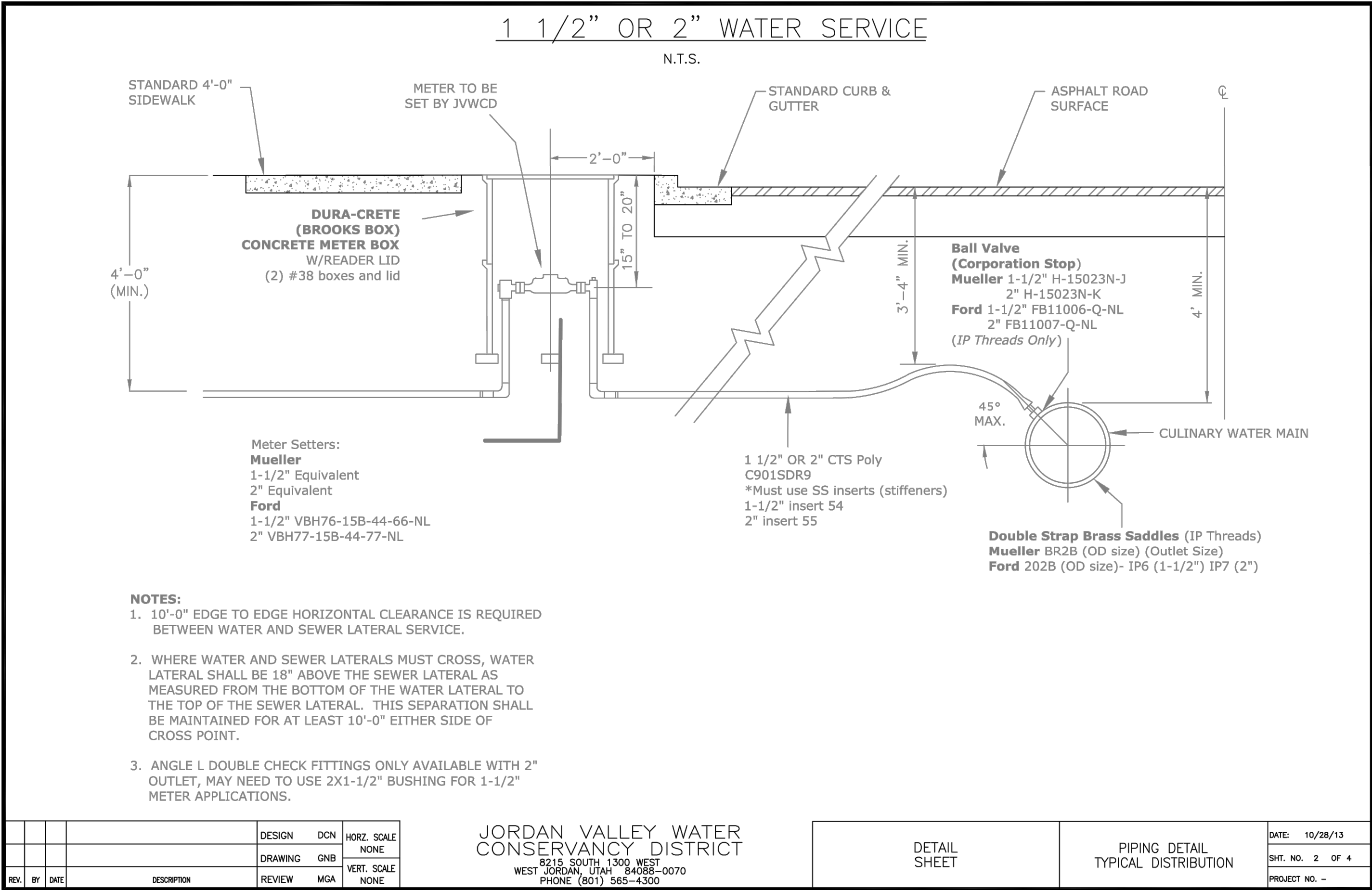
PROJECT NUMBER	PRINT DATE
7227	2/13/17

DRAWN BY  
M. BUDGIE

PROJECT MANAGER  
D. JENKINS

# C-100





1 1 1/2" OR 2" WATER SERVICE

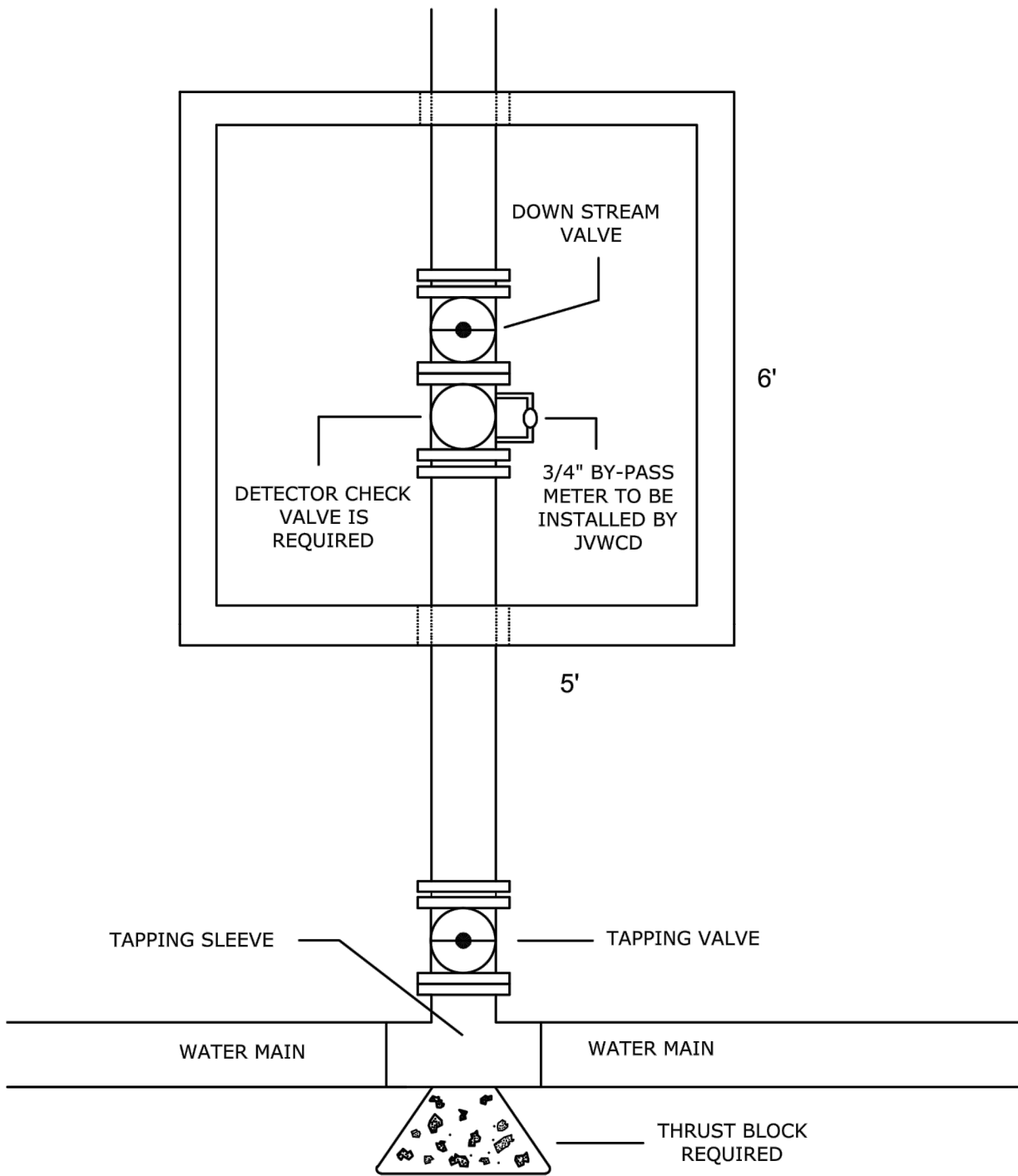
SCALE: NONE

2 GREASE TRAP & SAMPLING MANHOLE

SCALE: NONE

GENERAL NOTES

- All taps are to be hot-tapped only. No hot taps will be allowed on Friday. A minimum of 24 hours notice is required prior to the tap.
- A down stream valve is required inside the fireline box.
- The tapping valve can be used as the upstream valve.
- The tapping valve must have a slip type valve box and must be set to finish grade.
- Floor must have a minimum of 6" of gravel spread evenly throughout.
- All knock-outs for pipe coming into and going out of the box must be cement grouted once pipe is in place.
- All bolts & nuts upstream of the box must be greased and wrapped. All bolts will be coated with an acceptable thread lubricant prior to installation.
- Standard size 24" ring and lid is required for vault entrance.
- Typical fireline vault is to be a minimum of 5'x6' o.d. in size with gravel bottom.
- A 14-gauge underground rated locating wire must be laid with the pipe if using C-900.



3 TYPICAL FIRELINE BOX DETAIL

SCALE: NONE



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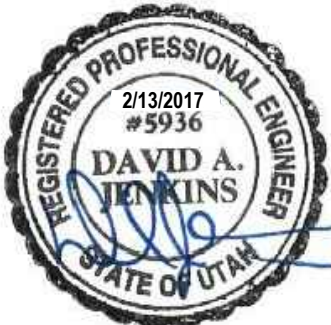
FOR:

CONTACT:

PHONE:

BRIGHTON RECOVERY CENTER

4895 S 900 E  
SALT LAKE COUNTY, UTAH



NO.	DATE	REVISION	BY
1	01/20/2017	WATER LINE CHANGES	MSB
2		ADDENDUM #6	
3			
4			
5			
6			
7			
8			

DETAILS

PROJECT NUMBER  
7227

PRINT DATE  
2/13/17

DRAWN BY  
M. BUDGE

CHECKED BY

PROJECT MANAGER  
D. JENKINS

C-200







ASPHALT PAVING SPECIFICATIONS	
PART 1 - GENERAL	
1.1	SUMMARY
A.	Section Includes: <div><div>1.</div><div>Hot-mix asphalt paving overlay.</div><div>2.</div><div>Pavement-marking paint.</div></div>
1.2	PROJECT CONDITIONS
A.	Environmental Limitations: Do not apply asphalt materials if subgrade is wet or excessively damp, if rain is imminent or expected before time required for adequate cure, or if the following conditions are not met: <div><div>1.</div><div>Asphalt Surface Course: Minimum surface temperature of <b>60 deg F (15.6 deg C)</b> at time of placement.</div></div>
B.	Pavement-Marking Paint: Proceed with pavement marking only on clean, dry surfaces and at a minimum ambient or surface temperature of <b>[40 deg F (4.4 deg C) for oil-based materials] [55 deg F (12.8 deg C) for water-based materials]</b> , and not exceeding <b>95 deg F (35 deg C)</b> .
PART 2 - PRODUCTS	
2.1	AGGREGATES
A.	Coarse Aggregate: ASTM D 692, sound; angular crushed stone, crushed gravel, or cured, crushed blast-furnace slag.
B.	Fine Aggregate: <b>[ASTM D 1073] [or] [AASHTO M 29]</b> , sharp-edged natural sand or sand prepared from stone, gravel, cured blast-furnace slag, or combinations thereof.
C.	Mineral Filler: <b>[ASTM D 242] [or] [AASHTO M 17]</b> , rock or slag dust, hydraulic cement, or other inert material.
2.2	ASPHALT MATERIALS
A.	Asphalt Binder: AASHTO M 320 or AASHTO MP 1a, <b>[PG 70-22]</b>
B.	Tack Coat: <b>[ASTM D 977] [or] [AASHTO M 140]</b> emulsified asphalt, or <b>[ASTM D 2397] [or] [AASHTO M 208]</b> cationic emulsified asphalt, slow setting, diluted in water, of suitable grade and consistency for application.

2.3	AUXILIARY MATERIALS
A.	Pavement-Marking Paint: MPI #32 Alkyd Traffic Marking Paint. <div><div>1.</div><div>Color: <b>[Yellow]</b>.</div></div>
2.4	MIXES
A.	Hot-Mix Asphalt: Dense, hot-laid, hot-mix asphalt plant mixes approved by authorities having jurisdiction <del>;</del> <b>designed according to procedures in AI MS-2, "Mix Design Methods for Asphalt Concrete and Other Hot-Mix Types"</b> ; and complying with the following requirements: <div><div>1.</div><div>Provide mixes with a history of satisfactory performance in geographical area where Project is located.</div></div>

PART 3 - EXECUTION	
3.1	EXAMINATION
A.	Proceed with paving only after unsatisfactory conditions have been corrected.
3.2	COLD MILLING
A.	Clean existing pavement surface of loose and deleterious material immediately before cold milling. Remove existing asphalt pavement by cold milling to grades and cross sections indicated. <div><div>1.</div><div>Mill to a depth of <b>[1-1/2 inches (38 mm)]</b>.</div></div>
3.3	PATCHING
A.	Hot-Mix Asphalt Pavement: Saw cut perimeter of patch and excavate existing pavement section to sound base. Excavate rectangular or trapezoidal patches, extending <b>12 inches (300 mm)</b> into adjacent sound pavement, unless otherwise indicated. Cut excavation faces vertically. Remove excavated material. Recompact existing unbound-aggregate base course to form new subgrade.
B.	Tack Coat: Apply uniformly to vertical surfaces abutting or projecting into new, hot-mix asphalt paving at a rate of <b>0.05 to 0.15 gal./sq. yd. (0.2 to 0.7 L/sq. m)</b> . <div><div>1.</div><div>Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.</div><div>2.</div><div>Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.</div></div>
C.	Patching: Fill excavated pavements with hot-mix asphalt base mix for full thickness of patch and, while still hot, compact flush with adjacent surface.

3.4	SURFACE PREPARATION
A.	General: Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces. Ensure that prepared subgrade is ready to receive paving.
B.	Tack Coat: Apply uniformly to surfaces of existing pavement at a rate of <b>0.05 to 0.15 gal./sq. yd. (0.2 to 0.7 L/sq. m)</b> . <div><div>1.</div><div>Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.</div><div>2.</div><div>Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.</div></div>
3.5	HOT-MIX ASPHALT PLACING
A.	Machine place hot-mix asphalt on prepared surface, spread uniformly, and strike off. Place asphalt mix by hand to areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section, and thickness when compacted. <div><div>1.</div><div>Spread mix at minimum temperature of <b>250 deg F (121 deg C)</b>.</div><div>2.</div><div>Regulate paver machine speed to obtain smooth, continuous surface free of pulls and tears in asphalt-paving mat.</div></div>
B.	Place paving in consecutive strips not less than <b>10 feet (3 m)</b> wide unless infill edge strips of a lesser width are required.
C.	Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot-mix asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.
3.6	JOINTS
A.	Construct joints to ensure a continuous bond between adjoining paving sections. Construct joints free of depressions, with same texture and smoothness as other sections of hot-mix asphalt course. <div><div>1.</div><div>Clean contact surfaces and apply tack coat to joints.</div><div>2.</div><div>Offset longitudinal joints, in successive courses, a minimum of <b>6 inches (150 mm)</b>.</div><div>3.</div><div>Offset transverse joints, in successive courses, a minimum of <b>24 inches (600 mm)</b>.</div><div>4.</div><div>Construct transverse joints at each point where paver ends a day's work and resumes work at a subsequent time. Construct these joints using either "bulkhead" or "papered" method according to AI MS-22, for both "Ending a Lane" and "Resumption of Paving Operations."</div></div>
3.7	COMPACTION
A.	General: Begin compaction as soon as placed hot-mix paving will bear roller weight without excessive displacement. Compact hot-mix paving with hot, hand tampers or with vibratory-plate compactors in areas inaccessible to rollers.

1.	Complete compaction before mix temperature cools to <b>185 deg F (85 deg C)</b> .
B.	Breakdown Rolling: Complete breakdown or initial rolling immediately after rolling joints and outside edge. Examine surface immediately after breakdown rolling for indicated crown, grade, and smoothness. Correct laydown and rolling operations to comply with requirements.
C.	Intermediate Rolling: Begin intermediate rolling immediately after breakdown rolling while hot-mix asphalt is still hot enough to achieve specified density. Continue rolling until hot-mix asphalt course has been uniformly compacted to the following density: <div><div>1.</div><div>Average Density: 92 percent of reference maximum theoretical density according to ASTM D 2041, but not less than 90 percent nor greater than 96 percent.</div></div>
D.	Finish Rolling: Finish roll paved surfaces to remove roller marks while hot-mix asphalt is still warm.
E.	Edge Shaping: While surface is being compacted and finished, trim edges of pavement to proper alignment. Bevel edges while asphalt is still hot; compact thoroughly.
F.	Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.
G.	Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

3.8	INSTALLATION TOLERANCES
A.	Pavement Thickness: Compact each course to produce the thickness indicated within the following tolerances: <div><div>1.</div><div>Base Course: Plus or minus <b>1/2 inch (13 mm)</b>.</div><div>2.</div><div>Surface Course: Plus <b>1/4 inch (6 mm)</b>, no minus.</div></div>
3.9	PAVEMENT MARKING
A.	Do not apply pavement-marking paint until layout, colors, and placement have been verified with Architect.
B.	Allow paving to age for <b>[30]</b> days before starting pavement marking.
C.	Sweep and clean surface to eliminate loose material and dust.
D.	Apply paint with mechanical equipment to produce pavement markings, of dimensions indicated, with uniform, straight edges. Apply at manufacturer's recommended rates to provide a minimum wet film thickness of <b>15 mils (0.4 mm)</b> . <div><div>1.</div><div>Broadcast glass beads uniformly into wet pavement markings at a rate of <b>6 lb/gal. (0.72 kg/L)</b>.</div></div>

3.10	FIELD QUALITY CONTROL
A.	Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.
B.	Replace and compact hot-mix asphalt where core tests were taken.
C.	Remove and replace or install additional hot-mix asphalt where test results or measurements indicate that it does not comply with specified requirements.
3.11	DISPOSAL
A.	Except for material indicated to be recycled, remove excavated materials from Project site and legally dispose of them in an EPA-approved landfill.

CLARIFICATION NOTES FOR ALL 6 BUILDINGS (ADDENDUM #4):

1 - COMMERCIAL KITCHEN EQUIPMENT WILL BE SUPPLIED AND INSTALLED BY "STANDARD RESTAURANT SUPPLY". MR. TERRILL ROE. THEY WILL BE PROVIDING AND INSTALLING ALL OF THE EQUIPMENT, INCLUDING THE HOOD VENTILATION SYSTEMS. THEY WILL ALSO CONNECT TO THE GAS, ELECTRICAL AND PLUMBING WHERE TERMINATED AT THE WALLS, FLOOR AND CEILING, BY OTHER SUBCONTRACTOR WORK.

2 - THE OWNER SHALL PROVIDE ALL TELEVISION SETS, LOCATED IN THE COMMON AREAS OF THE RESIDENTIAL AREAS, AND THE COMMUNITY CENTER. THE CONTRACTOR SHALL PROVIDE AND INSTALL THE SUPPORT AND BLOCKING, AT THE WALLS WHERE THE TELEVISIONS WILL BE INSTALLED.

3 - CONTRACTOR IS TO PROVIDE AN ALLOWANCE, IN THEIR BID, FOR PROVIDING AND INSTALLING THE RESIDENTIAL KITCHEN EQUIPMENT IN EACH OF THE RESIDENTIAL COMMON AREAS. PROVIDE AN ALLOWANCE FOR "MAYTAG" OR "GENERAL ELECTRIC" APPLIANCES, OR APPROVED EQUIVALENT.

4 - CONTRACTOR IS TO PROVIDE AN ALLOWANCE, IN THEIR BID, INCLUDING A DESIGN FEE, FOR THE BASE AND WALL CABINETS THROUGHOUT THE ENTIRE 6 BUILDINGS. CABINETS TO BE GRADE 1, MAPLE CABINET DOORS AND DRAWERS, WITH GRADE 1 STAIN FINISH. WHITE MELAMINE FACED INTERIOR CABINET DOORS, SHELVES AND DRAWERS. CABINET HARDWARE TO BE "AMEROCK" CABINET HARDWARE OR EQUIVALENT. COUNTER TOPS TO BE GRANITE OR STONE, GRADE 1.

THE FOLLOWING ROOMS SHALL HAVE BASE CABINETS ONLY, OR BASE AND WALL CABINETS,, WITH MIXED CABINETS AND DRAWERS:

<div><div>A - RESIDENT LAUNDRY A101 (BASE CABINET ONLY)</div><div>B - KITCHEN A115 (BASE AND WALL CABINETS, WALL CABINETS NOT SHOWN ON ORIGINAL SUBMITTAL SETS, DELETE CROWN MOLDING AT WALL CABINETS)</div><div>C - RESIDENT LAUNDRY A127 (BASE CABINET ONLY)</div><div>D - KITCHEN A132 (BASE AND WALL CABINETS, WALL CABINETS NOT SHOWN ON ORIGINAL SUBMITTAL SETS, DELETE CROWN MOLDING AT WALL CABINETS)</div></div>
<div><div>E - RESIDENT LAUNDRY B101 (BASE CABINET ONLY)</div><div>F - KITCHEN B115 (BASE AND WALL CABINETS, WALL CABINETS NOT SHOWN ON ORIGINAL SUBMITTAL SETS, DELETE CROWN MOLDING AT WALL CABINETS)</div><div>G - RESIDENT LAUNDRY B125 (BASE CABINET ONLY)</div><div>H - KITCHEN B129 (BASE AND WALL CABINETS, WALL CABINETS NOT SHOWN ON ORIGINAL SUBMITTAL SETS, DELETE CROWN MOLDING AT WALL CABINETS)</div></div>

<div><div>I - LAB C111 (BASE AND WALL CABINETS, WITH LOCKS ON BOTH CABINETS AND DRAWERS, WALL CABINETS NOT SHOWN ON ORIGINAL SUBMITTAL SETS, DELETE CROWN MOLDING AT WALL CABINETS).</div><div>J - MEDS C112 (BASE AND WALL CABINETS, WITH LOCKS ON BOTH CABINETS AND DRAWERS, DELETE CROWN MOLDING AT WALL CABINETS).</div><div>K - STAFF BREAK ROOM C113 (BASE AND WALL CABINETS, DELETE CROWN MOLDING AT WALL CABINETS)</div><div>L - RECEPTION C122 (BASE CABINET WITH RETURN; RECEPTION COUNTER W/ LOWER A.D.A. COUNTER)</div><div>M - BREAK AREA C129 (BASE AND WALL CABINETS, DELETE CROWN MOLDING AT WALL CABINETS)</div></div>
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<div><div>N - REAR WALL OF RECEPTION/OFFICE D109 (BACK WALL TO HAVE BASE CABINET ONLY; FRONT OF RECEPTION AREA TO HAVE BASE CABINET WITH RECEPTION COUNTER AND LOWER A.D.A. COUNTER.</div><div>O - WARMING KITCHEN D101 (COUNTERTOP ONLY)</div><div>P - SERVING D104 (BASE CABINET)</div><div>Q - WORKOUT ROOM D113 (WALNUT CUBICLES W/ MELAMINE INTERIOR FINISH)</div><div>R - YOGA STUDIO D114 (WALNUT CUBICLES W/ MELAMINE INTERIOR FINISH)</div><div>S - MALE EMPLOYEE LOCKER ROOM D115 (WALNUT FACED LOCKER DOORS WITH PADLOCK HARDWARE, 1 SHELF AND DOUBLE HOOK; MELAMINE INTERIOR FINISH)</div><div>T - FEMALE EMPLOYEE LOCKER ROOM D115A (WALNUT FACED LOCKER DOORS WITH PADLOCK HARDWARE, 1 SHELF AND DOUBLE HOOK; MELAMINE INTERIOR FINISH)</div><div>U - DINING D103 (CURVED EATING BENCH AND HALF WALL-BENCH TO MATCH DINING FURNITURE SUPPLIED BY OTHERS)</div></div>
--

<div><div>V - RESIDENT LAUNDRY E101 (BASE CABINET ONLY)</div><div>W - KITCHEN E115 (BASE AND WALL CABINETS, WALL CABINETS NOT SHOWN ON ORIGINAL SUBMITTAL SETS; DELETE CROWN MOLDING AT WALL CABINETS)</div><div>X - RESIDENT LAUNDRY E127 (BASE CABINET ONLY)</div><div>Y - KITCHEN E132 (BASE AND WALL CABINETS, WALL CABINETS NOT SHOWN ON ORIGINAL SUBMITTAL SETS, DELETE CROWN MOLDING AT WALL CABINETS)</div><div>Z - SERVING CENTER E140 (BASE CABINET ONLY)</div></div>
---

<div><div>AA - RESIDENT LAUNDRY F101 (BASE CABINET ONLY)</div><div>BB - KITCHEN F115 (BASE AND WALL CABINETS, WALL CABINETS NOT SHOWN ON ORIGINAL SUBMITTAL SETS, DELETE CROWN MOLDING AT WALL CABINETS)</div><div>CC - RESIDENT LAUNDRY F127 (BASE CABINET ONLY)</div><div>DD - KITCHEN F132 (BASE AND WALL CABINETS, WALL CABINETS NOT SHOWN ON ORIGINAL SUBMITTAL SETS, DELETE CROWN MOLDING AT WALL CABINETS)</div></div>
---

5 - ALL RESIDENTIAL BATHROOM COUNTERTOPS TO BE GRANITE OR STONE; PROVIDE ANGLED METAL BRACING WHERE GREATER THAN 3' WIDE, WITH A.D.A. PROTECTION ON BRACING.

6 - ALL PUBLIC RESTROOM COUNTERTOPS TO BE GRANITE OR STONE; PROVIDE ANGLED METAL BRACING WHERE GREATER THAN 3'-0" WIDE, WITH A.D.A. PROTECTION ON BRACING.

7 - ALL INTERIOR DOOR FRAME CASEWORK TO BE STANDARD PAINT-GRADE, ¾" X 3" TRIM SURROUND, EACH SIDE (UNLESS OTHERWISE DIRECTED BY OWNER).

8 - ALL ROOMS, i.e.: LINEN CLOSETS, STORAGE ROOMS, PANTRY, ETC., THROUGHOUT ALL 6 BUILDINGS TO HAVE ¾" PLYWOOD OR PARTICLE BOARD SHELVING WITH MELAMINE FINISH TOP AND BOTTOM, AND EDGE. PROVIDE MINIMUM 6 SHELVES IN EACH ROOM. BRACE SHELVES AS REQUIRED FOR STURDY SUPPORT.

9 - PROVIDE SOUND ATTENUATION INSULATION AT ALL RESIDENTIAL PARTY WALLS, AT MUSIC ROOM D117 (AS NOTED), AT PARTY WALL AT GATHERING/LEARNING AREA E136 (AS NOTED), AND AT PARTY WALLS SEPARATING RESIDENTIAL AREAS, BETWEEN KITCHENS AND COMMON AREAS.

10 - ALL INTERIOR DOORS TO BE SOLID CORE WALNUT DOORS WITH STAINED FINISH. DOORS WITH MACHINED, AND KNOCK DOWN FRAMES ARE ACCEPTIBLE.

11 - ALL WOOD BASE TO BE 1X4 MAPLE W/ RADIUSED TOP EDGE, OR APPROVED EQUIVALENT.

12 - CARPET TO BE AS MANUFACTURED BY "TUFTEX CARPET" OR EQUIVALENT, R2X STAIN AND SOIL RESISTANCE, ANSO NYLON. PROVIDE SAMPLES FOR APPROVAL BY OWNER.

13 - PROVIDE FRP (FIBERGLASS REINFORCED PLASTIC) PANEL SURROUND IN JANITOR'S CLOSETS, IN LIEU OF CERAMIC TILE NOTED.

14 - DELETE "MARBLE" TILE FROM SPECIFICATION. TILE WILL BE EITHER CERAMIC OR QUARRY TILE AS NOTED. DAL TILE OR EQUIVALENT. PLEASE SUBMIT SAMPLES FOR OWNER APPROVAL.

15 - TILE BACKSPLASH TO OCCUR WHEREVER A SINK OCCURS AT COUNTERTOPS. PROVIDE 4" HIGH CERAMIC TILE BACKSPLASH, DAL TILE OR EQUIVALENT. PROVIDE SAMPLES FOR OWNER'S APPROVAL.

16 - INTERIOR AND EXTERIOR SIGNAGE TO BE A SEPERATE BID PACKAGE PER OWNER. CONTRACTOR MAY PROVIDE AN ALLOWANCE FOR INTERIOR AND EXTERIOR SIGNAGE.

17 - FIRE EXTINGUISHERS AND CABINETS TO BE PROVIDED AND INSTALLED BY CONTRACTOR.

18 - ALL FURNISHINGS, i.e.: DINING AREA TABLES AND CHAIRS, POOL TABLES, WORK OUT EQUIPMENT, ETC., TO BE PROVIDED BY EITHER OWNER, OR BY KITCHEN EQUIPMENT SUPPLIER.

19 - PLEASE NOTE THAT ALL BIDS TO BE SUBMITTED TO OWNER BY END OF WORK DAY, ON MONDAY, JANUARY 23, 2017. PLEASE SUBMIT TO OWNER'S OFFICE, LOCATED AT 5200 SOUTH HIGHLAND DRIVE, SUITE 210.

MECHANICAL DUCT CLARIFICATION:
INSTALL RIGID DUCTWORK THROUGHOUT THE PLENUM SPACE WITH MINIMAL DUCTWORK TRANSITIONS/FITTINGS, TO ALLOW FOR MAXIMUM AIRFLOW.
INSULATE ALL SUPPLY AND RETURN DUCTWORK WITH R-VALUE (R-12 MIN.), AS INDICATED IN MECHANICAL PLAN VIEW GENERAL NOTES.

A FLEXIBLE CONNECTION IS TO BE PROVIDED ON ALL MAIN SUPPLY AND RETURN AIR RUNS TO MINIMIZE VIBRATION FROM ASSOCIATED RTU.

PLUMBING CLARIFICATION:
SHOWER VALVES TO BE "KOHLER", SINGLE HANDLE, OR EQUIVALENT AS APPROVED BY OWNER.

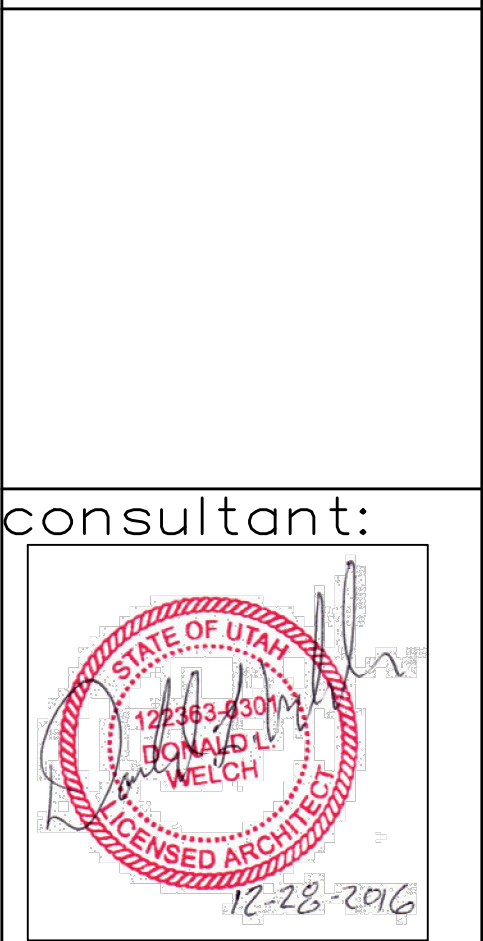


Donald L. Welch  
Architect

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project:  
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4905, 4911, 4915, 4925,  
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2	JANUARY 6, 2017 ADDENDUM #2-BUILDING 'C'
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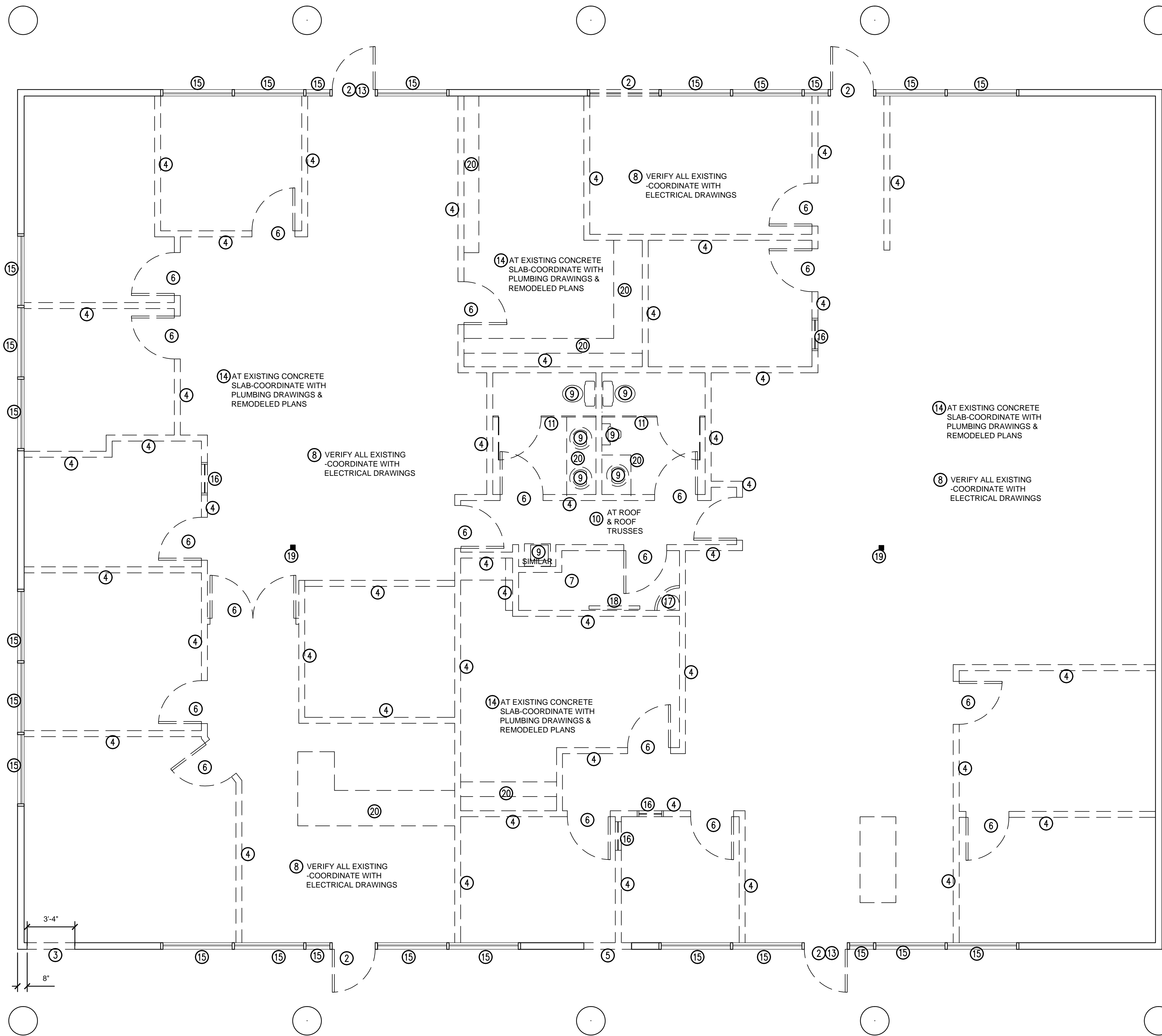
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project no:  
drawn by:  
checked by:  
title

PARKING LOT RE-PAVING  
SPECIFICATIONS  
AND GENERAL  
CLARIFICATION NOTES

sheet

A12





EXISTING DEMOLITION FLR. PLAN-BUILDING 'C'  
SCALE: 1/4" = 1'-0"

EXTERIOR ELEVATION & FLOOR PLAN DEMOLITION KEY NOTES	
SECTION	DESCRIPTION
1	EXISTING PARAPET CAP FLASHING AND COUNTER-FLASHING TO BE REMOVED COMPLETELY. PREPARE EXISTING 2X PLATES TO RECEIVE NEW CAP FLASHING AND COUNTER-FLASHING.
2	PORTION OF EXISTING STOREFRONT DOOR FRAME TO BE REMOVED AND DISCARDED; PREPARE EXISTING STOREFRONT DOOR FRAME TO RECEIVE NEW DOOR AND DOOR HARDWARE; REFINISH EXISTING STOREFRONT DOOR FRAME AS REQUIRED.
3	PORTION OF EXISTING WALL TO BE CUT AND REMOVED-FIELD VERIFY IF EXISTING WALL HAS STRUCTURAL MEMBERS THAT ARE AFFECTED-COORDINATE TO UPGRADE THE STRUCTURE OF THE WALL AS REQUIRED. PATCH, REPAIR AND REFINISH EXISTING SURROUNDING WALLS, FLOOR AND CEILING, AS REQUIRED. COORDINATE REMOVAL OF EXISTING WALL STRUCTURE WITH DEMOLITION PLANS, AND EXISTING CONDITIONS
4	EXISTING INTERIOR WALLS TO BE REMOVED AND DISCARDED COMPLETELY. PATCH, REPAIR AND REFINISH REMAINING, SURROUNDING EXISTING WALLS, FLOOR AND CEILING AS REQUIRED.
5	CUT AND REMOVE PORTION OF EXISTING WALL TO ALLOW FOR NEW OPENING FOR NEW DOOR/DOOR FRAME, OR WINDOW/WINDOW FRAME, OPENING-INSTALL SUPPORT SYSTEM AROUND OPENINGS AS REQUIRED FOR SOLID ASSEMBLY. PATCH, REPAIR AND REFINISH SURROUNDING WALLS AFTER NEW FRAMES & SUPPORTS HAVE BEEN INSTALLED.
6	EXISTING DOOR/DOOR FRAME TO BE REMOVED COMPLETELY. DISCARD FRAME COMPLETELY. RETURN ALL EXISTING INTERIOR DOORS TO OWNER.
7	COORDINATE WITH ALL EXISTING ELECTRICAL POWER BOXES, AND WITH ELECTRICAL SUBCONTRACTOR, OR ELECTRICAL ENGINEER, TO RELOCATE BOXES, IF REQUIRED, AND TO UPGRADE BOXES IF REQUIRED.
8	ALL EXISTING ELECTRICAL OUTLETS, LIGHT FIXTURES, AND OTHER EXISTING ELECTRICAL ITEMS TO BE REMOVED AND DISCARDED COMPLETELY, INCLUDING ALL RECESSED EXTERIOR SOFFIT LIGHTS. PREPARE EXISTING SOFFIT, WHERE EXISTING SOFFIT LIGHTS ARE REMOVED, TO RECEIVE NEW SOFFIT LIGHTS. PATCH, REPAIR AND REFINISH SOFFIT AROUND NEW SOFFIT LIGHTS. COORDINATE WITH ELECTRICAL DRAWINGS.
9	EXISTING BATHROOM FIXTURES TO BE REMOVED AND RETURNED TO OWNER, OR DISCARDED AS DIRECTED BY OWNER. EXISTING PIPING TO BE REMOVED AND RE-ROUTED, CAPPED, OR RELOCATED (OR NEW PIPING INSTALLED TO REPLACE EXISTING), AS REQUIRED-COORDINATE WITH PLUMBING DRAWINGS.
10	ALL EXISTING ROOFTOP MECHANICAL EQUIPMENT, MECHANICAL DUCTING, ETC. TO BE REMOVED COMPLETELY, AND DISCARDED. PREPARE EXISTING ROOF AND ROOF TRUSSES TO RECEIVE NEW MECHANICAL EQUIPMENT AND DUCTING. PATCH, REPAIR AND REFINISH EXISTING ROOF AROUND NEW DUCT PENETRATIONS-COORDINATE WITH MECHANICAL DRAWINGS.
11	EXISTING TOILET PARTITIONS TO BE REMOVED AND DISCARDED.
12	PROVIDE OPENING IN EXISTING ROOF FOR NEW SKYLIGHTS-COORDINATE LOCATION OF SKYLIGHTS WITH EXISTING ROOF TRUSSES. ADJUST AS NECESSARY WITH ROOF TRUSSES. NEW SKYLIGHTS TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS-PATCH, REPAIR, FLASH & SEAL EXISTING ROOFING, AND AROUND NEW SKYLIGHT FOR A TIGHT WATERPROOF ASSEMBLY
13	REMOVE PORTION OF EXISTING STOREFRONT WINDOW AND FRAME COMPLETELY, WHERE EXISTING STOREFRONT DOOR AND FRAME ARE REMOVED, INFILL WITH STUDS, AND BATT INSULATION. PROVIDE NEW GYPSUM BOARD, AT INTERIOR, AND NEW STUCCO ON SHEATHING AT EXTERIOR, FOR A COMPLETE SYSTEM. STUCCO FINISH AND COLOR TO MATCH EXISTING STUCCO FINISH AND COLOR.
14	SAWCUT AND REMOVE PORTION OF EXISTING CONCRETE SLAB AS REQUIRED FOR INSTALLATION OF NEW SEWER AND WATER PIPING BELOW EXISTING SLAB. COORDINATE WITH EXISTING PIPING (REMOVE EXISTING PIPING AS REQUIRED). PROVIDE PROPER SLOPE FOR WASTE LINES AS REQUIRED. PATCH, REPAIR, AND INSTALL NEW CONCRETE OVER NEW PIPE LINES. REFINISH SLAB TO MATCH EXISTING SURROUNDING CONCRETE SLAB FINISH. COORDINATE ALL NEW PIPING WITH PLUMBING DRAWINGS.
15	EXISTING STOREFRONT WINDOWS AND FRAMES TO REMAIN, AND TO BE PROTECTED FROM DAMAGE DURING DEMOLITION AND REMODELING PHASES. EXISTING STOREFRONT FRAME TO BE REPLACED IF DAMAGED ORIGINALLY BEFORE DEMOLITION, OR DURING DEMOLITION AND REMODELING PHASES. EXISTING STOREFRONT WINDOW GLASS TO BE CLEANED DURING REMODELING PHASE. REPLACE ANY STOREFRONT WINDOW GLASS DAMAGED OR BROKEN ORIGINALLY BEFORE DEMOLITION, OR DURING DEMOLITION AND REMODELING PHASES.
16	EXISTING INTERIOR WINDOW/WINDOW FRAME TO BE REMOVED COMPLETELY. DISCARD FRAME COMPLETELY.
17	EXISTING WATER HEATER & FLOOR MOP SINK TO BE REMOVED AND RETURNED TO OWNER.
18	EXISTING MAIN WATER LINE PIPING TO BE REMOVED. WATER MAIN TO BE RELOCATED WHERE SHOWN ON PLUMBING PLANS.
19	EXISTING SUPPORT POSTS TO REMAIN AND BE PROTECTED FROM DAMAGE -FIELD VERIFY EXACT LOCATION OF POSTS
20	EXISTING BASE AND WALL CABINETS TO BE REMOVED AND DISCARDED

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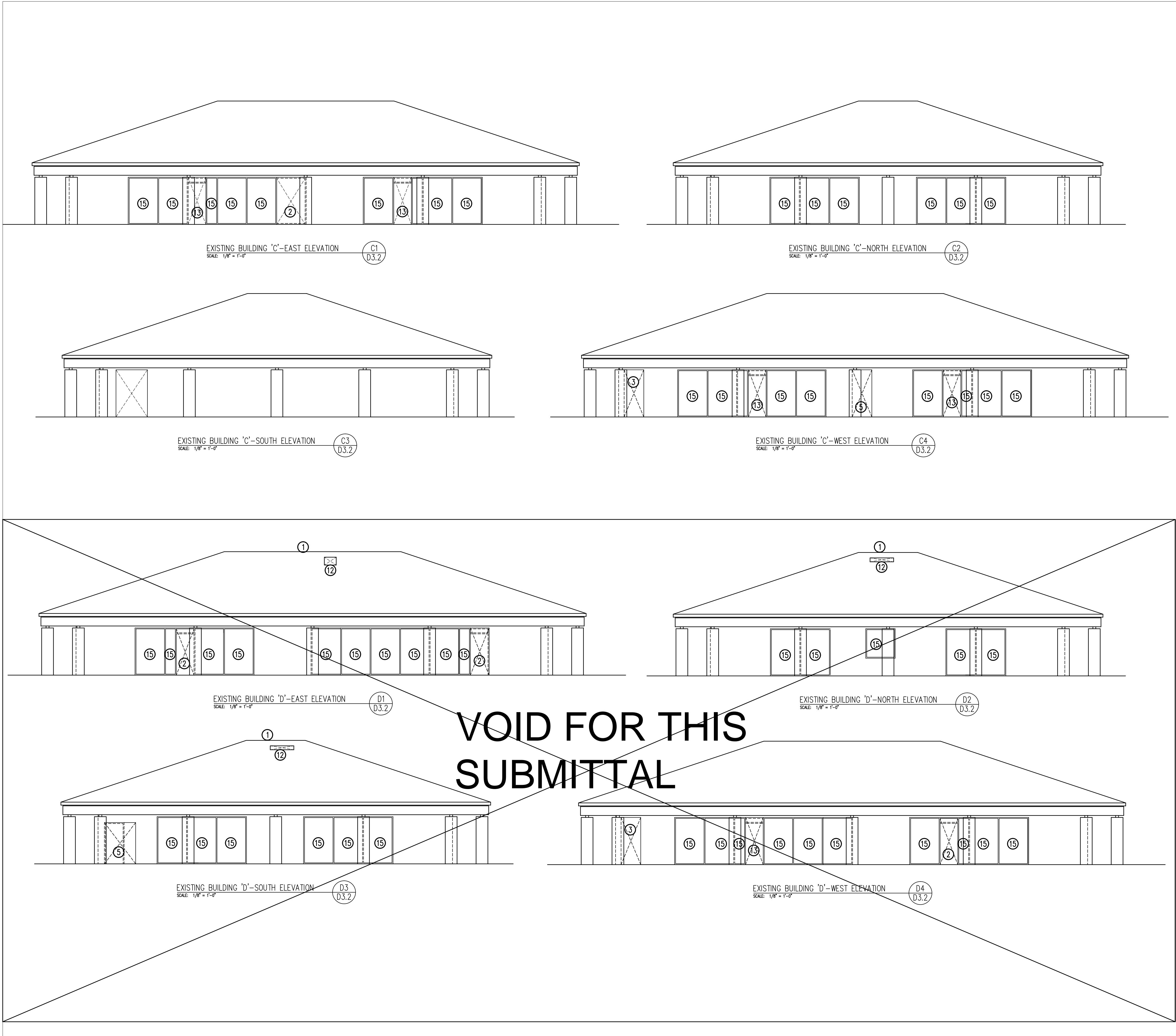
revisions

JANUARY 3, 2017	SECOND SUBMITTAL FOR EACH SEPERATE BUILDING PARCEL
JANUARY 6, 2017	ADDENDUM #2-BUILDING 'C'
JANUARY 17, 2017	ADDENDUM #4-BUILDING 'B'
FEBRUARY 24, 2017	ADDENDUM #7-BUILDING 'A'
MARCH 20, 2017	ADDENDUM #8-BUILDING 'A'

data  
project no:  
drawn by:  
checked by:  
title  
BUILDING 'C'  
EXISTING  
DEMOLITION PLAN

sheet  
D2 3





EXTERIOR ELEVATION & FLOOR PLAN DEMOLITION KEY NOTES	
SECTION	DESCRIPTION
	① EXISTING PARAPET CAP FLASHING AND COUNTER-FLASHING TO BE REMOVED COMPLETELY. PREPARE EXISTING 2X PLATES TO RECEIVE NEW CAP FLASHING AND COUNTER-FLASHING.
	② PORTION OF EXISTING STOREFRONT DOOR FRAME TO BE REMOVED AND DISCARDED; PREPARE EXISTING STOREFRONT DOOR FRAME TO RECEIVE NEW DOOR AND DOOR HARDWARE; REFINISH EXISTING STOREFRONT DOOR FRAME AS REQUIRED.
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	⑥ EXISTING DOOR/DOOR FRAME TO BE REMOVED COMPLETELY. DISCARD FRAME COMPLETELY. RETURN ALL EXISTING INTERIOR DOORS TO OWNER.
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	⑩ ALL EXISTING ROOFTOP MECHANICAL EQUIPMENT, MECHANICAL DUCTING, ETC. TO BE REMOVED COMPLETELY, AND DISCARDED. PREPARE EXISTING ROOF AND EXISTING ROOF TRUSSES TO RECEIVE NEW MECHANICAL EQUIPMENT AND DUCTING. PATCH, REPAIR AND REFINISH EXISTING ROOF AROUND NEW DUCT PENETRATIONS—COORDINATE WITH MECHANICAL DRAWINGS.
	⑪ EXISTING TOILET PARTITIONS TO BE REMOVED AND DISCARDED.
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revisions

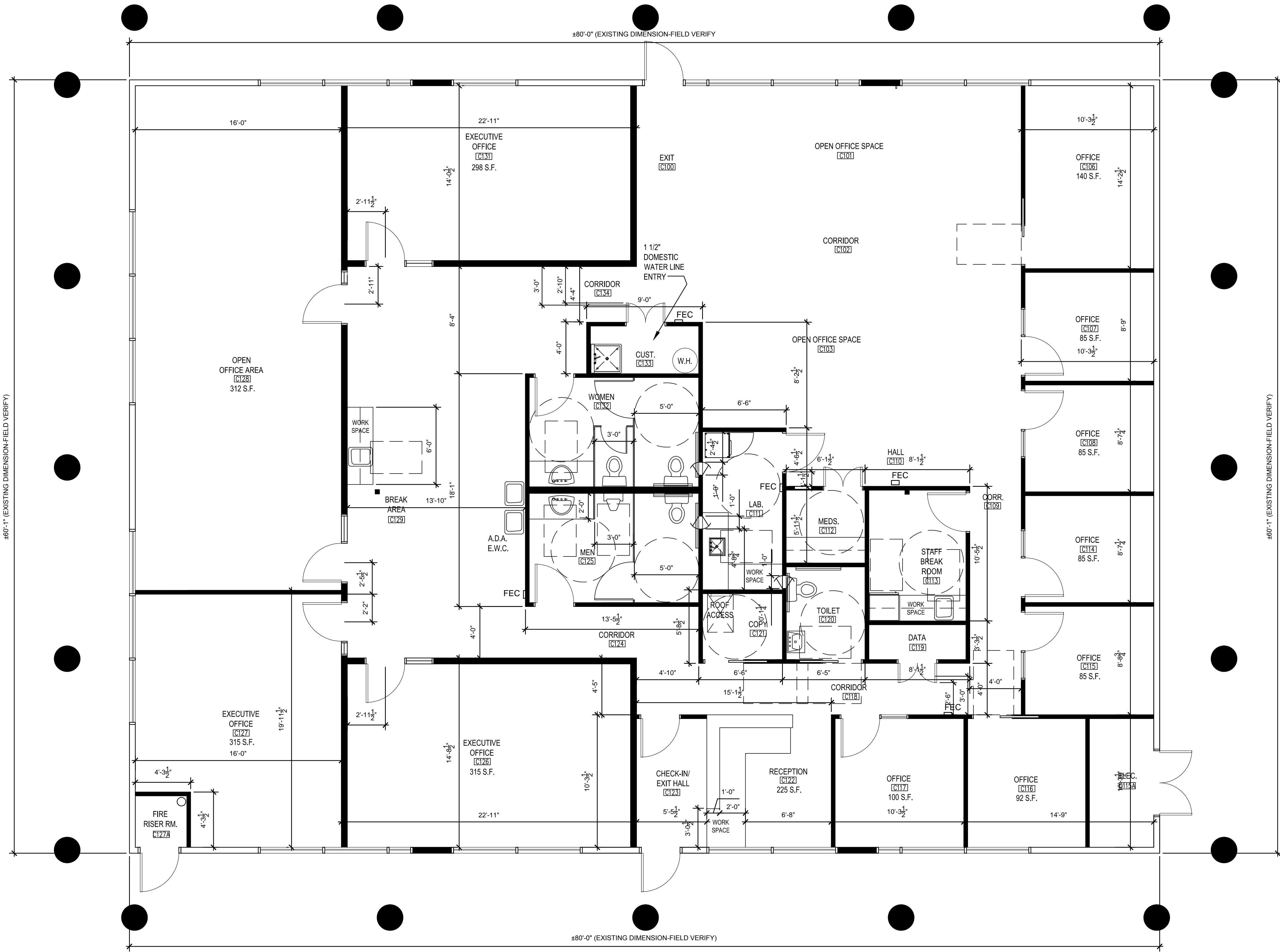
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	SECOND SUBMITTAL FOR
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2	JANUARY 6, 2017
	ADDENDUM #2-BUILDING 'C'
4	JANUARY 17, 2017
	ADDENDUM #4-BUILDING 'B'
7	FEBRUARY 24, 2017
	ADDENDUM #7-BUILDING 'A'
	BUILDING 'F', 'B', 'C', 'D', 'E'
8	MARCH 20, 2017
	ADDENDUM #8-BUILDING 'A'
	BUILDING 'F'

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title

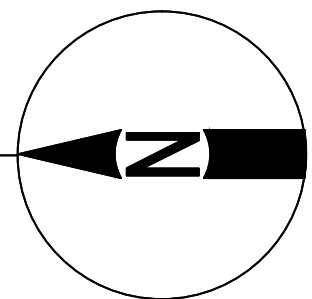
BUILDINGS 'C' & 'D'  
EXISTING/DEMOLITION  
ELEVATIONS

sheet

D32



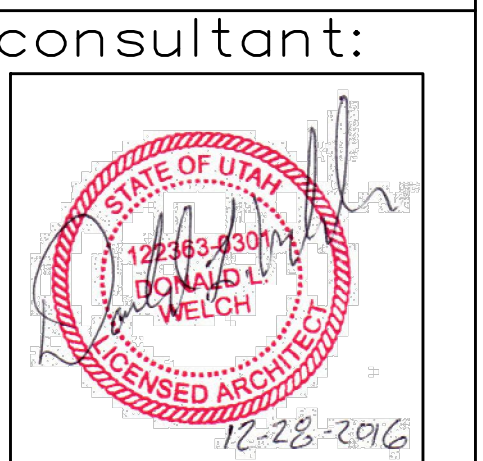
REHAB. CENTER OFFICES  
REMODELED DIMENSION FLR. PLAN-BLDG. 'C'  
SCALE: 1/4" = 1'-0"



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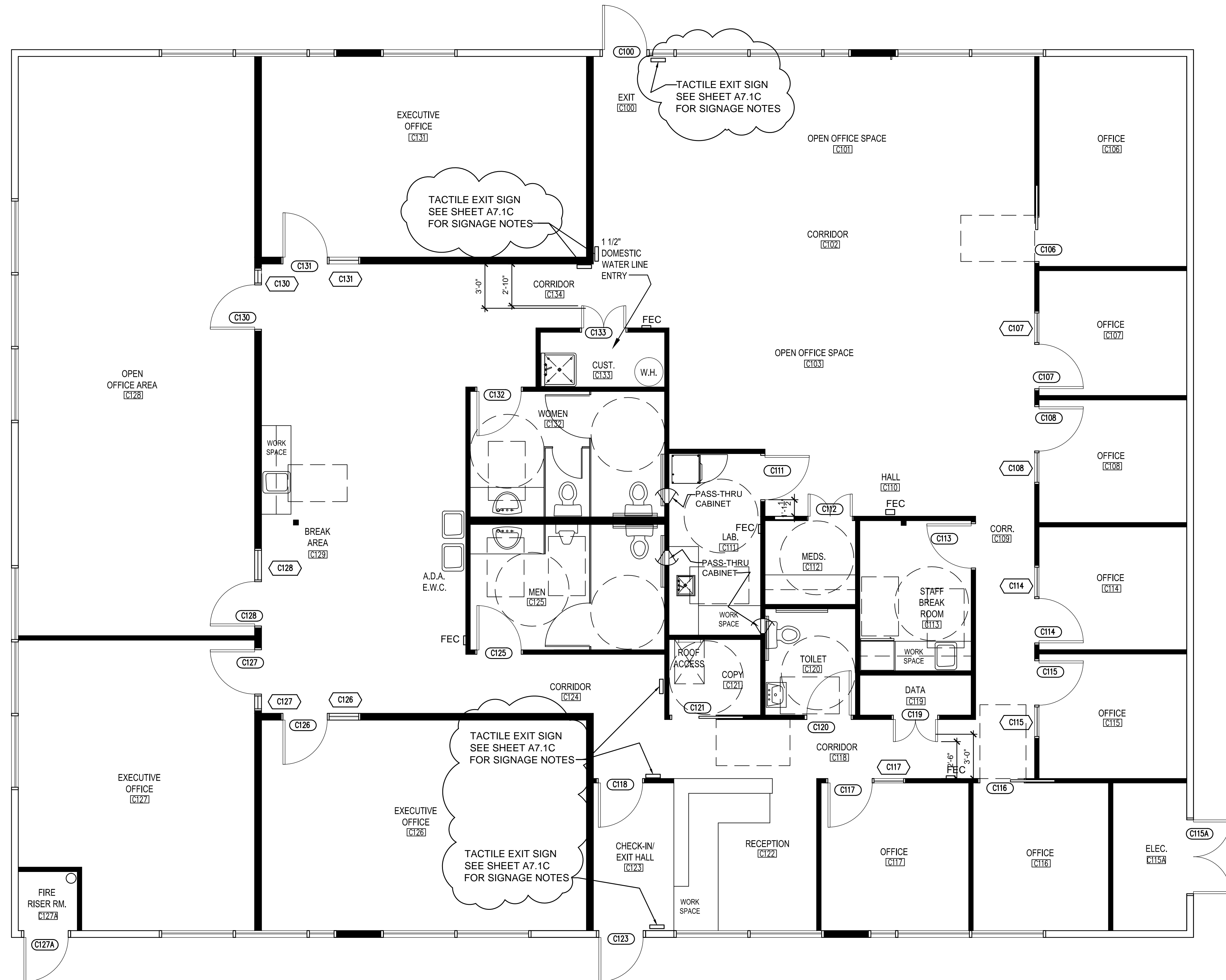
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10	MARCH 20, 2017
11	ADDENDUM #8-BUILDING 'A'
12	BUILDING 'F'

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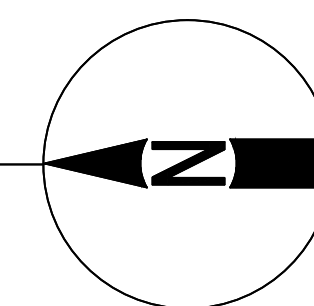
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BUILDING 'C'  
REMODELED  
FLOOR PLAN

sheet  
A23





REHAB. CENTER OFFICES  
REMODELED FLOOR PLAN—BLDG. 'C'  
SCALE: 1/4" = 1'-0"

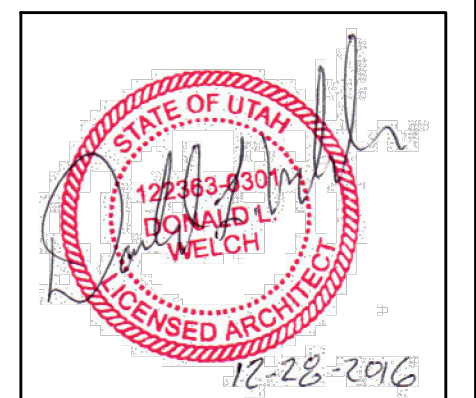


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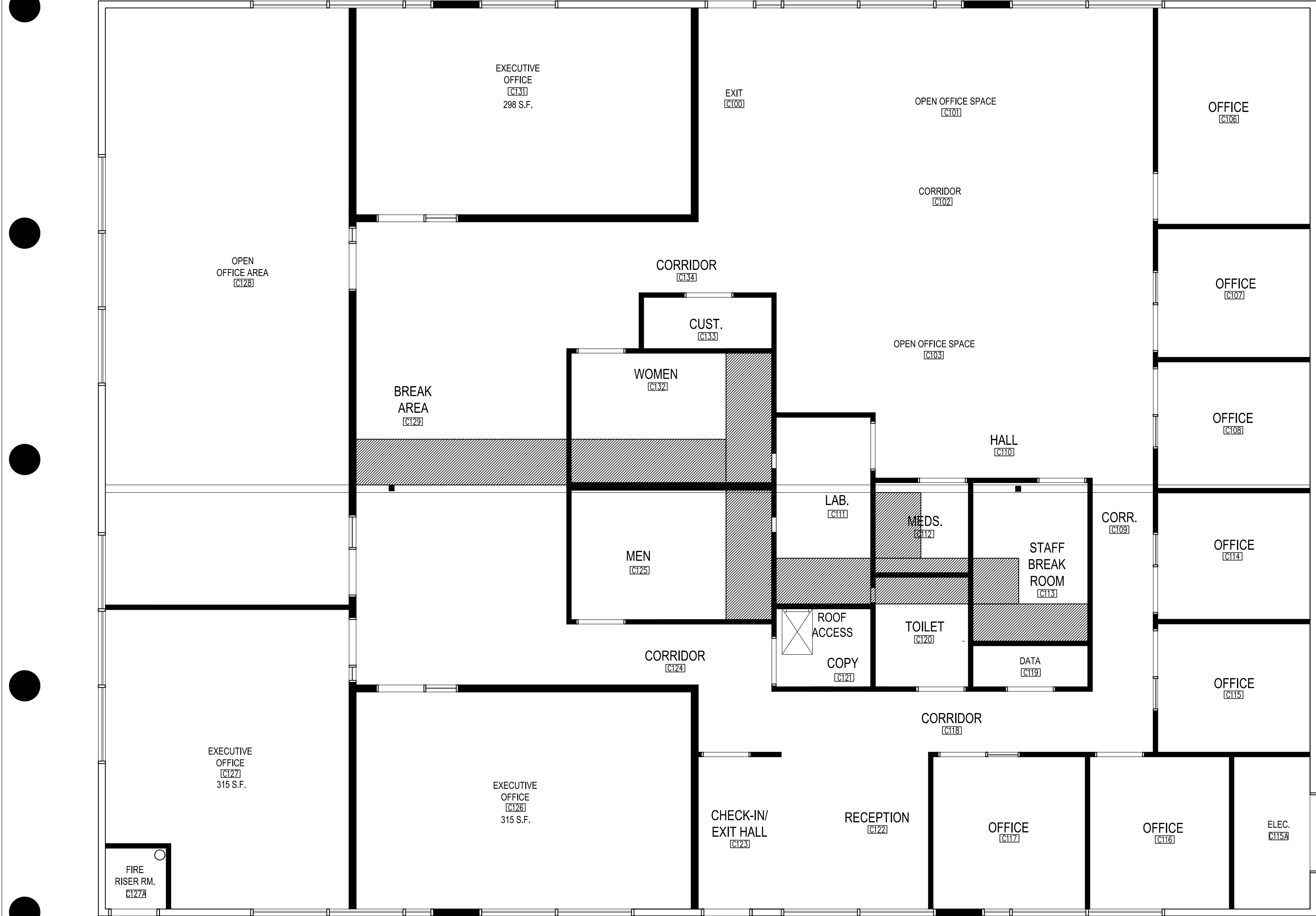
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BUILDING 'F'

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title

BUILDING 'C'  
REMODELED  
FLOOR PLAN

sheet

A2 3A

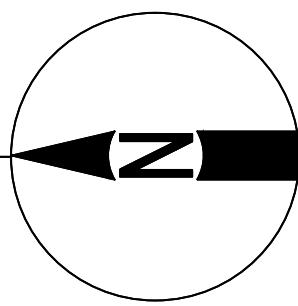


HATCHED AREAS REPRESENT  
12" DEEP X 3'-0" WIDE DROPPED  
CEILINGS FOR PLUMBING LINES  
AT CEILINGS

GROUP CENTER/OFFICES

REMODELED REFLECTED CLG. PLAN-BLDG. 'C'

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



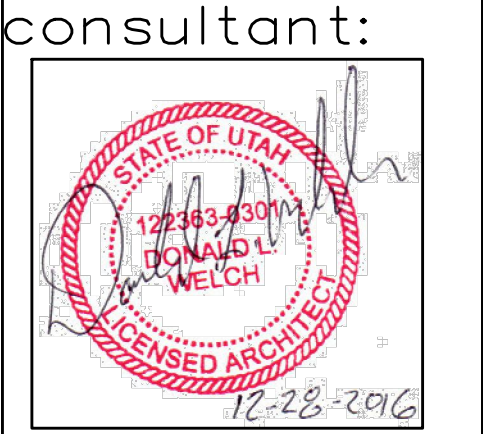
- NOTES:
1. ALL EXISTING CEILINGS TO BE REMOVED, ALONG WITH ALL LIGHT FIXTURES, CEILING GRILLES, ETC.- NEW CEILING ELEVATION TO BE APPROXIMATELY 10'-4" ABOVE FINISH FLOOR
  2. ALL NEW CEILINGS TO BE PAINTED/TEXTURED 5/8" GYP. BD., SCREWED TO BOTTOM OF EXISTING ROOF TRUSSES,;
  3. COORDINATE LOCATION OF NEW ROOF ACCESS OPENING WITH POSITION OF EXISTING ROOF TRUSSES;
  4. EXISTING EXPOSED GLU-LAM BEAM TO BE PREPPED AND PAINTED, OR STAINED.

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- revisions
- |   |                                  |
|---|----------------------------------|
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|   | BUILDING 'F', 'B', 'C', 'D', 'E' |
| 8 | MARCH 20, 2017                   |
|   | ADDENDUM #8-BUILDING 'A'         |
|   | BUILDING 'F'                     |

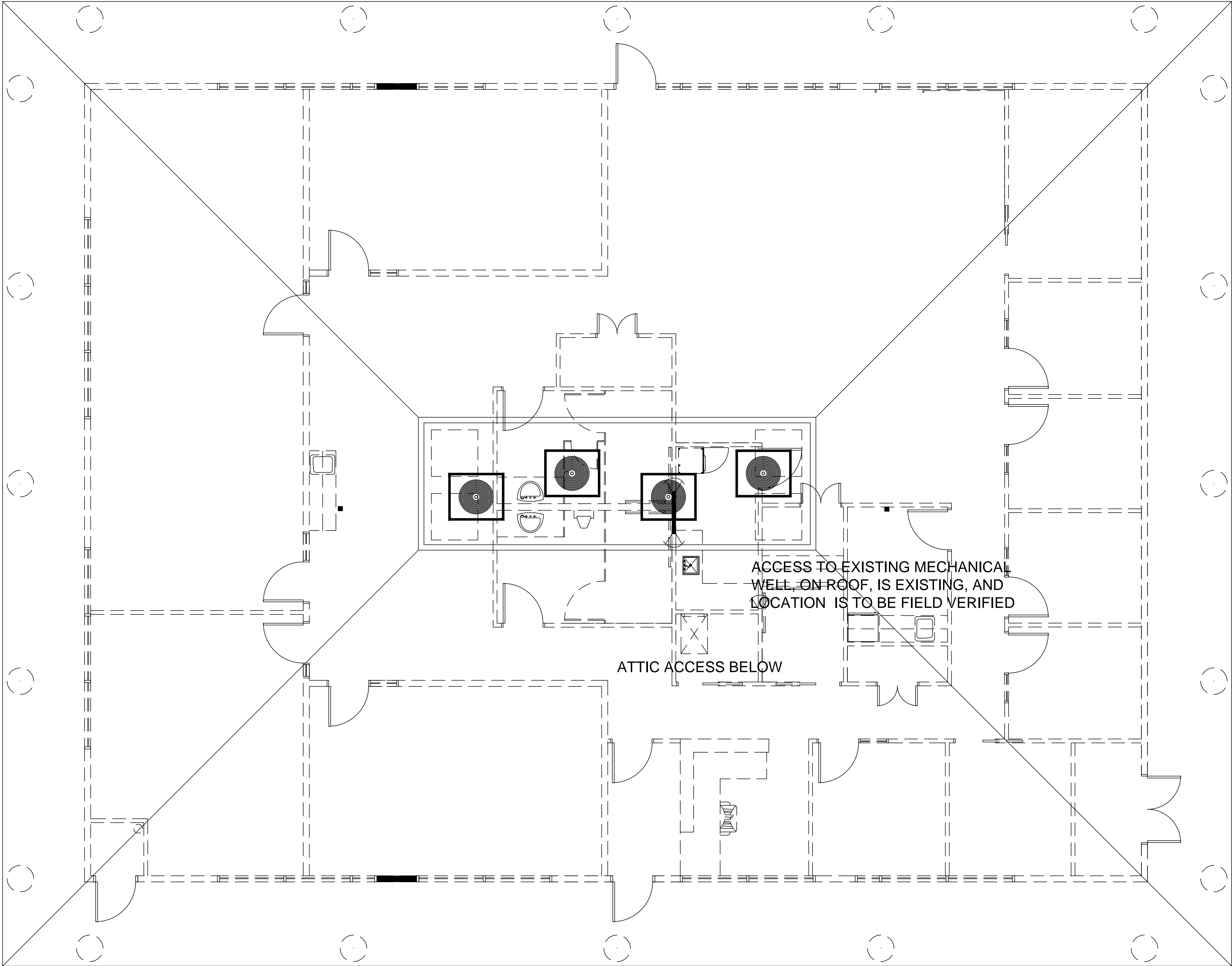
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BUILDING 'C'  
REMODELED  
REFL. CLG. PLAN

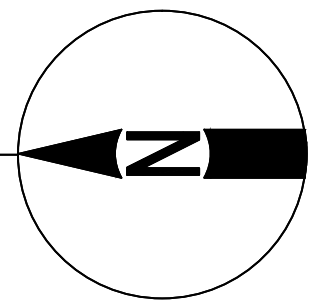
sheet

A2 3B





GROUP CENTER/OFFICES  
EXISTING ROOF PLAN-BLDG. 'C'  
SCALE: 1/4" = 1'-0"



NOTE REFER TO SHEET A2.1C,  
BUILDING 'A' EXISTING ROOF PLAN,  
FOR GENERAL NOTES CONCERNING  
THE ROOF

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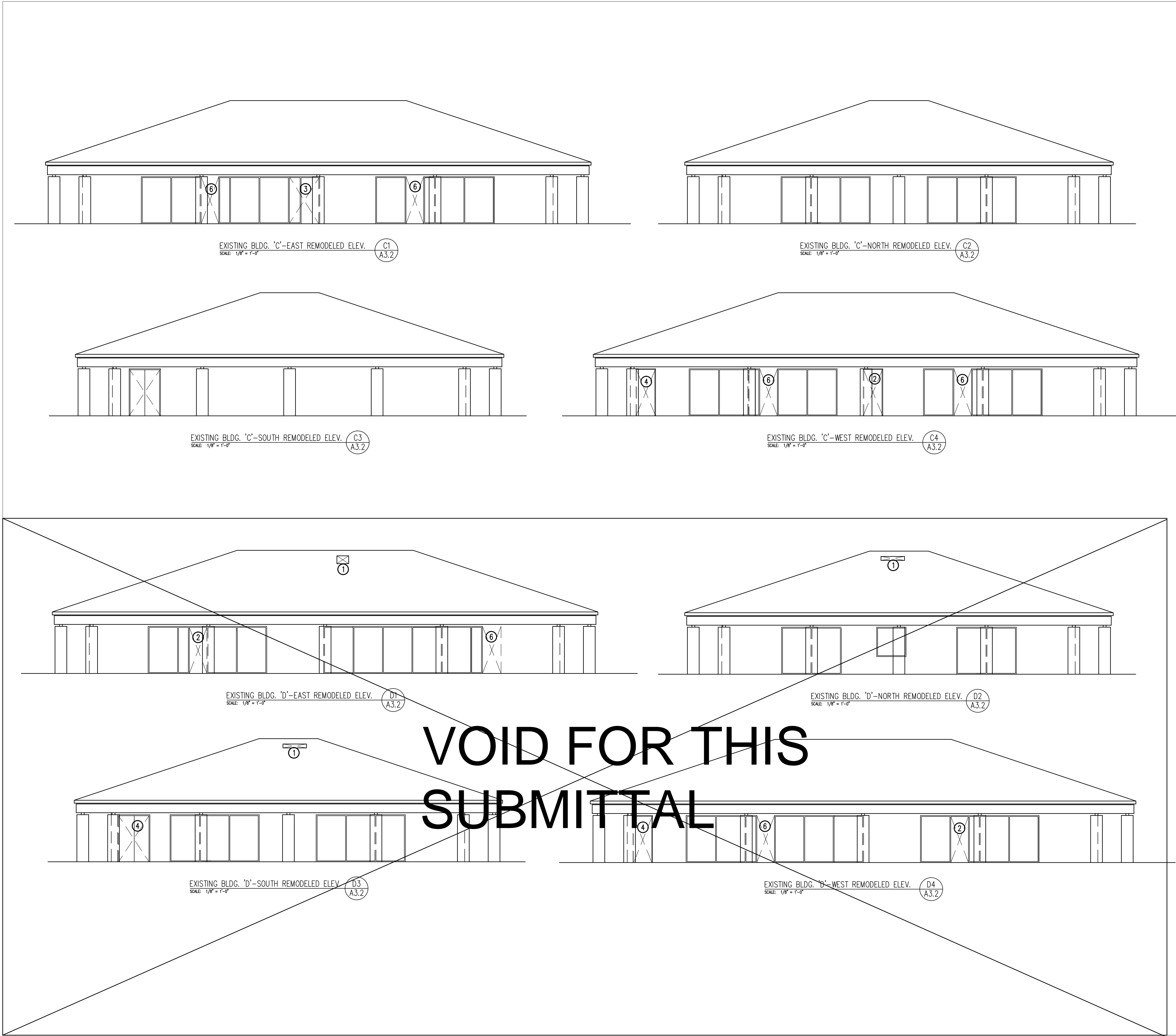
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title  
BUILDING 'C'  
EXISTING  
ROOF PLAN

sheet  
A2 3C





ELEVATION/SECTION LEGEND		
HATCH PATTERN	SECTION	DESCRIPTION
<div></div>		
<div></div>		
ELEVATION/SECTION KEY NOTES		
SECTION	DESCRIPTION	
	<div>① NEW SKYLIGHTS INSTALLED PER MANUFACTURER'S INSTRUCTIONS—PATCH, REPAIR, FLASH &amp; SEAL EXISTING ROOFING, AND AROUND NEW SKYLIGHT FOR A TIGHT WATERPROOF ASSEMBLY</div> <div>② PROVIDE NEW DOOR IN EXISTING STOREFRONT DOOR FRAME; PREPARE EXISTING STOREFRONT DOOR FRAME TO RECEIVE NEW DOOR AND DOOR HARDWARE; REFINISH EXISTING STOREFRONT DOOR FRAME AS REQUIRED.</div> <div>③ PROVIDE NEW DOOR IN NEW STOREFRONT DOOR FRAME; PREPARE EXISTING STOREFRONT FRAME TO RECEIVE NEW STOREFRONT DOORFRAME, NEW DOOR, AND DOOR HARDWARE; REFINISH EXISTING STOREFRONT FRAME AS REQUIRED.</div> <div>④ NEW METAL DOOR FRAME AND NEW DOOR—COORDINATE WITH DOOR SCHEDULE FOR DOOR TYPE—PATCH, REPAIR AND REFINISH EXISTING SURROUNDING WALL FINISH—PAINT TO MATCH EXISTING SURROUNDING INTERIOR AND EXTERIOR WALLS</div> <div>⑤ NEW STOREFRONT WINDOW FRAME AND WINDOW TO MATCH EXISTING STOREFRONT WINDOW FRAMES AND WINDOWS—COORDINATE WITH WINDOW SCHEDULE FOR WINDOW TYPE—PATCH, REPAIR AND REFINISH EXISTING SURROUNDING WALL FINISH—PAINT TO MATCH EXISTING SURROUNDING INTERIOR AND EXTERIOR WALLS</div> <div>⑥ EXISTING OPENING, WHERE EXISTING STOREFRONT DOOR AND FRAME WERE REMOVED, TO BE INFILLED WITH STUDS, AND BATT INSULATION. PROVIDE NEW GYPSUM BOARD AT INTERIOR, AND NEW STUCCO ON SHEATHING AT EXTERIOR, FOR A COMPLETE SYSTEM. STUCCO FINISH AND COLOR TO MATCH EXISTING STUCCO FINISH AND COLOR.</div>	

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122383-4301  
DONALD L. WELCH  
LICENSED ARCHITECT  
12-28-2016

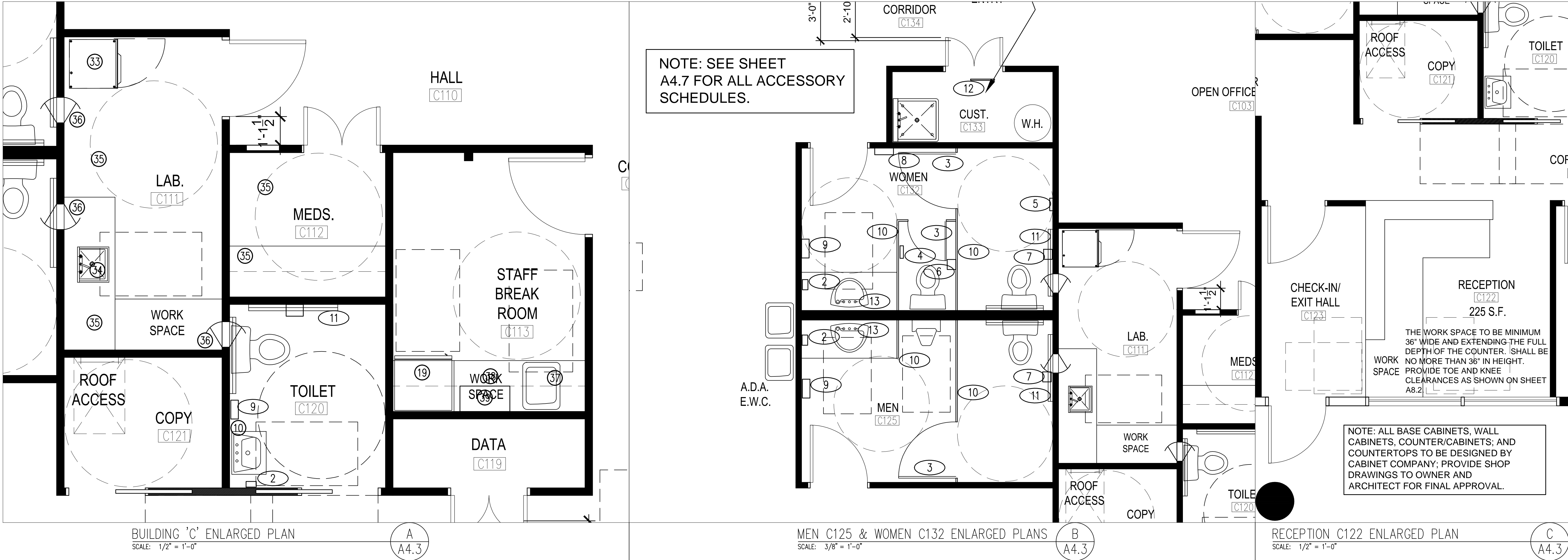
project:  
Tenant Finish  
for  
Brighton Recovery  
Campus  
4905, 4911, 4915, 4925,  
4931, 4953 South 900 East  
Salt Lake County, Utah

date  
DECEMBER 28, 2016

revisions  
JANUARY 3, 2017  
SECOND SUBMITTAL FOR  
EACH SEPERATE BUILDING PARCEL  
JANUARY 6, 2017  
② ADDENDUM #2-BUILDING 'C'  
JANUARY 17, 2017  
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FEBRUARY 24, 2017  
⑦ ADDENDUM #7-BUILDING 'A'  
BUILDING 'F', 'B', 'C', 'D', 'E'  
MARCH 20, 2017  
⑧ ADDENDUM #8-BUILDING 'A'  
BUILDING 'F'

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project no:  
drawn by:  
checked by:  
title  
BUILDING 'C'  
REMODELED  
ELEVATIONS

sheet  
A3 2



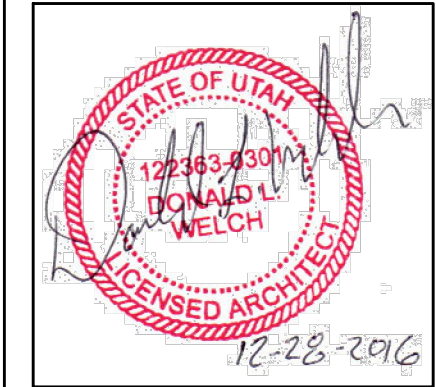
PLEASE REFER TO SHEET A4.6, ENLARGED PLANS, FOR ANY NOTES OR FIXTURE ITEMS THAT MAY HAVE NOT BEEN NOTED ON THIS SHEET.

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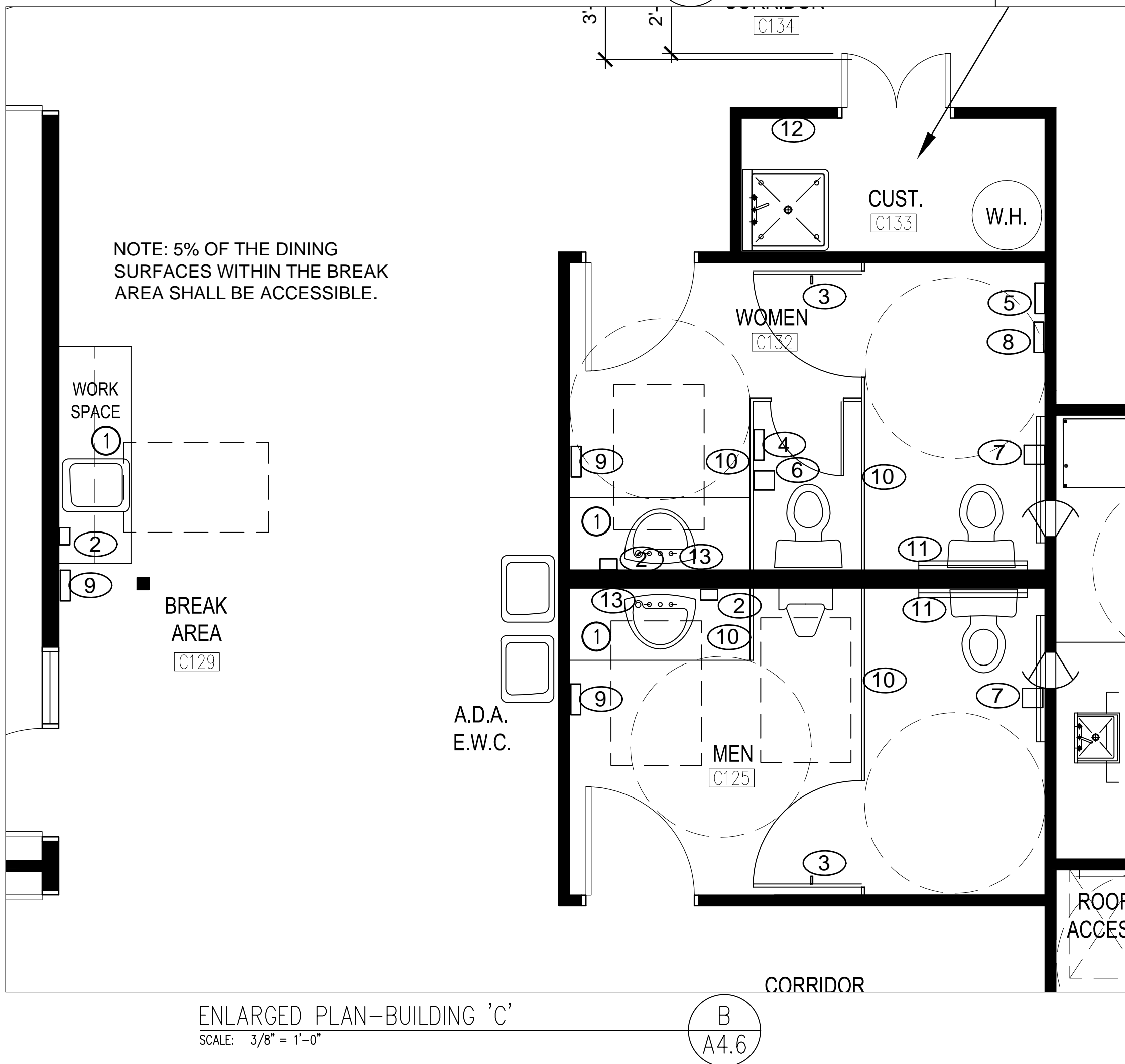
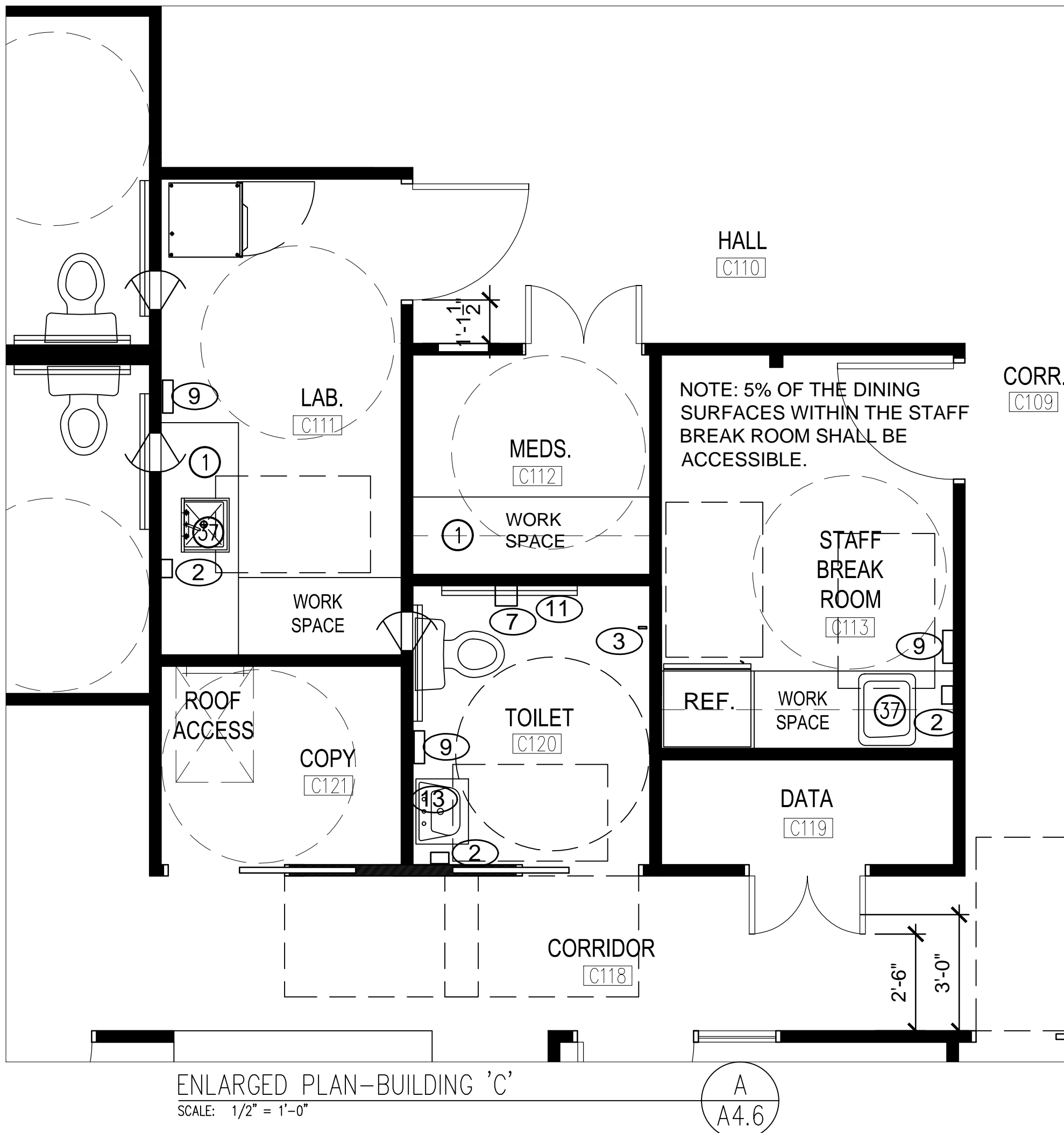
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ADDENDUM #8-BUILDING 'A'
  - BUILDING 'F'


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project no:  
drawn by:  
checked by: DLW

title  
BUILDING 'C'  
ENLARGED  
FLOOR PLANS


sheet  
A4 3







Unified Fire Authority, Greater Salt Lake  
Fire Prevention Bureau  
Building and Site Development Plan Review



SALT LAKE  
COUNTY

Salt Lake County Townships  
UNIFIED FIRE AUTHORITY REVIEW

Date: January 23, 2017  
Permit #: 170067  
Project Name: New Brighton Recovery Campus  
Address: 4911 S 900 E, SALT LAKE CITY UT 84117

Thank you for submitting your plans for the New Brighton Recovery Campus project. Please review all comments contained in this letter. This project SHALL, be designed to meet all requirements of the 2012 International Fire Code. Please contact the Area Fire Marshal Don Buckley at (801) 824-3714 for any and all inspections or questions.

Comments:

- Fire Sprinklers Required.** Deferred submittal for fire sprinkler shop drawings are to be sent directly to the following address: Unified Fire Authority, 3380 South 900 West, Salt Lake City, Utah 84119. Attention: Stewart Gray. A minimum of two sets of plans, complete with manufacturer cut sheets, and hydraulic calculations. Plans must be ink signed by a NICET level III or better in Auto Sprinkler Layout. **(There needs to be a hydrant within a 100 feet of the FDC.) FDC is required to have KNOX Locking Caps. ALL FIRE PROTECTION PLANS REQUIRE 3<sup>rd</sup> PARTY REVIEW PRIOR TO BE SUBMITTED TO THE UNIFIED FIRE AUTHORITY.**
- Post Indicator Valve with Tamper Required.** If there is no designated fire riser room with a direct access door from the outside. There shall be either a wall mounted P.I.V (OS&Y) or a typical P.I.V placed a minimum distance of 40 feet from the building with a tamper switch.
- Low Frequency Fire Alarm Required.** Deferred submittal for fire alarm shop drawings are to be sent directly to the following address: Unified Fire Authority, 3380 South 900 West, Salt Lake City, Utah 84119. Attention: Stewart Gray. A minimum of two sets of plans, complete with manufacturer cut sheets, and battery calculations. Plans must be ink signed by a NICET level III or better in Fire Alarm Systems. **ALL FIRE ALARM PLANS REQUIRE 3<sup>rd</sup> PARTY REVIEW PRIOR TO BE SUBMITTED TO THE UNIFIED FIRE AUTHORITY.**
- Knox Boxes Required.** Fire Department "Knox Brand" lock box to be mounted to exterior walls, near the main entrance and/or nearest the door serving the exterior access to the fire sprinkler riser room. **(At a height of 5 feet to the top of the box)** Lock box purchase can be arranged by the General Contractor. See attached information form.

5. **Visible Addressing Required.** New and existing buildings shall have approved address numbers plainly legible and visible from the street fronting the property. These numbers shall contrast with their background.

Notes:

All plans pertaining to fire protection and/or life safety are to be made available upon request at the construction site.

Plan approval or review shall not be construed to relieve from or lessen the responsibility of any person designing, owning, operating or controlling any building. Damages to persons or property caused by defects, fire, improper installation, or other emergency conditions that occur in or on the building property shall not hold the Unified Fire Authority as assuming any liability.

Thank you,  
Donald P. Buckley Jr.,  
Salt Lake County East Area Fire Marshal,  
Unified Fire Authority,  
3380 South 900 West  
Salt Lake City, Utah 84119  
Phone: (801) 824-3714  
Fax: (385) 468-9030

ALL BREAK ROOM ELEMENTS TO BE ACCESSIBLE AS NOTED BELOW:

i. PROVIDE A WORK SURFACE WHERE SHOWN,(30" WIDE X 28"-34" ABOVE FINISHED FLOOR

a. CLEAR FLOOR SPACE FOR FORWARD APPROACH WITH KNEE AND TOE CLEARANCE IS REQUIRED.

b. THE WORK SURFACE IS REQUIRED TO BE LOCATED ADJACENT TO MICROWAVE OVEN. EITHER ON THE SIDE OPPOSITE THE HINGE, OR ON EITHER SIDE, FOR A BOTTOM HINGE.

II. SINK SHALL BE 34" HIGH WITH A FORWARD APPROACH WITH TOE AND KNEE CLEARANCE (NO CABINET)

IV. CONTROLS FOR OVER THE MICROWAVE NEED TO BE WITHIN REACH RANGE AS REQUIRED BY SECTION 804.5.2, 309.3, and 309.4 OF ICC A117.1-09 (48").

**804.5.5 Oven.** Ovens shall comply with Section 804.5.5.

**804.5.5.1 Clear floor space.** A clear floor space shall be provided. The oven door in the open position shall not obstruct the clear floor space for the oven.

**804.5.5.2 Side-Hinged Door Ovens.** Side-hinged door ovens shall have a work surface complying with Section 804.3 positioned adjacent to the latch side of the oven door.

**804.5.5.3 Bottom-Hinged Door Ovens.** Bottom-hinged door ovens shall have a work surface complying with Section 804.3 positioned adjacent to one side of the door.

**804.5.5.4 Controls.** The location of controls shall not require reaching across burners.

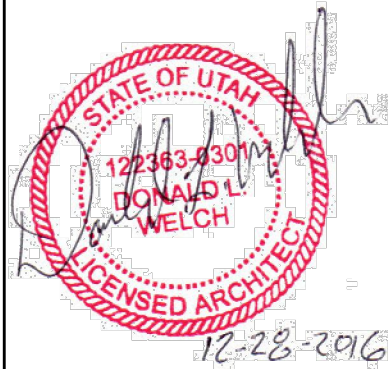
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project no:  
drawn by:  
checked by:

DLW

title  
ENLARGED FLOOR PLANS & CABINET SECTIONS

sheet

A4 6



EQUIPMENT/ACCESSORY SCHEDULE - REFER TO A4 SHEETS FOR ENLARGED PLANS									
NO	DESCRIPTION	MANUFACTURER / VENDOR	FURNISHED BY			INSTALL. BY			REMARKS
			O	C	V	O	C	V	
1	LAVATORY - COUNTERTOP ACCESSIBLE	SEE PLUMBING SCHEDULE		•			•		
2	4"x4" X 4'-0" HIGH TILE SURROUND	SEE SPECIFICATIONS; REAR OF MOP SINK		•			•		
3	ADA SHOWER SEAT	SEE FINISH SCHED.; COORD. W/ PREFAB SHOWER UNIT		•			•		SEE NOTE A.
4	TOILET GRAB BAR	TO MEET A.D.A. REQUIREMENTS		•			•		PROVIDE BLOCKING PER MANUFACT. RECOMMENDATION
5	TOILET PAPER HOLDER - CHROME	COORD. WITH OWNER-SEE FINISH SCHED.		•			•		
6	SHOWER GRAB BARS	COORDINATE WITH PRE-FAB SHOWER		•			•		PROVIDE BLOCKING PER MANUFACT. RECOMMENDATION
7	SHOWER SPRAY UNIT - 60" LONG HOSE, HEAD HEIGHT ADJUSTABLE FROM 26" TO 54" ABOVE TOP OF TUB	SEE FINISH SCHEDULE # PLUMBING SCHEDULE		•			•		
8	SHOWER CONTROLS	SEE PLUMBING SCHEDULE		•			•		IN ACCESSIBLE ROOMS INSTALL AT 8" FROM EDGE OF TUB # 8" ABOVE TOP OF TUB, SEE INTERIOR ELEVATIONS. SEE INTERIOR ELEVATIONS FOR SHOWERS.
				•			•		
9	STRAIGHT SHOWER CURTAIN ROD - CHROME PLATED, SCREW MOUNTED	COORDINATE WITH OWNER		•			•		
10	MIRROR - 16" WIDE X 30" HIGH - ADA			•			•		FIXED TILT MIRROR W/ STAINLESS STEEL FRAME
11	ONE PIECE FIBERGLASS SHOWER UNIT	SEE FINISH SCHEDULE # PLUMBING SCHEDULE		•			•		SEE NOTE B
11a	ONE PIECE FIBERGLASS ACCESSIBLE SHOWER	SEE FINISH SCHEDULE # PLUMBING SCHEDULE		•			•		SEE NOTE B
				•			•		
12	DOUBLE ROBE HOOK - MOUNTED ON BACK OF BATHROOM DOOR 66" A.F.F. UNLESS NOTED OTHERWISE	CONTACT DESIGNATED SERVICE PROVIDERS		•			•		IN ACCESSIBLE ROOMS PROVIDE TWO SETS, ONE SET AT 66" AFF AND ONE SET AT 48" AFF.
13	TOWEL RACK - CHROME 18" WIDE	CONTACT DESIGNATED SERVICE PROVIDERS		•			•		
14	FLAT PANEL TELEVISION W/ FIXED MOUNTING BRACKET	CONTACT DESIGNATED SERVICE PROVIDERS		•			•		40" OR 60" FLAT SCREEN PER OWNERS PREFERENCE
				•			•		
15	ADA CLEARANCE								SEE NOTE C
16	ADA CLEARANCE								SEE NOTE D
17	ACCESSIBLE SINK FRONT/PLUMBING	SEE PLUMBING SCHEDULE		•			•		
18	BUILT-IN MICROWAVE ABOVE OVENS	COORDINATE WITH OWNER		•			•		SEE NOTE L
19	REFRIGERATOR	COORDINATE WITH OWNER		•			•		SEE NOTE L
20	COOK-TOP	COORDINATE WITH OWNER		•			•		SEE NOTE L
21	COOK-TOP HOOD	COORDINATE WITH OWNER		•			•		SEE NOTE L
22	DOUBLE OVEN	COORDINATE WITH OWNER		•			•		SEE NOTE L
23	UNDER-COUNTER DISHWASHER	COORDINATE WITH OWNER		•			•		SEE NOTE L
24	DOUBLE SINK W/ DISPOSAL	SEE PLUMBING DRAWINGS		•			•		
25	CLOTHES WASHER	COORDINATE WITH OWNER		•			•		
26	CLOTHES DRYER	COORDINATE WITH OWNER		•			•		
27	RECESSED WALL IRONING BOARD	COORDINATE WITH OWNER		•			•		SEE NOTE H
28	COUNTERTOP - PLASTIC LAMINATE OVER 3/4" SUBSTRATE - 1 1/2" SUBSTRATE AT PERIMETER W/ BACKSPLASH	COORDINATE WITH OWNER		•			•		SEE NOTE H
29	ADA CLEARANCE								SEE NOTE F
30	4" x 4" CERAMIC WALL TILE SURROUND X 4'-0" HIGH AT CUSTODIAL MOP SINK			•			•		
31	PREFABRICATED GAS FIREPLACE	COORDINATE WITH FINISH SCHEDULE		•			•		COORDINATE WITH PLUMBING AND ELECTRICAL FOR GAS BIBB AND ELECTRICAL SWITCH
32	STAINLESS STEEL OR LAMINATE TOILET PARTITIONS AND PARTITION DOORS	COORDINATE WITH OWNER		•			•		PROVIDE BLOCKING PER MANUFACT. RECOMMENDATION
33	UNDER-COUNTER SPECIMEN REFRIGERATOR	COORDINATE WITH OWNER		•			•		SEE NOTE L
34	SINGLE LAB SINK	COORDINATE WITH OWNER		•			•		COORDINATE WITH PLUMBING
35	LOCKABLE CABINETS	COORDINATE WITH OWNER		•			•		SEE NOTE L
36	THROUGH-WALL SPECIMENT PASS-THRU	STAINLESS STEEL-BOBRICK OR EQUIVALENT		•			•		#B505; 11 1/2" W. X 10 7/8" HIGH; SEE NOTE L
37	SINGLE BAR SINK	COORDINATE WITH OWNER		•			•		COORDINATE WITH PLUMBING
38	COUNTERTOP/CABINET - PLASTIC LAMINATE OVER 3/4" SUBSTRATE - 1 1/2" SUBSTRATE AT PERIMETER W/ BACKSPLASH	COORDINATE WITH OWNER		•			•		SEE NOTE H
39	COUNTER-TOP MICROWAVE	COORDINATE WITH OWNER		•			•		SEE NOTE L

## LEGEND

O - OWNER

C - CONTRACTOR

V - VENDOR

## RESTROOM ACCESSORIES SCHEDULE

MARK	ITEM	MANUF./ MODEL NO.#	NOTES:
①	NOT USED		
②	WALL MTD. SOAP DISPENSER	BOBRICK OR BRADLEY	
③	ROBE HOOK @ 6'-0" A.F.F.	BOBRICK OR BRADLEY	
④	PARTITION MTD. SANITARY NAPKIN DISPOSAL	BRADLEY 4721-15	
⑤	WALL MTD. SANITARY NAPKIN DISPOSAL	BRADLEY 4722-15	
⑥	PARTITION MTD. TOILET TISSUE DISPENSER	BOBRICK OR BRADLEY	
⑦	WALL MTD. TOILET TISSUE DISPENSER	BRADLEY 5412	
⑧	SANITARY NAPKIN DISPENSER	BRADLEY 401	
⑨	TOWEL DISPENSER / WASTE CAN	BRADLEY 235	
⑩	TOILET STALL PARTITION	SANVMETAL	
⑪	36" X 52" X 1 1/2" GRAB BAR	BRADLEY 059	STAINLESS STEEL
⑫	MOP RACK		WALL/CLG. MTD., STAINLESS STEEL
⑬	36" WIDE x 48" HIGH FRAMELESS MIRROR	BOBRICK OR BRADLEY	COORD. MIRROR WDTH. W/ FIN. WALLS
⑭	TOWEL DISPENSER	BRADLEY OR BOBRICK	WALL HUNG ABOVE COUNTER TOP
⑮	COAT HOOK	BOBRICK OR BRADLEY	

NOTES:

- A. ~~IN-TUB SEAT SHALL BE MOUNTED SECURELY & SHALL NOT SLIP DURING USE. STRUCT. STRENGTH PER ADA REQUIREMENTS.~~
- B. ~~VERIFY REQUIRED R.O. WITH SHOWER MANUF.~~
- C. ~~ADA 30"x 48" CLEAR FLOOR SPACE @ LAVATORY, AND 60" x 56" CLEAR FLOOR SPACE @ WATER CLOSET.~~
- D. ~~ADA 36" CLEAR FLOOR SPACE @ SHOWER.~~
- E. ~~PROVIDE CUTOUT IN HEADBOARD FOR ELECTRICAL BOX - COORD. W/ ELEC. DWGS. (SEE 8/A-9 FOR BACK-TO-BACK CONDITION).~~
- F. ~~NOTE: ELEC. OUTLETS IN ALL GUEST ROOMS SHALL BE 4" HIGHER THAN IN COMMON AREAS.~~
- F. ~~ADA 3'-0" CLEAR FLOOR SPACE AROUND BED.~~
- G. ~~FURNISHING~~
- H. ~~CONTRACTOR TO PROVIDE AND INSTALL BLOCKING AND COORDINATE ELECTRICAL INSTALLATION W/ ELECTRICAL DRAWINGS.~~
- J. ~~NOT USED~~
- K. ~~NOT USED~~
- L. ~~ALL OWNER SUPPLIED ITEMS MUST BE PURCHASED THROUGH ONE OF THE OWNER DESIGNATED SERVICE PROVIDERS. COORDINATE WITH OWNER.~~

NOTE: FIRE EXTINGUISHER CABINETS SHALL NOT EXTEND MORE THAN 4" OVER THE WALKING SURFACE AS REQUIRED BY IBC 1003.3.2.

ALL NEW INTERIOR WALLS, SEPARATING SLEEPING UNITS FROM EACH OTHER, AND WALLS SEPARATING COMMON AREAS, TO BE 30 MINUTE FIRE RATED CONSTRUCTION, CONSISTING OF ONE LAYER OF 5/8" SHEETROCK ULTRALIGHT PANELS FIRECODE 30, EACH SIDE OF 2X4 WOOD STUDS @ 16" O.C. UL DESIGN #U407.

ALL INTERIOR DOORS AND FRAMES, PLACED WITHIN THE 30 MINUE FIRE RATED WALL CONSTRUCTION, TO BE 20 MINUTE RATED DOORS.

ALL NEW INTERIOR SHEETROCK CEILINGS THROUGHOUT THE ENTIRE EXISTING BUILDING TO BE 30 MINUTE FIRE RATED CONSTRUCTION (MATERIALS CALLED OUT IN THIS NOTE ARE FOR A 1 HOUR FIRE RATED CONSTRUCTION), CONSISTING OF ONE LAYER OF 5/8" SHEETROCK FIRECODE C CORE GYPSUM PANELS. (WITH EXISTING PLY WOOD SHEATHING ON ROOF) EXISTING ROOF TRUSSES AT 24" O.C. FIELD VERIFY EXACT SPACING), WITH SYP. BD.

ATTACHED TO 3/4" RC-1 CHANNELS, OR EQUIVALENT, AT 16" O.C. WITH BATF OR BLOWN-IN INSULATION. AIR OUTLETS AND CEILING DAMPERS AS NOTED ON MECHANICAL DRAWINGS. UL DESIGN #P522

NOTE: THE SHELF AND ROD IN THE CLOSETS OF THE A.D.A. ACCESSIBLE UNITS SHALL MEET REQUIREMENTS OF SECTION 1002.14 OG ICC A117.1-09, FOR ACCESSIBLE REACH RANGE. SEE NOTES ON SHEET A8.2 CONCERNING ACCESSIBLE REACH RANGE & HEIGHTS.

NOTE: REINFORCEMENT SHALL BE PROVIDED FOR THE FUTURE INSTALLATION OF GRAB BARS AND SHOWER SEATS AT WATER CLOSETS AND SHOWER COMPARTMENTS. WHERE WALLS ARE LOCATED TO PERMIT THE INSTALLATION OF GRAB BARS AND SEATS COMPLYING WITH SECTION 604.5 AT WATER CLOSETS, GRAB BARS COMPLYING WITH 607.4 , AT BATHTUBS, AND FOR GRAB BARS AND SHOWER SEATS COMPLYING WITH SECTION 608.3, 608.2.1.3, 608.2.2.3, AND 608.2.3.2, AT SHOWER COMPARTMENTS, REINFORCEMENT SHALL BE PROVIDED FOR THE FUTURE INSTALLATION OF GRAB BARS AND SEATS COMPLYING WITH THOSE REQUIREMENTS.

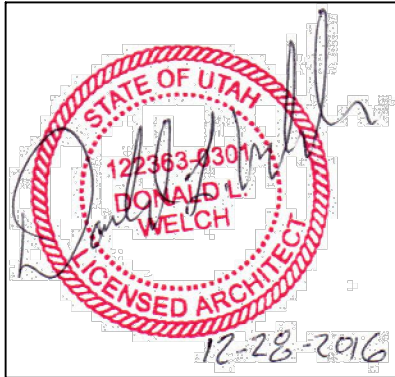
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	BUILDING 'F'

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project no:  
drawn by:  
checked by:  
title  
EQUIPMENT/  
ACCESSORY  
SCHEDULE

sheet  
A4 7



# INTERIOR FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR	BASE	WALLS				CEILG.	CEILG. HGT.	REMARKS
				NORTH	EAST	SOUTH	WEST			
EXISTING BUILDING 'A'										
A100	EXIT HALL	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A101	RESIDENT LAUNDRY	F-3	B-1	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A102	ELECTRICAL	F-3	B-1	W-1	W-1	W-1	W-2	C-1	±10'-4"	--
A103	PRIVATE UNIT	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A103A	BATHROOM	F-2	B-2	W-2	W-2	W-2	W-2	C-1	±10'-4"	5
A103B	CLOSET	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A103C	SHOWER (PREFAB.)	--	--	--	--	--	--	--	--	3
A104	A.D.A. PRIVATE UNIT	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A104A	BATHROOM	F-2	B-2	W-2	W-2	W-2	W-2	C-1	±10'-4"	5
A104B	CLOSET	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A104C	SHOWER	--	--	--	--	--	--	--	--	3
A105	STORAGE	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A105A	FIRE RISER ROOM	F-3	B-1	W-3	W-3	W-3	W-3	C-1	±10'-4"	--
A106	VESTIBULE	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A107	A.D.A. SEMI-PRIVATE UNIT	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A107A	BATHROOM	F-2	B-2	W-2	W-2	W-2	W-2	C-1	±10'-4"	5
A107B	DOUBLE CLOSET	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A107C	SHOWER	--	--	--	--	--	--	--	--	3
A108	LINEN	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A109	LINEN	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A110	SEMI-PRIVATE UNIT	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A110A	BATHROOM	F-2	B-2	W-2	W-2	W-2	W-2	C-1	±10'-4"	5
A110B	CLOSET	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A110C	CLOSET	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A110D	SHOWER	--	--	--	--	--	--	--	--	3
A111	SEMI-PRIVATE UNIT	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A111A	BATHROOM	F-2	B-2	W-2	W-2	W-2	W-2	C-1	±10'-4"	5
A111B	CLOSET	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A111C	CLOSET	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A111D	SHOWER	--	--	--	--	--	--	--	--	3
A112	HALL	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A112A	ROOF ACCESS	F-3	B-1	W-3	W-3	W-3	W-3	C-2	±10'-4"	--
A113	DINING/GREAT ROOM	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	4
A114	FAMILY ROOM	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A115	KITCHEN	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A116	STORAGE	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A117	HALL	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A118	SEMI-PRIVATE UNIT	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A118A	BATHROOM	F-2	B-2	W-2	W-2	W-2	W-2	C-1	±10'-4"	5
A118B	CLOSET	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A118C	CLOSET	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A118D	SHOWER	--	--	--	--	--	--	--	--	3
A119	SEMI-PRIVATE UNIT	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A119A	BATHROOM	F-2	B-2	W-2	W-2	W-2	W-2	C-1	±10'-4"	5
A119B	CLOSET	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A119C	CLOSET	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A119D	SHOWER	--	--	--	--	--	--	--	--	3
A120	LINEN	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A121	LINEN	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A122	A.D.A. SEMI-PRIVATE UNIT	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A122A	BATHROOM	F-2	B-2	W-2	W-2	W-2	W-2	C-1	±10'-4"	5
A122B	DOUBLE CLOSET	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A122C	SHOWER	--	--	--	--	--	--	--	--	3
A123	HALL	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A124	CUSTODIAN	F-3	B-1	W-1	W-1	W-1	W-1	C-1	±10'-4"	6
A125	A.D.A. PRIVATE UNIT	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A125A	BATHROOM	F-2	B-2	W-2	W-2	W-2	W-2	C-1	±10'-4"	5
A125B	CLOSET	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A125C	SHOWER	--	--	--	--	--	--	--	--	3
A126	PRIVATE UNIT	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A126A	BATHROOM	F-2	B-2	W-2	W-2	W-2	W-2	C-1	±10'-4"	5
A126B	CLOSET	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A126C	SHOWER	--	--	--	--	--	--	--	--	3
A127	RESIDENT LAUNDRY	F-3	B-1	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
A128	EXIT HALL	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--

GENERAL NOTES FOR ALL 6 BUILDINGS:  
 1- TO MEET THE ENERGY CODE REQUIREMENTS.  
 PROVIDE 1/2" PAINTED GYP. BD. ON 2X4 STUD FURRING @ 24" O.C., AND R-13 BATT OR BLOWN-INSULATION AT ALL EXISTING EXTERIOR WALLS, AT WINDOW SILLS AND HEADS, BELOW NEW CEILINGS.  
 2- PROVIDE NEW R-38 BATT, OR BLOWN-IN INSULATION ABOVE NEW CEILING IN ALL BUILDINGS-COORDINATE WITH NEW FIRE SPRINKLER LINES ABOVE NEW CEILING.  
 3. COORDINATE WITH REFLECTED CEILING PLANS FOR 12" DEEP X 36" WIDE FURRED-DOWN CEILING AREAS, FOR HOT & COLD WATER PIPING LINES- ALSO COORDINATE WITH PLUMBING PLANS FOR HOT AND COLD WATER PIPING LINE LOCATIONS

FOR GENERAL CLARIFICATION ITEMS, SEE NEW SHEET A1.2, FOR ADDENDUM #4

PREFABRICATED FIREPLACE UNITS:  
 NAPOLEON FIREPLACES 1-866-820-8686  
 PLAZMA FIRE VF31  
 PRODUCT CODE: WHVF31  
 VENT FREE GAS FIREPLACE  
 28" H X 43 1/2" WIDE X 9 9/16" DEEP  
 OR EQUIVALENT  
 OR  
 NAPOLEON FIREPLACES  
 DIRECT VENT GAS FIREPLACE  
 ASCENT LINEAR 36  
 PRODUCT CODE: BL36  
 34 1/2" HIGH X 35" WIDE X 16 1/2" DEEP  
 COORDINATE FIREPLACE SURROUND TO MEET REQUIRED DIMENSIONS

PREFABRICATED SHOWER UNITS:  
 www.FreedomShowers.com 1-877-947-7769  
 38 5/8" x 38 7/16" Freedom ADA Transfer Shower  
 Or equivalent (dimensions shown on plans are for this prefabricated shower. adjust wall dimensions for other prefab showers selected.  
 4-Piece for Remodeling  
 ADA Compliance for this unit:  
 •Outside dimensions 38 5/8" x 38 7/16" x 79"  
 •ADA compliant installation 38 5/8" x 38 7/16"  
 •4-piece unit for remodeling  
 •1/2" barrier free threshold  
 •Center drain location  
 •Self-supporting and pre-installed shower base eliminates the need for a separate shower pan  
 •Full wood backing  
 •Easy clean gel coat finish  
 •Textured, slip resistant floor  
 •Made in America  
 •30 Year Manufacturer's Limited Warranty

Commercial Code Compliance:  
 •ADA Accessibility Guidelines for Buildings and Facilities  
 •IPC International Plumbing Code  
 •UPC Uniform Plumbing Code  
 •ANSI Z124.2 Standards for Plastic Showers  
 •ANSI A117.1 Accessible and Useable Buildings and Facilities  
 •CSA approved  
 •NAHB, HUD, FHA

PROVIDE THE FOLLOWING AVAILABLE ACCESSORIES IN ALL SHOWERS  
 (UNLESS DIRECTED OTHERWISE BY OWNER.)  
 •2 Strip to create receiver flange (recommended)  
 •Folding Shower Seat  
 •Grab Bars  
 •Shower Rod  
 •Weighted Curtain  
 •Pressure Balance Valve  
 •Hand-held Shower and Slide Bar  
 •Surface mount stainless soap dish  
 •Caulkless Drain  
 •Collapsible Water Retainer  
 •Color upgrade to Bone or Biscuit- TO BE SELECTED BY OWNER

# INTERIOR FINISH SCHEDULE

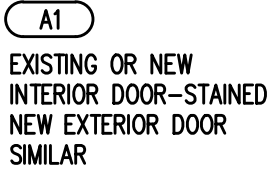
ROOM NO.	ROOM NAME	FLOOR	BASE	WALLS				CEILG.	CEILG. HGT.	REMARKS
				NORTH	EAST	SOUTH	WEST			
EXISTING BUILDING 'B'										
B100	EXIT HALL	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B101	RESIDENT LAUNDRY	F-3	B-1	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B102	ELECTRICAL	F-3	B-1	W-1	W-1	W-1	W-2	C-1	±10'-4"	-
B103	STORAGE	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B104	SEMI-PRIVATE UNIT	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B104A	BATHROOM	F-2	B-2	W-2	W-2	W-2	W-2	C-1	±10'-4"	5
B104B	CLOSET	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B104C	CLOSET	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B104D	SHOWER (PREFAB.)	--	--	--	--	--	--	--	--	3
B105	A.D.A. PRIVATE UNIT	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B105A	BATHROOM	F-2	B-2	W-2	W-2	W-2	W-2	C-1	±10'-4"	5
B105B	CLOSET	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B105C	SHOWER	--	--	--	--	--	--	--	--	3
B106	CUSTODIAN	F-3	B-1	W-1	W-1	W-1	W-1	C-1	±10'-4"	6
B107	VESTIBULE	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B108	SEMI-PRIVATE UNIT	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B108A	BATHROOM	F-2	B-2	W-2	W-2	W-2	W-2	C-1	±10'-4"	5
B108B	CLOSET	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B108C	CLOSET	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B108D	SHOWER	--	--	--	--	--	--	--	--	3
B109	LINEN	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B110	LINEN	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B111	PRIVATE UNIT	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B111A	BATHROOM	F-2	B-2	W-2	W-2	W-2	W-2	C-1	±10'-4"	5
B111B	CLOSET	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B111C	SHOWER	--	--	--	--	--	--	--	--	3
B112	HALL	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B112A	ROOF ACCESS	F-3	B-1	W-3	W-3	W-3	W-3	C-2	±10'-4"	--
B113	DINING/GREAT ROOM	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	4
B114	FAMILY ROOM	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B115	KITCHEN	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B116	HALL	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B117	PRIVATE UNIT	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B117A	BATHROOM	F-2	B-2	W-2	W-2	W-2	W-2	C-1	±10'-4"	5
B117B	CLOSET	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B117C	SHOWER	--	--	--	--	--	--	--	--	3
B118	LINEN	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B119	SEMI-PRIVATE UNIT	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B119A	BATHROOM	F-2	B-2	W-2	W-2	W-2	W-2	C-1	±10'-4"	5
B119B	CLOSET	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B119C	CLOSET	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B119D	SHOWER	--	--	--	--	--	--	--	--	3
B120	OUTSIDE STORAGE	F-3	B-1	W-3	W-3	W-3	W-3	C-2	±10'-4"	--
B121	STORAGE	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B122	A.D.A. PRIVATE UNIT	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B122A	BATHROOM	F-2	B-2	W-2	W-2	W-2	W-2	C-1	±10'-4"	5
B122B	CLOSET	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B122C	SHOWER	--	--	--	--	--	--	--	--	3
B123	SEMI-PRIVATE UNIT	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B123A	BATHROOM	F-2	B-2	W-2	W-2	W-2	W-2	C-1	±10'-4"	5
B123B	CLOSET	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B123C	CLOSET	F-1	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B123D	SHOWER	--	--	--	--	--	--	--	--	3
B124	STORAGE	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B125	RESIDENT LAUNDRY	F-3	B-1	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B125A	FIRE RISER ROOM	F-5	B-4	W-3	W-3	W-3	W-3	C-2	±10'-4"	--
B126	EXIT HALL	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B127	DINING/GREAT ROOM	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	4
B128	FAMILY ROOM	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--
B129	KITCHEN	F-4	B-3	W-1	W-1	W-1	W-1	C-1	±10'-4"	--



[illegible]


~~VOID FOR THIS SUBMITTAL~~

1. FIELD VERIFY ALL DOOR DIMENSIONS—COORDINATE WITH OWNER AND ARCHITECT
2. COORDINATE WITH OWNER AND ARCHITECT FOR FINAL DOOR TYPES, DOOR DIMENSIONS, DOOR MATERIAL TYPES & COLOR TYPES & FINISH TYPES.
3. FIELD VERIFY ALL CONDITIONS, OPENING SIZES, ETC. BEFORE FABRICATION, MANUFACTURING, OR INSTALLATION OF ALL DOORS.
4. COORDINATE WITH LOCAL JURISDICTION FOR TEMPERED GLASS REQUIREMENTS FOR WINDOWS ADJACENT TO DOORS, SPECIFICALLY, THE DIMENSION FROM DOOR TO WINDOW DISTANCE.
5. ALL DOOR HARDWARE TO BE ADA TYPE LEVER HARDWARE AS REQUIRED BY LOCAL JURISDICTION AND PER IBC REQUIREMENTS
6. COORDINATE WITH OWNER FOR TYPE AND LOCATION OF PRIVACY AND/PASSAGE TYPE HARDWARE FOR EACH DOOR.
7. DOOR NUMBERS CORRESPOND TO THE ROOM NUMBERS ASSOCIATED WITH.

[illegible][illegible]

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

THESE DRAWINGS ARE AVAILABLE FOR LIMITED REVIEW AND EVALUATION BY CLIENTS, CONSULTANTS, CONTRACTORS, GOVERNMENT AGENCIES, VENDORS, AND OFFICE PERSONNEL ONLY IN ACCORDANCE WITH THIS NOTICE.



data  
project no: (DOOR C120 CHANGE  
04-11-2017)

sheet

# A7 1A



HARDWARE SCHEDULE																	
HARDWARE SET	CARD KEY LOCK	SECURITY LATCH	ALARM W/ KEY CARD	KEYED LOCK	PRIVACY SET	PASSAGE SET	VIEWER	PANIC BAR	DOOR CLOSER	HINGES	MAGNETIC LOCK	DOOR SWEEP	SMOKE SEALS	DOOR STOP	REMARKS	HARDWARE SET	NOTES
1	*	*	*					HANDLE *	*						3 PAIR OF DOOR HINGES - SEE NOTE 1 W/ WEATHER SEAL - SEE NOTE 2	-	1. 1-1/2 PAIR SPRING HINGES.
2				*	*									*	3 PAIR OF DOOR HINGES	2	
3						*								*	3 PAIR OF DOOR HINGES	3	
4						*			*					*	3 PAIR OF DOOR HINGES - SEE NOTE 2	4	2. ALL DOORS W/ CLOSERS TO HAVE BALL BEARING HINGES.
5	*	*	*											*(2)	6 PAIR OF DOOR HINGES - SEE NOTE 2; ELECTRIC STRIKE; DUTCH DOOR	5	
6				*	*									*(2)	6 PAIR OF DOOR HINGES	6	3. WEATHER PROOF CARD KEY LOCK TO BE MOUNTED ON DOOR STYLE.
7				*	*										POCKET DOOR HARDWARE	7	
8															W/ WEATHER SEAL - SEE NOTE 2	8	4. PROVIDE 2 REVERSE VIEWERS - 1 @ 60" A.F.F. AND 1 @ 42" A.F.F.
9															3 PAIR OF DOOR HINGES - SEE NOTE 2	9	
10															3 PAIR OF DOOR HINGES - SEE NOTE 2	10	5. COORDINATE WITH DOOR MANUFACTURER SO CARD OVERRIDE WHEN VESTIBULE SIDE MOTION SENSOR IS OFF. LOBBY SIDE MOTION SENSOR TO REMAIN ACTIVE AT ALL TIMES.
11															MOTION SENSOR - PER MANUFACTURER	11	
12															MOTION SENSOR - PER MANUFACTURER	12	
13															PUNCH PAD ACCESS - SEE NOTE 2	13	
14															3 PAIR OF DOOR HINGES - SEE NOTE 2	14	
15															3 PAIR OF DOOR HINGES	15	
16															3 PAIR OF DOOR HINGES	16	
17															3 PAIR OF DOOR HINGES	17	

NOTES: 1. ALL DOOR HARDWARE SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST TO OPERATE.  
2. VERIFY REQUIREMENTS WITH LOCAL CODES-PROVIDE 20 MINUTE DOORS @ GUEST ROOMS, IF LOCAL JURISDICTION REQUIRES IT..  
3. EXTERIOR H. METAL FRAMES SHALL BE 14 GAUGE, UNLESS NOTED OTHERWISE.  
4. WHERE SMOKE DOOR IS REQUIRED BY LOCAL AUTHORITIES, A MAGNETIC HOLD OPEN DEVICE SHALL BE USED WHICH IS COORDINATED WITH THE FIRE ALARM SYSTEM.

5. NOT USED  
6. ALL EXTERIOR DOORS TO HAVE THRESHOLDS, DOOR SWEEPS, & WEATHER SEALS.  
7. CONTRACTOR TO VERIFY ALL DOOR FRAME THROAT DIMENSIONS.  
8. CONTRACTOR TO VERIFY KEY SCHEDULE WITH OWNER PRIOR TO PURCHASING LOCKS.

\*\*NOTE: THE LOCK FOR HARDWARE SETS 2, 6 & 7 WILL NOT PREVENT THE OPERATION OF THE DOOR FROM THE EGRESS SIDE, WHEN ENGAGED.

HARDWARE MANUFACTURERS			Comply with Owner's instructions for master keying and, except as otherwise indicated, provide individual change key for each lock which is not designated to be keyed alike with a group.  Permanently inscribe each key with number or lock that identifies cylinder manufacturer key symbol, and notation "DO NOT DUPLICATE".  Key Material: Provide keys of nickel silver only. Key Quantity: Furnish three change keys for each lock; five master keys for each master system; and five grandmaster keys for each grandmaster system. Deliver keys to Owner's representative.  For Electronic Locks: Provide card keys as required to comply with master keying. Provide one system controller. Provide one spare lock with keys.  Keying General: Supplier will supply three reusable card keys per lock (or three keys for standard locks) and three sets of master keys. Keying shall be as follows: Each room shall be keyed separately. A master key for all guest rooms. A master key for all rooms. A master key to open guest room deadbolts. Room keys shall open exterior doors.  Keying Schedule – Submit keying schedule to Owner for approval prior to fabrication. Keying to have 3 levels of security.
Hardware Item	Base Manufacturer	Acceptable Equivalents	
Spring Hinges	Hager	Stanley	
Hinges	Hager	Stanley, McKinney	
Lockset (Standard Type)	Schlage	Sargent, Yale	
Lockset (Electronic System)	KABA/ILCO System E-760	Onity, Vingcard	
Closer	LCN	Sargent, Dorma	
Stops, Flush Bolts	Ives	Rockwood, Quality, Taymor	
Weatherstrip, Door Sweeps, Thresholds	NGP, Stanley	Pemko, Zero, Door and Hardware Systems	
Exit Devices	Sargent	Adams-Rite, Von Duprin	
Peep Sight	Ives	Quality	
Door Guard	Ives	Quality, Door & Hardware Systems, Inc.	
Surface Bolts	Ives	Quality	
Frame Smoke Seals	DSHI #105 "Cush N Seal" by: Door & Hardware System (716) 235-8543	None	
Door Silencers	Glynn-Johnson	Door & Hardware Systems, Inc.	
Electric Strike	Folger Adams	None	

CYLINDERS AND KEYING  
Keying System: Master keying must be in accordance with the National Hardware Council's recommendations for hotels.  
For Manual Locks:  
Equip locks with manufacturer's standard 6-pin tumbler cylinders.  
Equip locks with manufacturer's interchangeable core cylinders operable by a control key.

NOTE: SIGNAGE TO BE LOCATED AT ALL PUBLIC RESTROOMS, LABORATORY, MED ROOM, JANITOR'S CLOSETS, STORAGE ROOMS, OFFICES, DATA ROOM, BREAK ROOMS, ETC. AS REQUIRED BY OWNER AND LOCAL JURISDICTION.



A SIGN STATING 'EXIT' IN VISUAL CHARACTERS, RAISED CHARACTERS, AND BRAILLE, AND COMPLYING WITH ICC A117.1 SHALL BE PROVIDED ADJACENT TO EACH DOOR TO AN EXIT PASSAGEWAY AND THE EXIT DISCHARGE.

**703.3.3 Case.** Characters shall be uppercase.  
**703.3.4 Style.** Characters shall be sans serif. Characters shall not be italic, oblique, script, highly decorative, or of other unusual forms.  
**703.3.5 Character Height.** The uppercase letter "I" shall be used to determine the allowable height of all characters of a font. The height of the uppercase letter "I" of the font, measured vertically from the baseline of the character, shall be 1/8 inch (16 mm) minimum, and 2 inches (51 mm) maximum.  
**EXCEPTION:** Where separate raised and visual characters with the same information are provided, the height of the raised uppercase letter "I" shall be permitted to be 1/8 inch (13 mm) minimum.

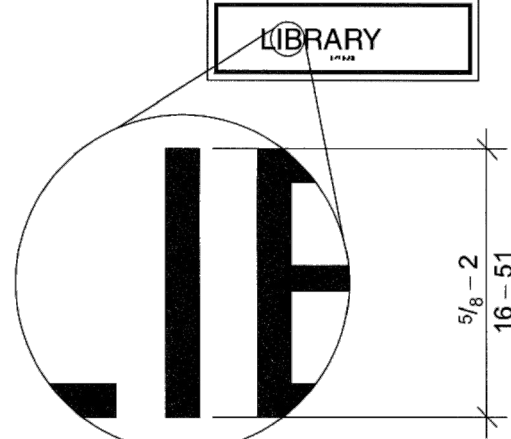


FIG. 703.3.5 CHARACTER HEIGHT

**703.3.6 Character Width.** The uppercase letter "O" shall be used to determine the allowable width of all characters of a font. The width of the uppercase letter "O" of the font shall be 55 percent minimum and 110 percent maximum of the height of the uppercase "I" of the font.  
**703.3.7 Stroke Width.** Raised character stroke width shall comply with Section 703.3.7. The uppercase letter "I" of the font shall be used to determine the allowable stroke width of all characters of a font.  
**703.3.7.1 Maximum.** The stroke width shall be 15 percent maximum of the height of the uppercase letter "I" measured at the top surface of the character, and 30 percent maximum of the height of the uppercase letter "I" measured at the base of the character.  
**703.3.7.2 Minimum.** When characters are both visual and raised, the stroke width shall be 10 percent minimum of the height of the uppercase letter "I".

### PART 3 - EXECUTION

#### INSPECTION

Verify that doors and frames are ready to receive work and dimensions, are as indicated on Shop Drawings, and as instructed by the manufacturer.  
Beginning of installation means acceptance of existing conditions.

#### INSTALLATION

Install each hardware item in compliance with manufacturer's instructions and recommendations. Wherever cutting and fitting is required to install hardware onto or into surfaces which are later to be painted or finished in another way, install each item completely and then remove and store in a secure place during the finish application. After completion of the finished, reinstall each item. Do not install surface-mounted items until finishes have been completed on the substrate.  
Conform to ANSI A117.1 and ADAAG for positioning requirements for the Disabled.  
All door closers shall be installed out of public sight wherever possible.  
All doors off corridors and all communicating doors to have frame-mounted smoke seals.

#### FASTENINGS

Furnish proper screws, hex bolts, through bolts, etc., as required to make secure attachment of each item to the material it is installed on.

#### PROTECTION AND CLEANING

After installation, clean metal surfaces on both interior and exterior of all mortar, plaster, paint and other contaminants. After cleaning, protect work against damage.

nearest adjacent wall. Signs containing raised characters and braille shall be located so that a clear floor area 18 inches (455 mm) minimum by 18 inches (455 mm) minimum, centered on the raised characters is provided beyond the arc of any door swing between the closed position and 45 degree open position.  
**EXCEPTION:** Signs containing raised characters and braille shall be permitted on the push side of doors with closers and without hold-open devices.

**703.3.12 Finish and Contrast.** Characters and their background shall have a non-glare finish. Characters shall contrast with their background with either light characters on a dark background, or dark characters on a light background.  
**EXCEPTION:** Where separate raised characters and visual characters with the same information are provided, raised characters are not required to have nonglare finish or to contrast with their background.

#### 703.4 Braille

**703.4.1 General.** Braille shall be contracted (Grade 2) braille and shall comply with Section 703.4.

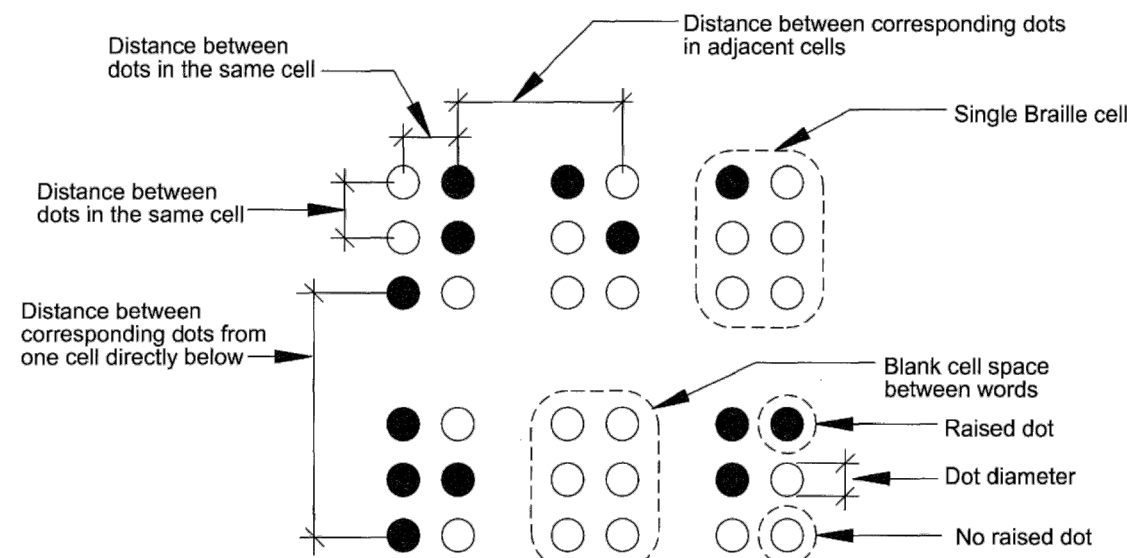


FIG. 703.4.3 BRAILLE MEASUREMENT

TABLE 703.4.3— BRAILLE DIMENSIONS	
Measurement range	Minimum in inches Maximum in inches
Dot base diameter	0.059 (1.5 mm) to 0.063 (1.6 mm)
Distance between two dots in the same cell	0.090 (2.3 mm) to 0.100 (2.5 mm)
Distance between corresponding dots in adjacent cells <sup>1</sup>	0.241 (6.1 mm) to 0.300 (7.6 mm)
Dot height	0.025 (0.6 mm) to 0.037 (0.9 mm)
Distance between corresponding dots from one cell directly below <sup>1</sup>	0.395 (10.0 mm) to 0.400 (10.2 mm)

#### FINAL ADJUSTMENT

Whenever hardware is installed more than one month prior to acceptance or occupancy of a space or area, return during the week prior to acceptance or occupancy and make a final check and adjustment of all hardware items in such space or area.  
At the completion of the project, manufacturers' suppliers or representatives shall inspect their hardware and make any corrections required due to errors or improper installation.

### PART 4 - HARDWARE SCHEDULE

See door and hardware schedule on drawings

ICC A117.1-2009

Chapter 7. Communication Elements and Features

#### 703.5 Pictograms.

**703.5.1 General.** Pictograms shall comply with Section 703.5.

**703.5.2 Pictogram Field.** Pictograms shall have a field 6 inches (150 mm) minimum in height. Characters or braille shall not be located in the pictogram field.

**703.5.3 Finish and Contrast.** Pictograms and their fields shall have a nonglare finish. Pictograms shall contrast with their fields, with either a light pictogram on a dark field or a dark pictogram on a light field.

#### 703.6 Symbols of Accessibility.

**703.6.1 General.** Symbols of accessibility shall comply with Section 703.6.

**703.6.2 Finish and Contrast.** Symbols of accessibility and their backgrounds shall have a non-glare finish. Symbols of accessibility shall contrast with their backgrounds, with either a light symbol on a dark background or a dark symbol on a light background.

#### 703.6.3 Symbols.

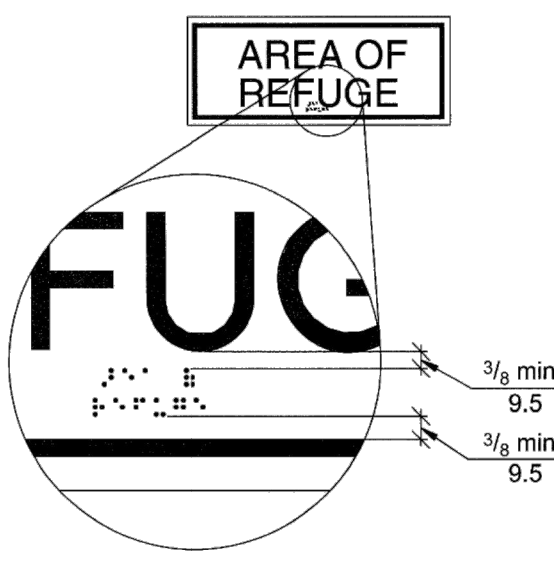


FIG. 703.4.4 POSITION OF BRAILLE

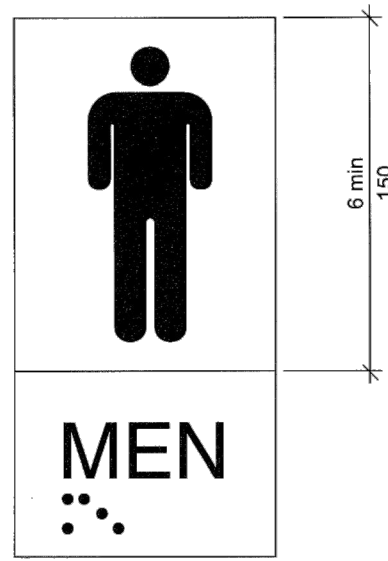
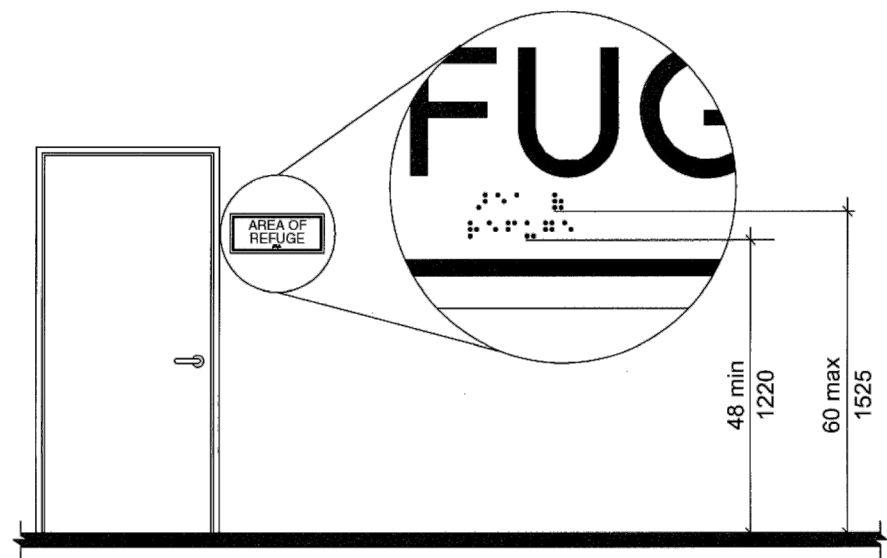


FIG. 703.5 PICTOGRAM FIELD



Note: For raised character mounting height see Section 703.3.10

FIG. 703.4.5 HEIGHT OF BRAILLE CHARACTERS ABOVE FLOOR

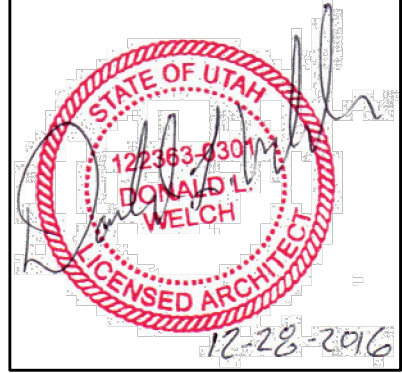
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project:

Tenant Finish  
for  
Brighton Recovery  
Campus  
4905, 4911, 4915, 4925,  
4931, 4953 South 900 East  
Salt Lake County, Utah

date

DECEMBER 28, 2016

revisions

JANUARY 3, 2017  
SECOND SUBMITTAL FOR  
EACH SEPARATE BUILDING PARCEL  
JANUARY 6, 2017  
ADDENDUM #2-BUILDING "C"  
JANUARY 17, 2017  
ADDENDUM #4-BUILDING "B"  
FEBRUARY 24, 2017  
ADDENDUM #7-BUILDING "A"  
BUILDING "F", "B", "C", "D", "E"  
MARCH 20, 2017  
ADDENDUM #8-BUILDING "A"  
BUILDING "F"

(ADDED EXIT SIGN INFO.  
04-12-2017)

data  
project no:  
drawn by:  
checked by:  
title

Door Hardware  
& Specs.

sheet

A7 1C



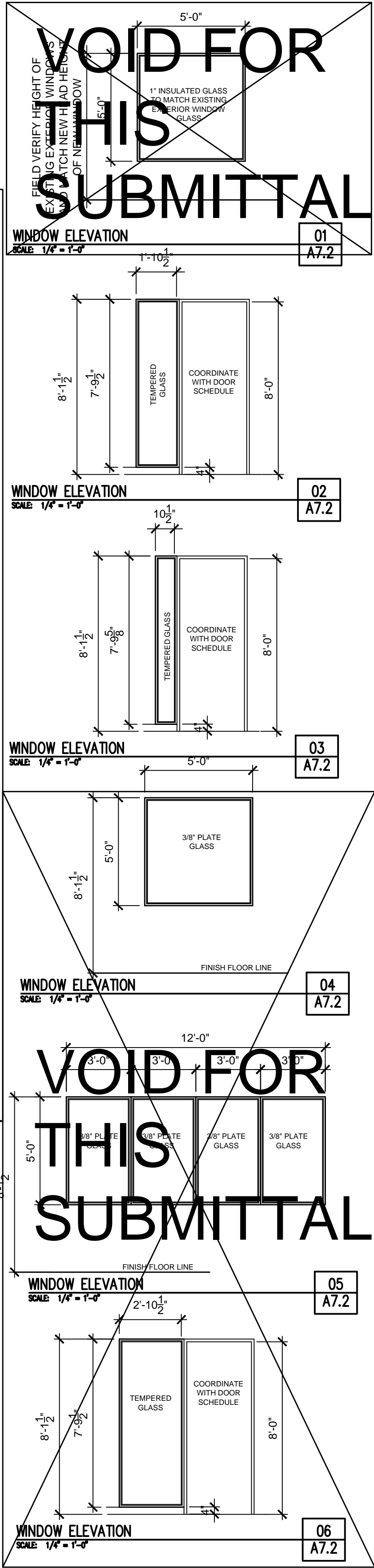
MARK	SIZE		HEAD HEIGHT	FRAME MATERIAL	TYPE	GLAZING	DETAILS			REMARKS
	WIDTH	HEIGHT					HEAD	JAMB	SILL	
8105	5'-0"	5'-0"	MATCH EXIST.	ALUMINUM	FIXED-01/A7.2	INSULATED GLASS	-	-	-	WINDOW FRAME & GLASS TO MATCH EXISTING EXTERIOR WINDOWS

WINDOW SCHEDULE-BUILDING 'C'										
MARK	SIZE		HEAD HEIGHT	FRAME MATERIAL	TYPE	GLAZING	DETAILS			REMARKS
	WIDTH	HEIGHT					HEAD	JAMB	SILL	
101	1'-10 1/2"	7'-9 1/2"	8'-1 1/2"	WOOD	FIXED-02/A7.2	3/8" TEMPERED GLASS	-	-	-	WINDOW FRAME TO MATCH DOOR FRAME
103	1'-10 1/2"	7'-9 1/2"	8'-1 1/2"	WOOD	FIXED-02/A7.2	3/8" TEMPERED GLASS	-	-	-	WINDOW FRAME TO MATCH DOOR FRAME
104	1'-10 1/2"	7'-9 1/2"	8'-1 1/2"	WOOD	FIXED-02/A7.2	3/8" TEMPERED GLASS	-	-	-	WINDOW FRAME TO MATCH DOOR FRAME
105	1'-10 1/2"	7'-9 1/2"	8'-1 1/2"	WOOD	FIXED-02/A7.2	3/8" TEMPERED GLASS	-	-	-	WINDOW FRAME TO MATCH DOOR FRAME
107	1'-10 1/2"	7'-9 1/2"	8'-1 1/2"	WOOD	FIXED-02/A7.2	3/8" TEMPERED GLASS	-	-	-	WINDOW FRAME TO MATCH DOOR FRAME
108	1'-10 1/2"	7'-9 1/2"	8'-1 1/2"	WOOD	FIXED-02/A7.2	3/8" TEMPERED GLASS	-	-	-	WINDOW FRAME TO MATCH DOOR FRAME
114	1'-10 1/2"	7'-9 1/2"	8'-1 1/2"	WOOD	FIXED-02/A7.2	3/8" TEMPERED GLASS	-	-	-	WINDOW FRAME TO MATCH DOOR FRAME
115	1'-10 1/2"	7'-9 1/2"	8'-1 1/2"	WOOD	FIXED-02/A7.2	3/8" TEMPERED GLASS	-	-	-	WINDOW FRAME TO MATCH DOOR FRAME
117	1'-10 1/2"	7'-9 1/2"	8'-1 1/2"	WOOD	FIXED-02/A7.2	3/8" TEMPERED GLASS	-	-	-	WINDOW FRAME TO MATCH DOOR FRAME
126	1'-10 1/2"	7'-9 1/2"	8'-1 1/2"	WOOD	FIXED-02/A7.2	3/8" TEMPERED GLASS	-	-	-	WINDOW FRAME TO MATCH DOOR FRAME
127	10 1/2"	7'-9 1/2"	8'-1 1/2"	WOOD	FIXED-03/A7.2	3/8" TEMPERED GLASS	-	-	-	WINDOW FRAME TO MATCH DOOR FRAME
128	1'-10 1/2"	7'-9 1/2"	8'-1 1/2"	WOOD	FIXED-02/A7.2	3/8" TEMPERED GLASS	-	-	-	WINDOW FRAME TO MATCH DOOR FRAME
130	10 1/2"	7'-9 1/2"	8'-1 1/2"	WOOD	FIXED-03/A7.2	3/8" TEMPERED GLASS	-	-	-	WINDOW FRAME TO MATCH DOOR FRAME
131	1'-10 1/2"	7'-9 1/2"	8'-1 1/2"	WOOD	FIXED-02/A7.2	3/8" TEMPERED GLASS	-	-	-	WINDOW FRAME TO MATCH DOOR FRAME

WINDOW SCHEDULE-BUILDING 'D'										
MARK	SIZE		HEAD HEIGHT	FRAME MATERIAL	TYPE	GLAZING	DETAILS			REMARKS
	WIDTH	HEIGHT					HEAD	JAMB	SILL	
<del>Ø113</del>	12'-0"	5'-0"	8'-1 1/2"	WOOD	FIXED-05/A7.2	3/8" PLATE GLASS	-	-	-	WINDOW FRAME TO MATCH DOOR FRAME
<del>Ø113A</del>	12'-0"	5'-0"	8'-1 1/2"	WOOD	FIXED-05/A7.2	3/8" PLATE GLASS	-	-	-	WINDOW FRAME TO MATCH DOOR FRAME
<del>Ø114</del>	2'-10 1/2"	7'-9 1/2"	8'-1 1/2"	WOOD	FIXED-06/A7.2	3/8" TEMPERED GLASS	-	-	-	WINDOW FRAME TO MATCH DOOR FRAME
<del>Ø115</del>	2'-10 1/2"	7'-9 1/2"	8'-1 1/2"	WOOD	FIXED-06/A7.2	3/8" TEMPERED GLASS	-	-	-	WINDOW FRAME TO MATCH DOOR FRAME
<del>Ø116</del>	2'-10 1/2"	7'-9 1/2"	8'-1 1/2"	WOOD	FIXED-06/A7.2	3/8" TEMPERED GLASS	-	-	-	WINDOW FRAME TO MATCH DOOR FRAME
<del>Ø116A</del>	2'-10 1/2"	7'-9 1/2"	8'-1 1/2"	WOOD	FIXED-06/A7.2	3/8" TEMPERED GLASS	-	-	-	WINDOW FRAME TO MATCH DOOR FRAME
<del>Ø118</del>	2'-10 1/2"	7'-9 1/2"	8'-1 1/2"	WOOD	FIXED-06/A7.2	3/8" TEMPERED GLASS	-	-	-	WINDOW FRAME TO MATCH DOOR FRAME
<del>Ø119</del>	2'-10 1/2"	7'-9 1/2"	8'-1 1/2"	WOOD	FIXED-06/A7.2	3/8" TEMPERED GLASS	-	-	-	WINDOW FRAME TO MATCH DOOR FRAME

WINDOW SCHEDULE-BUILDING 'E'										
MARK	SIZE		HEAD HEIGHT	FRAME MATERIAL	TYPE	GLAZING	DETAILS			REMARKS
	WIDTH	HEIGHT					HEAD	JAMB	SILL	
Ⓔ104	5'-0"	5'-0"	MATCH EXIST.	ALUMINUM	FIXED-01/A7.2	1" INSULATED GLASS	-	-	-	WINDOW FRAME & GLASS TO MATCH EXISTING EXTERIOR WINDOWS
Ⓔ125	5'-0"	5'-0"	8'-1 1/2"	WOOD	FIXED-04/A7.2	3/8" PLATE GLASS	-	-	-	WINDOW FRAME TO MATCH DOOR FRAME
Ⓔ126	5'-0"	5'-0"	8'-1 1/2"	WOOD	FIXED-04/A7.2	3/8" PLATE GLASS	-	-	-	WINDOW FRAME TO MATCH DOOR FRAME

1. FIELD VERIFY ALL WINDOW DIMENSIONS—COORDINATE WITH OWNER AND DESIGNER.
2. COORDINATE WITH OWNER AND DESIGNER FOR FINAL WINDOW TYPES, WINDOW MATERIAL TYPES & COLOR TYPES & FINISH TYPES.
3. FIELD VERIFY ALL CONDITIONS, OPENING SIZES, ETC. BEFORE FABRICATION, MANUFACTURING, OR INSTALLATION OF ALL WINDOWS.
4. COORDINATE WITH LOCAL JURISDICTION FOR TEMPERED GLASS REQUIREMENTS FOR WINDOWS ADJACENT TO DOORS, SPECIFICALLY, THE DIMENSION FROM DOOR TO WINDOW DISTANCE.
5. PROVIDE TEMPERED GLASS AT WINDOWS, PER IBC SECTION 2406.4, WITHIN 2'-0" OF DOORS AT LANDINGS AND ADJACENT TO STAIRWAYS.
6. WINDOW NUMBERS CORRESPOND TO THE ROOM NUMBERS ASSOCIATED WITH.



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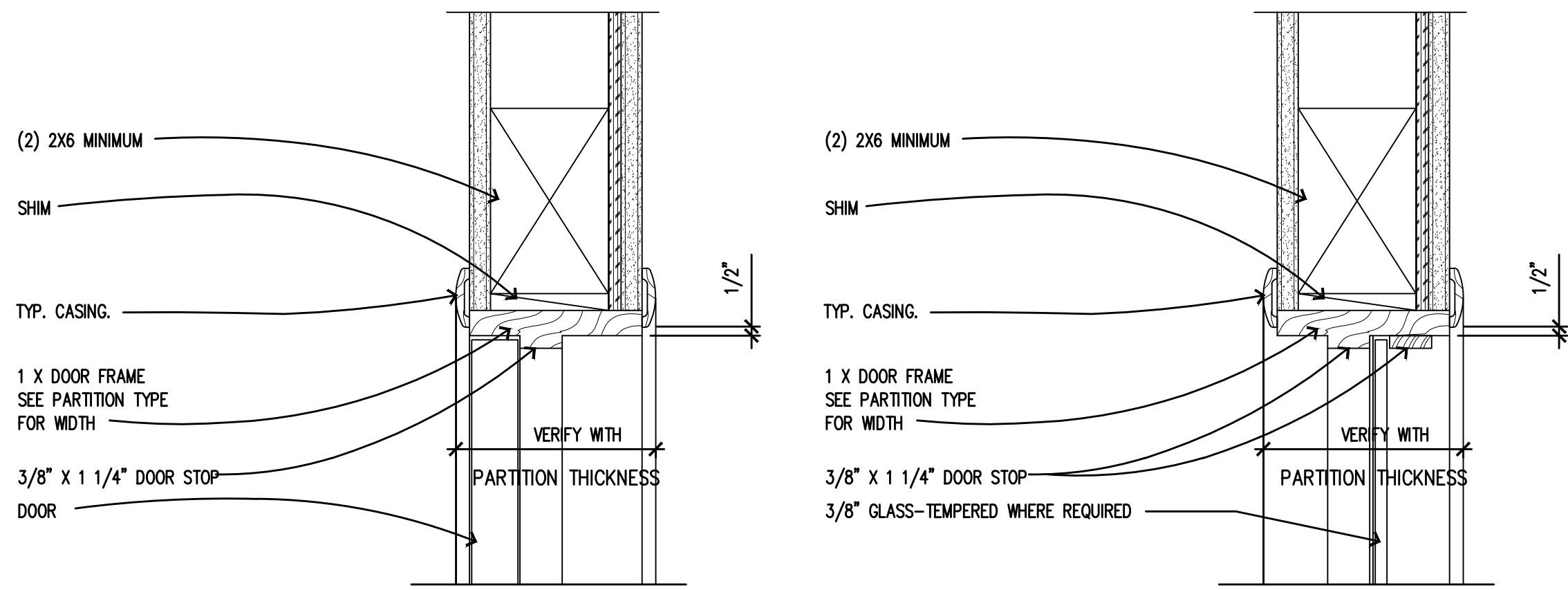
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drawn by:  
checked by: DLW  
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**A7 | 2**



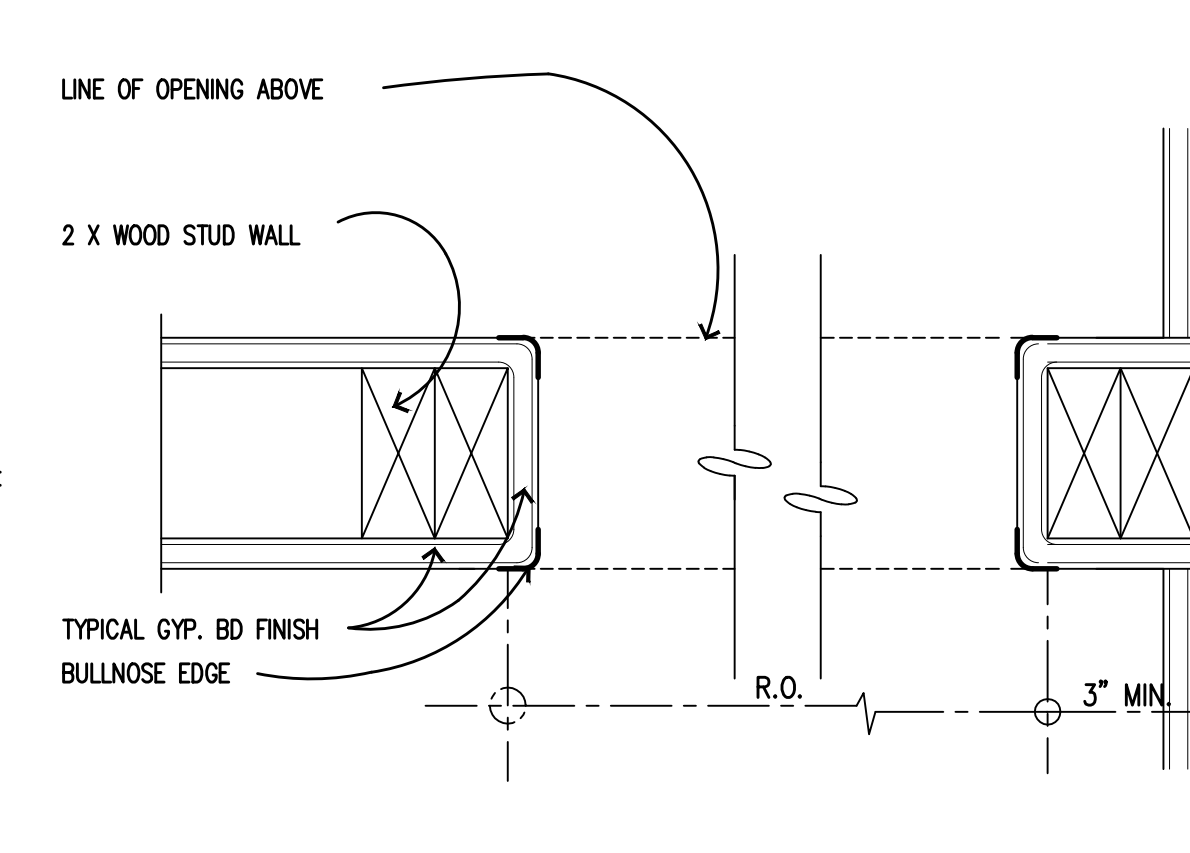


TYP. INTERIOR DOOR HEAD

SCALE: - = 1'-0"

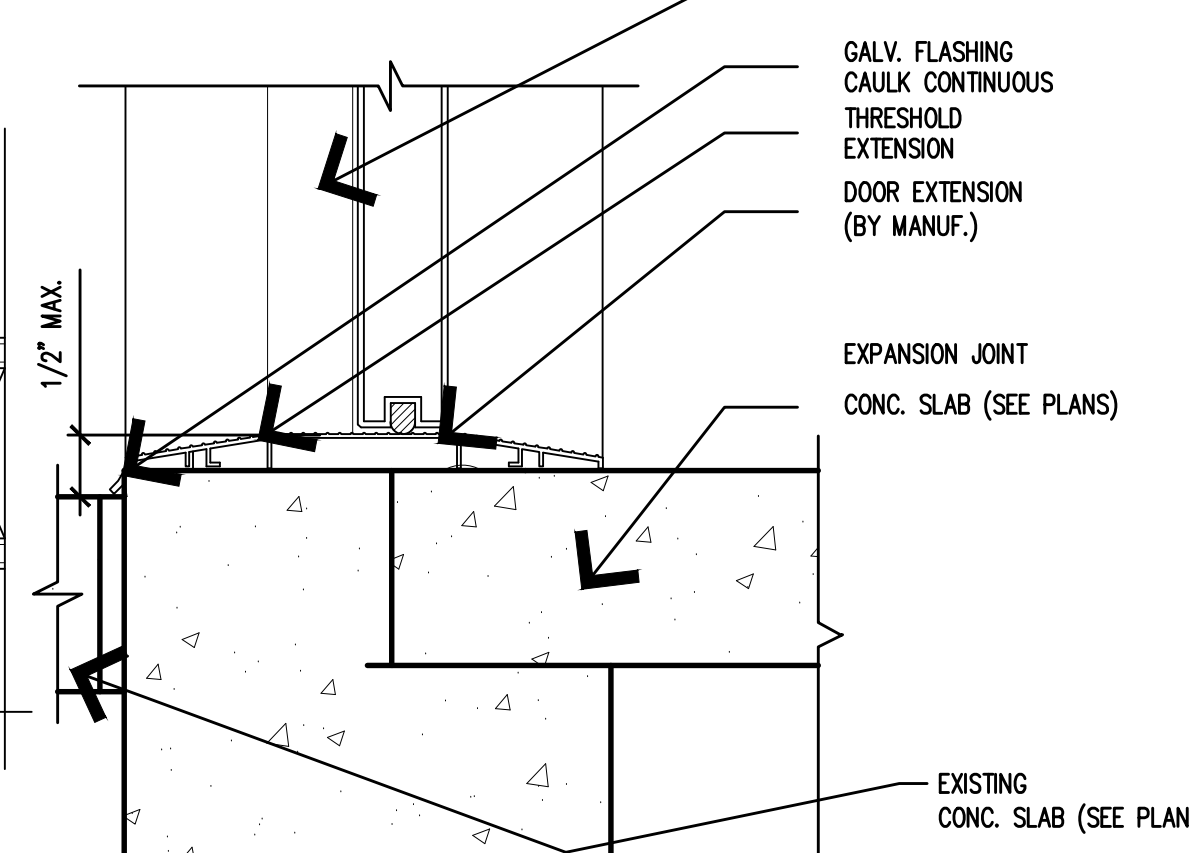
TYP. INTERIOR WINDOW HEAD/JAMB/SILL

SCALE: - = 1'-0"



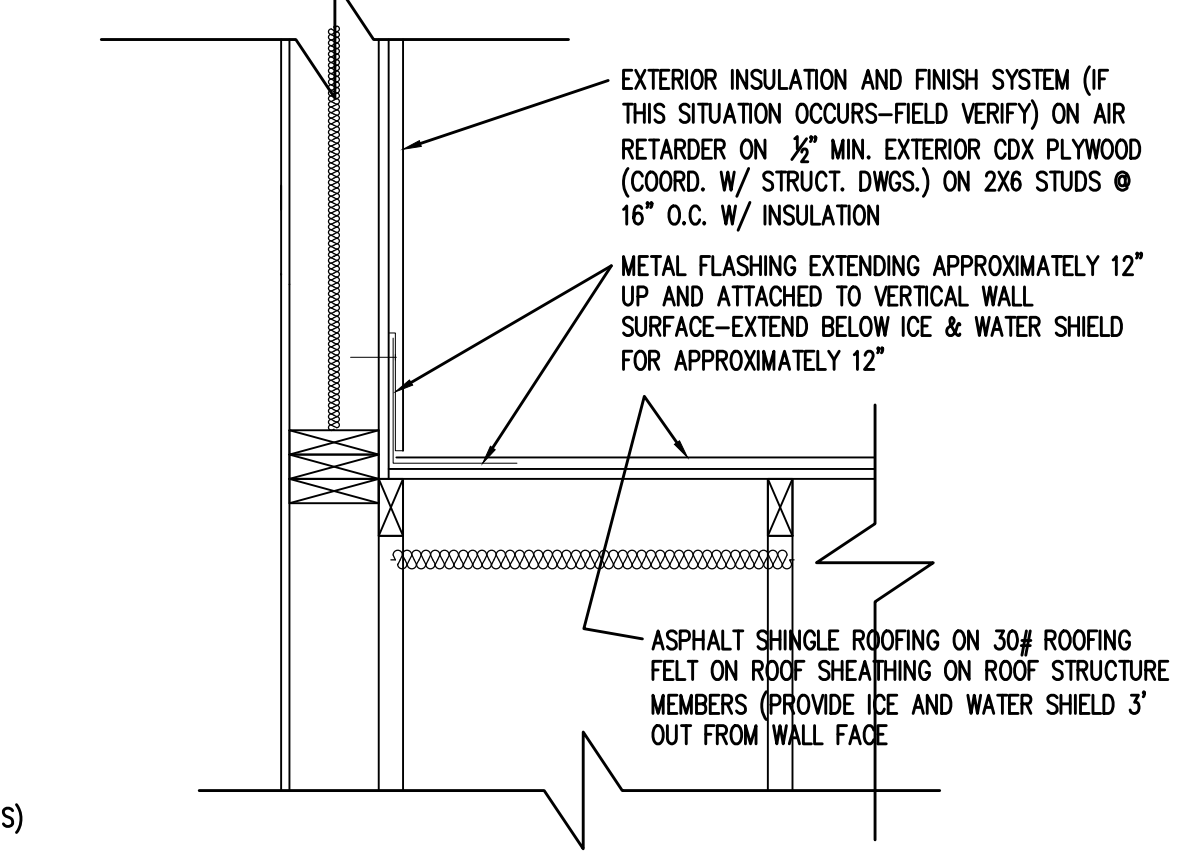
TYP. JAMB AT OPENING

SCALE: - = 1'-0"



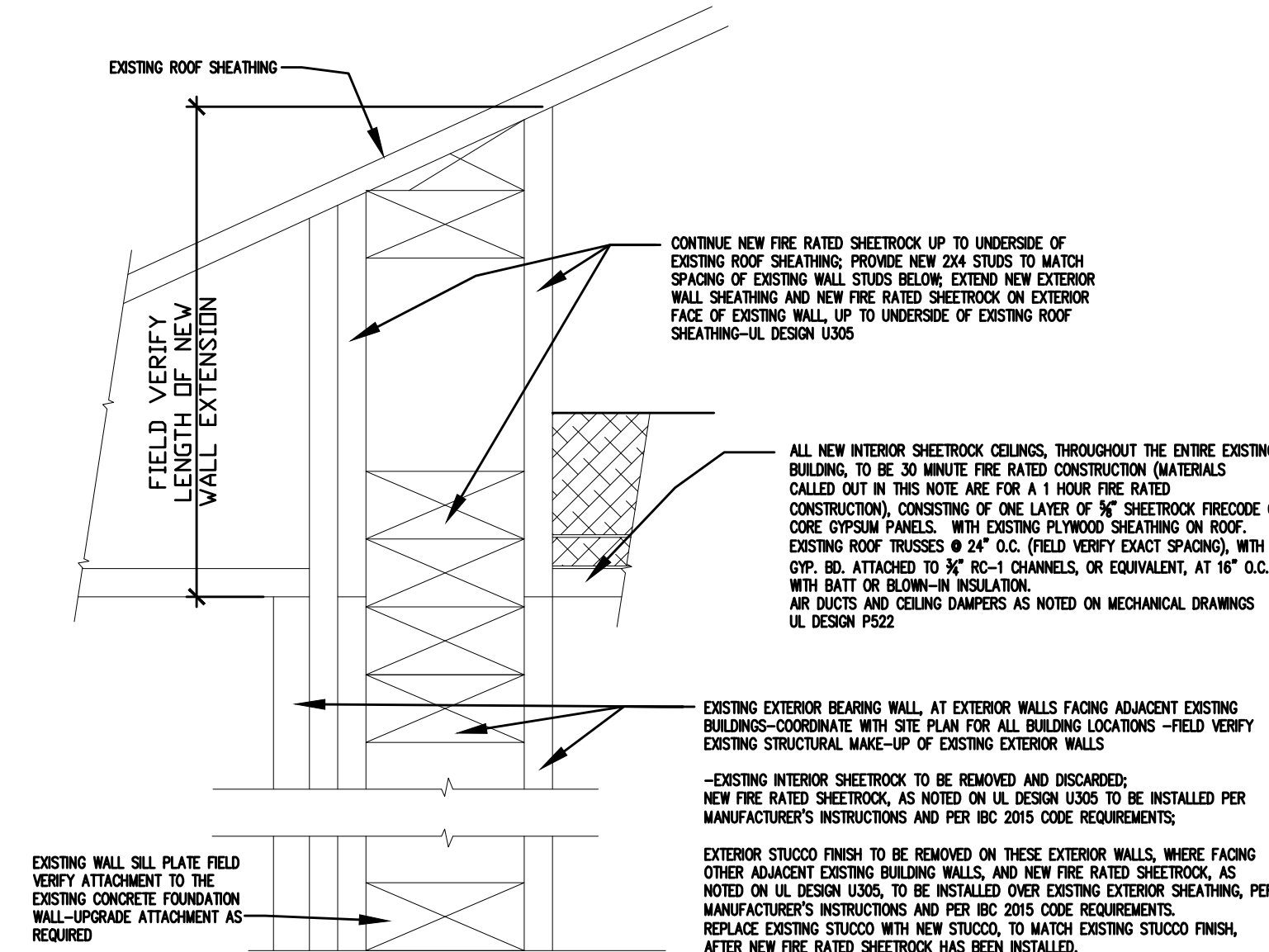
DOOR THRESHOLD DETAIL

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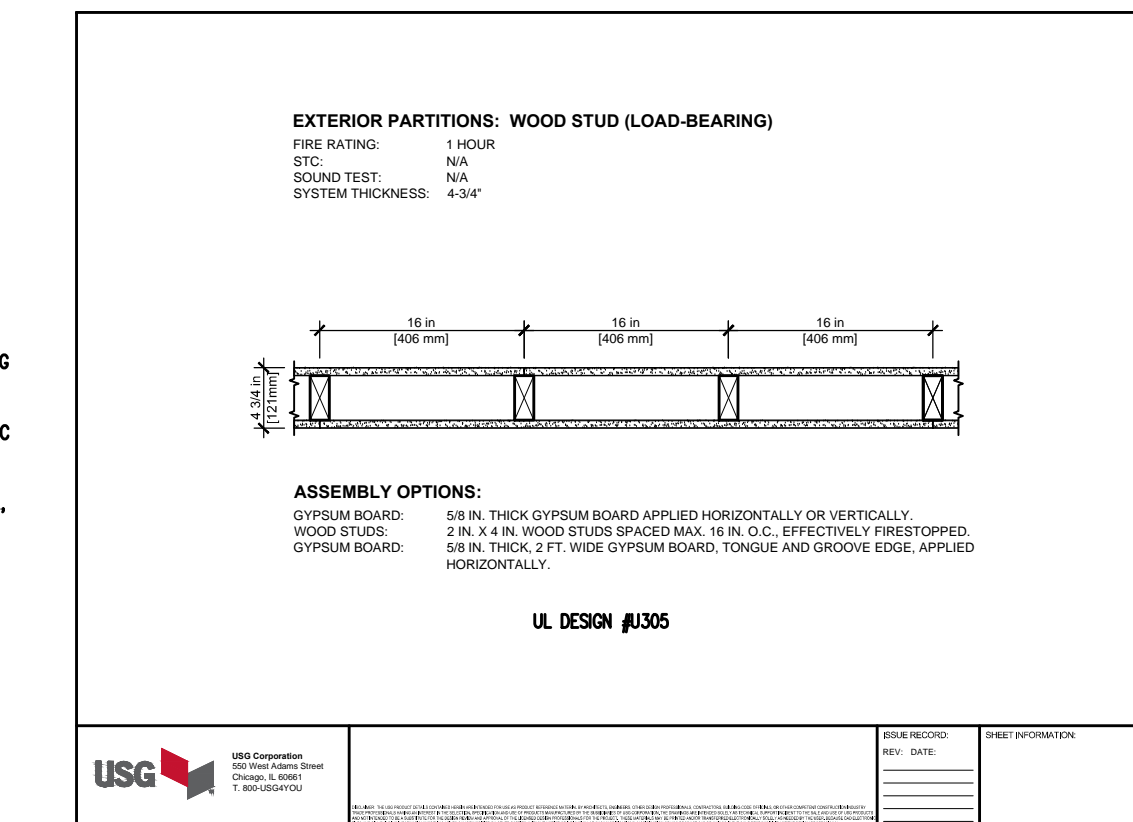
WALL/ROOF FLASHING DETAIL

SCALE: - = 1'-0"



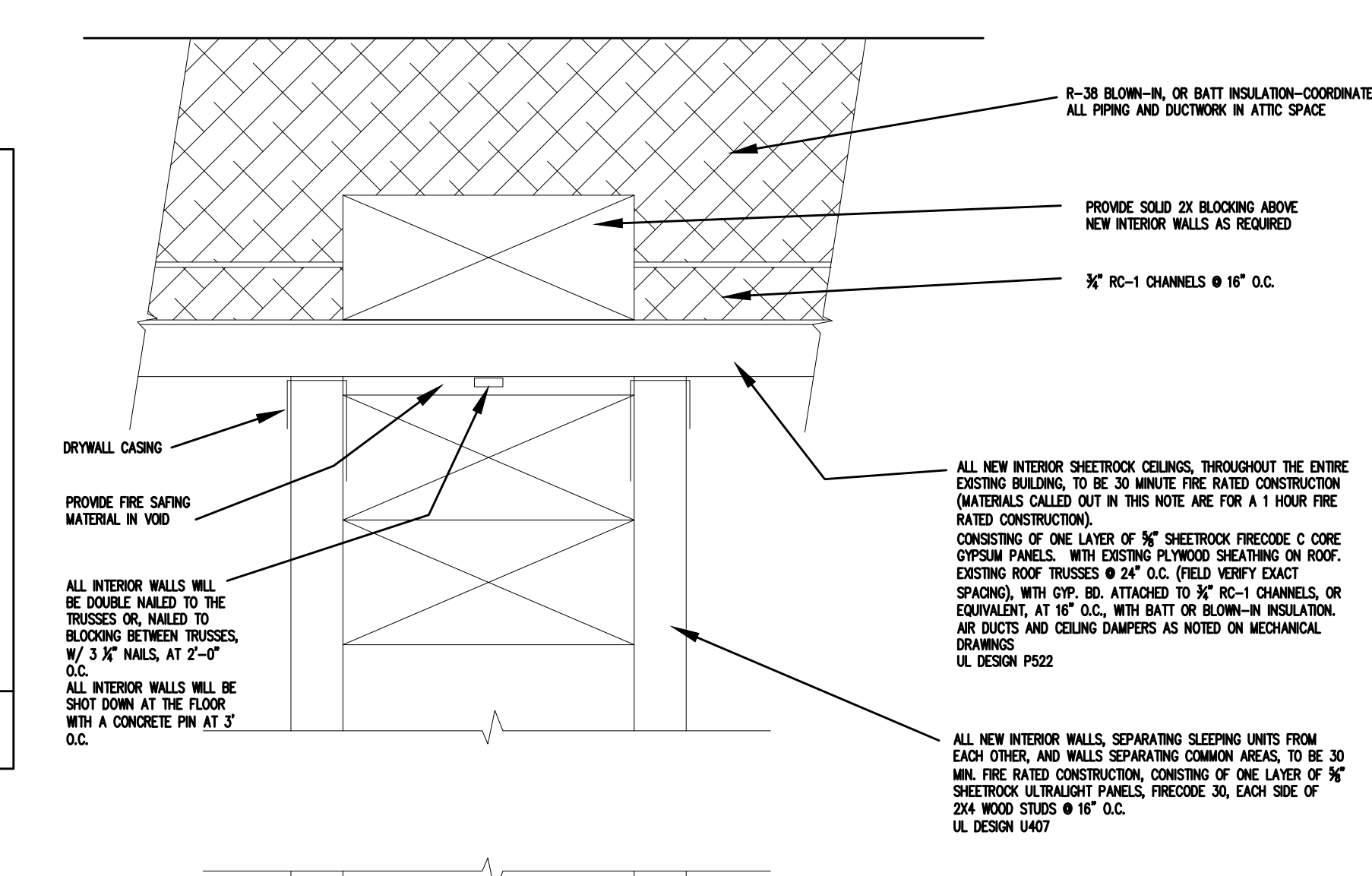
EXTERIOR EXISTING 1 HOUR FIRE RATED WALL

SCALE: - = 1'-0"



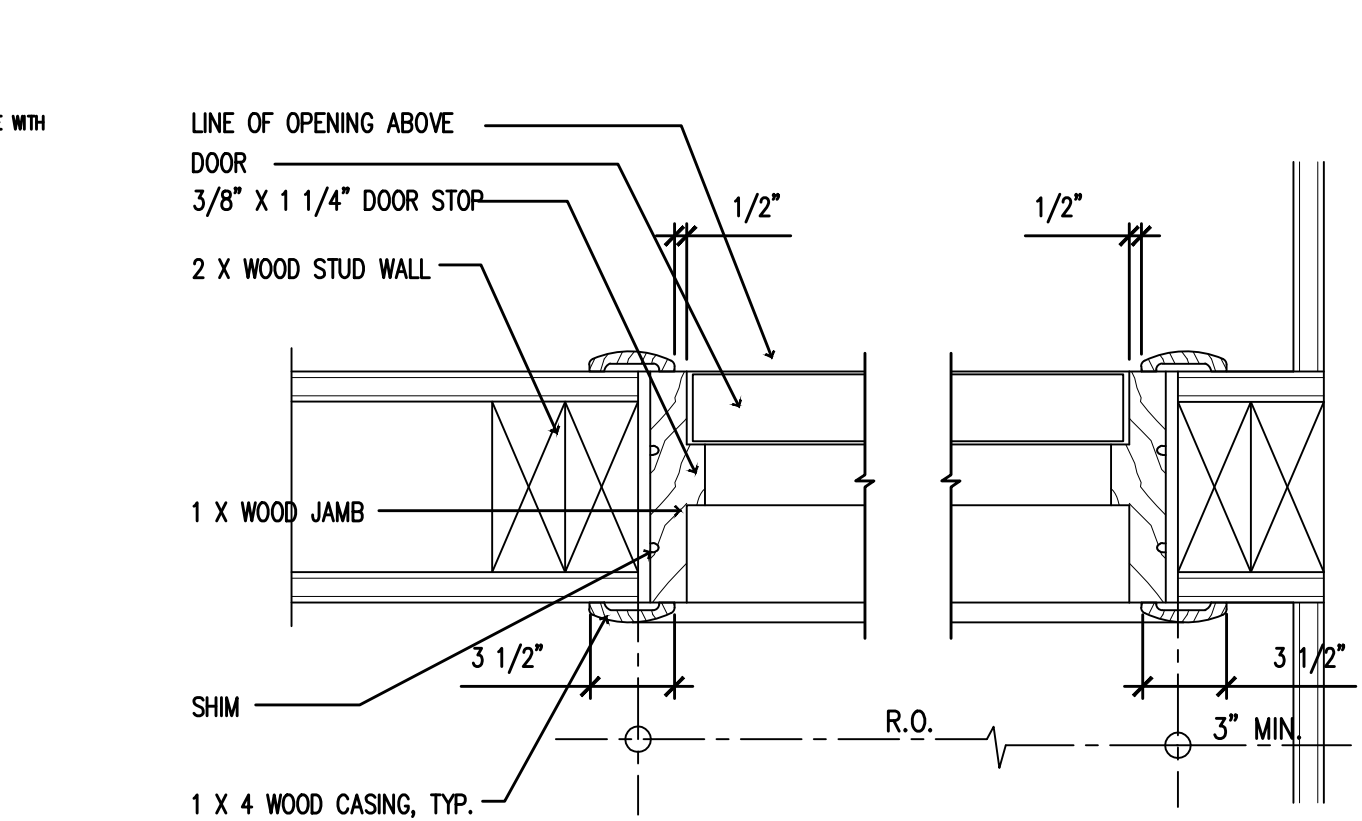
EXTERIOR EXISTING 1 HOUR FIRE RATED WALL

SCALE: - = 1'-0"



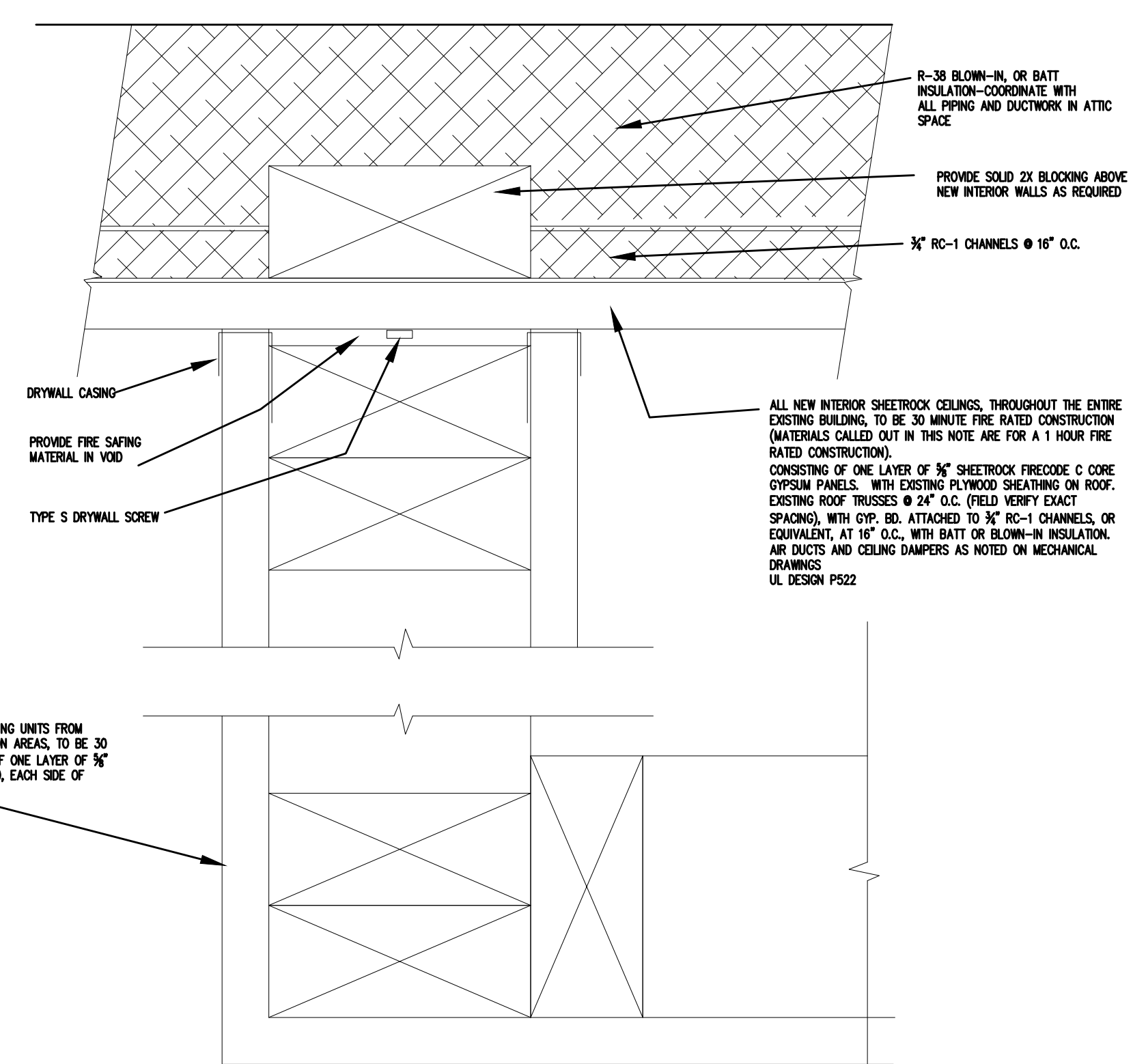
TYPICAL INTERIOR FIRE RATED WALL DETAIL

SCALE: - = 1'-0"



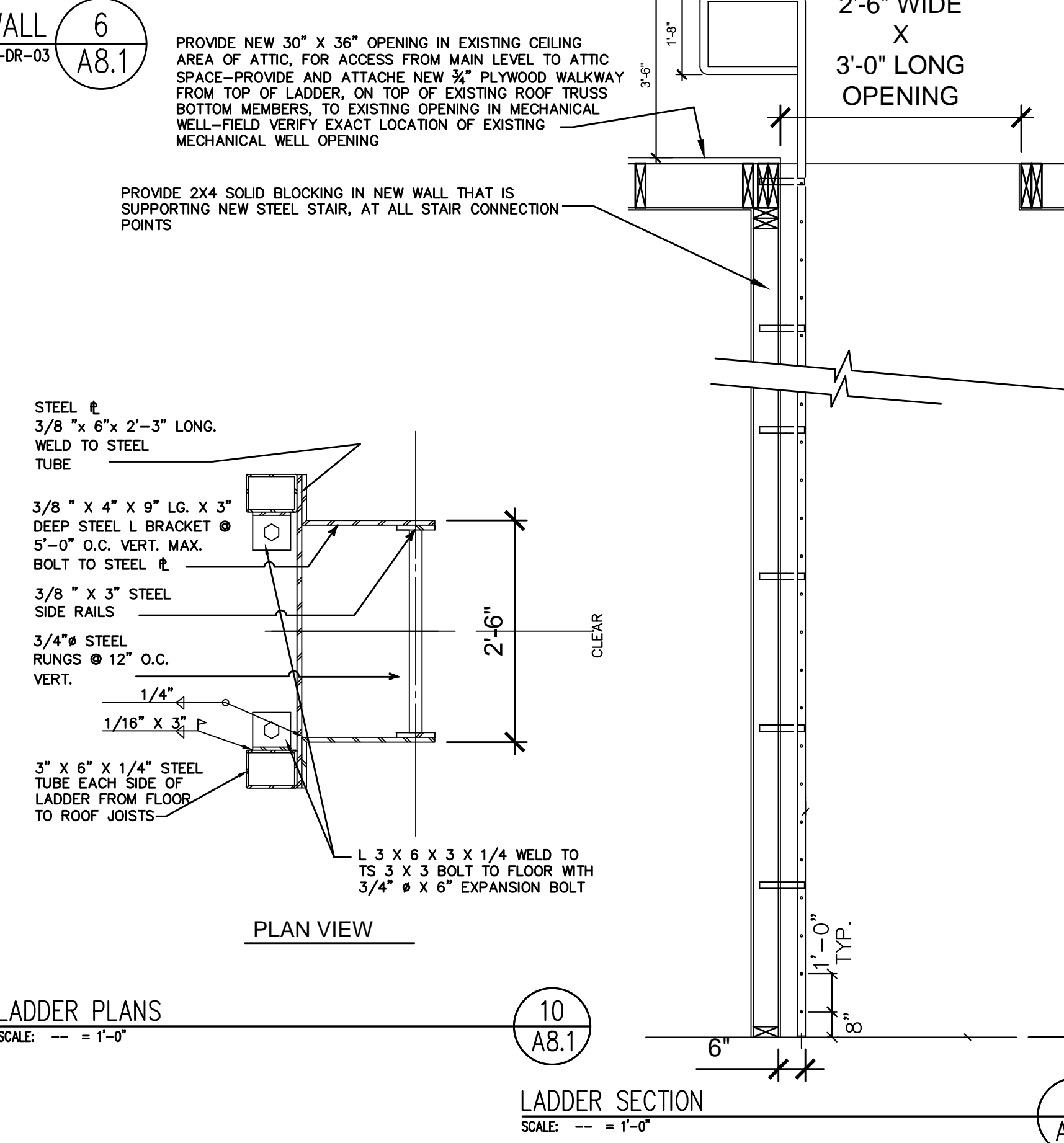
TYP. WOOD JAMB AT INTERIOR DOOR

SCALE: - = 1'-0"



DROPPED CEILING DETAIL

SCALE: - = 1'-0"



LADDER PLANS

SCALE: - = 1'-0"

LADDER SECTION

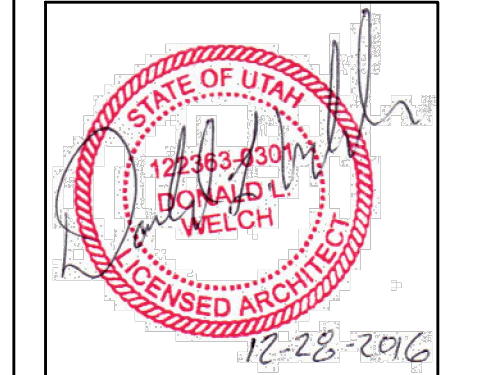
SCALE: - = 1'-0"

Donald L. Welch  
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midvale utah 84047  
801-548-6381 daniel@dwelch.com

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date  
DECEMBER 28, 2016  
revisions

JANUARY 3, 2017  
SECOND SUBMITTAL FOR  
EACH SEPARATE BUILDING PARCEL  
JANUARY 6, 2017  
ADDENDUM #2-BUILDING "C"  
JANUARY 17, 2017  
ADDENDUM #4-BUILDING "B"  
FEBRUARY 24, 2017  
ADDENDUM #7-BUILDING "A"  
BUILDING "B", "C", "D", "E"  
MARCH 20, 2017  
ADDENDUM #8-BUILDING "A"  
BUILDING "F"

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project no:  
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checked by:  
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ARCHITECTURAL  
DETAILS

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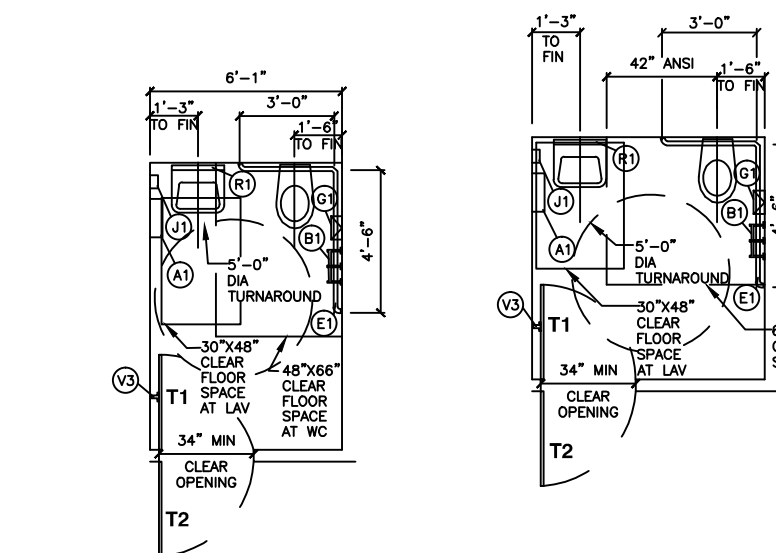
A8 1



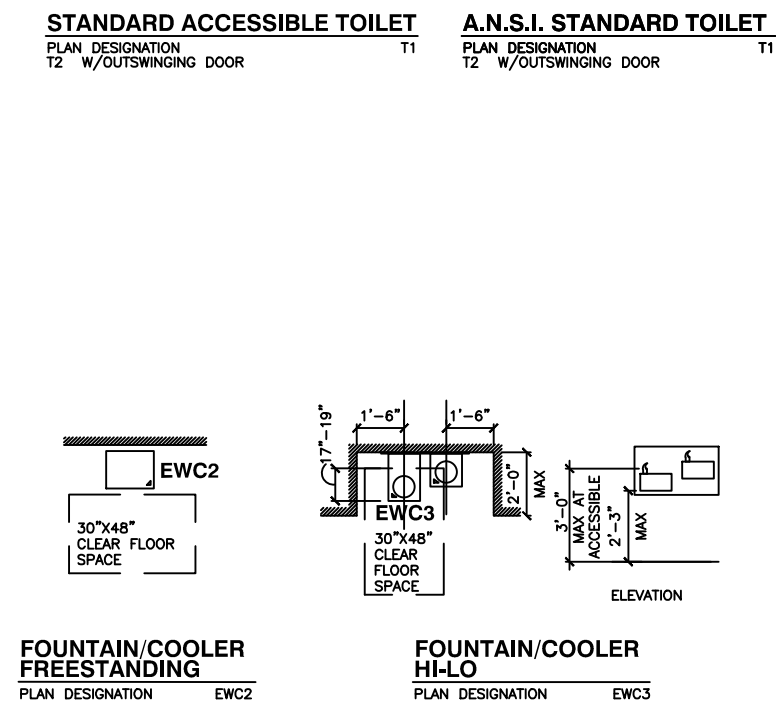
## STANDARD LAYOUTS - UNIVERSAL

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

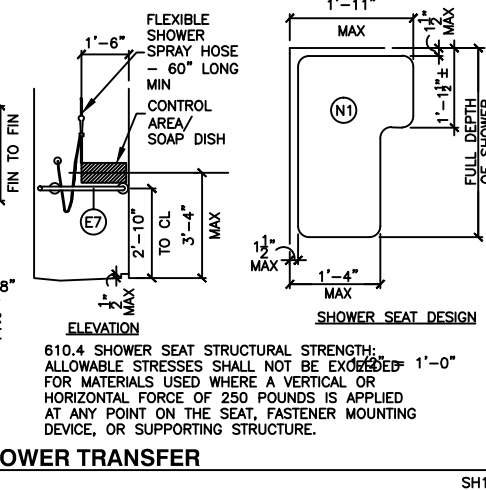
NOTE: LOCATE FLUSH ACTIVATOR ON WIDE SIDE AT ALL TOILETS - LOCATE FLUSH VALVE BENEATH ADJACENT GRAB BARS.



PLEASE NOTE:  
THE DOORS TO THE ACCESSIBLE WATER CLOSETS WILL BE SELF-CLOSING WITH A PULL HANDLE ON EACH SIDE OF THE DOOR NEXT TO THE LATCH.  
THE TOE CLEARANCE UNDERNEATH THE PARTITION WALLS SHALL HAVE A CLEARANCE OF 9".



CONTROLS AND HAND SHOWERS MUST MEET THE REQUIREMENTS OF SECTION 608.4.1, INCLUDING:  
A. ON THE CONTROL WALL OPPOSITE THE SEAT.  
B. AT A HEIGHT OF 36 INCHES MINIMUM AND 48 INCHES MAXIMUM ABOVE THE SHOWER FLOOR.  
C. 10 INCHES MINIMUM FROM THE CENTERLINE OF THE CONTROL WALL FORWARD TO THE SHOWER OPENING.  
1'-11"



ICD A17.1-2008

Chapter 3. Building Blocks

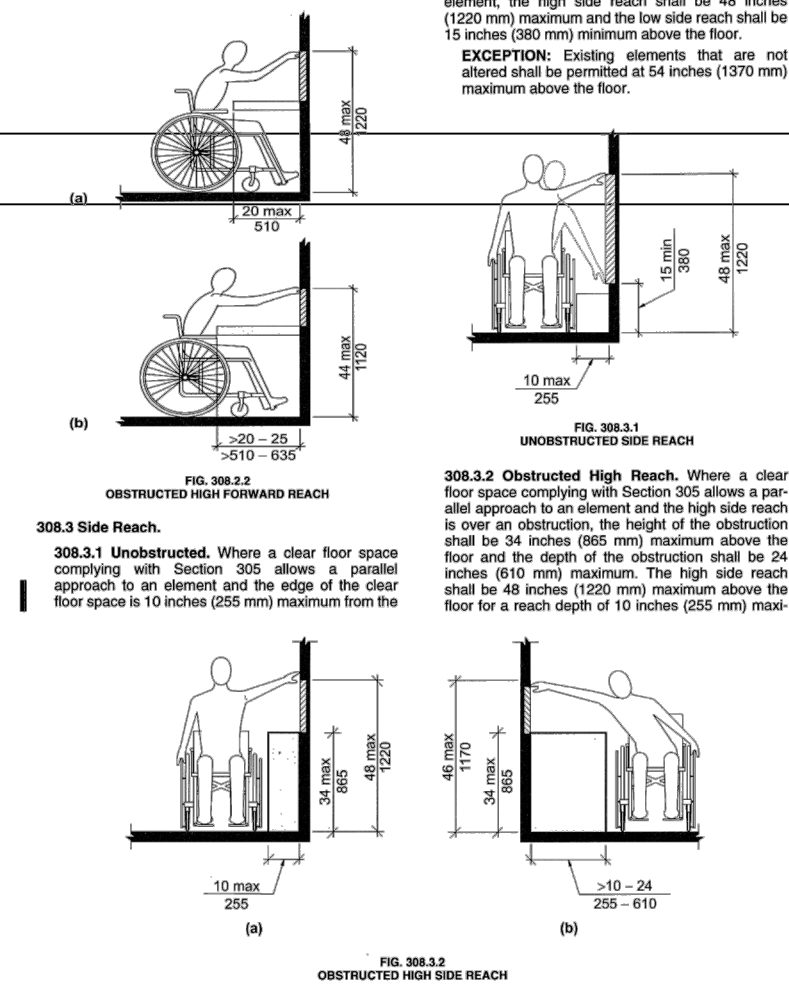
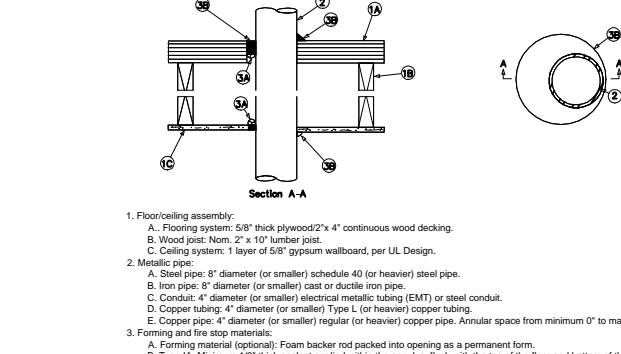


Table 3: Typical Mounting Heights

Wall switches	48" (120 cm)
Receptacle outlets (general)	18" (45 cm)
Receptacle outlets (kitchen, utility room, workbenches, etc.)	42" (105 cm), or 6" (15 cm) above countertop
Special purpose outlet	within 72" (180 cm) of intended use
Telephone outlets	18" (45 cm)
Wall intercom stations	48" (120 cm)
Night lights	18" (45 cm)
Wall lighting outlets	84" (210 cm)
Thermostats	48" (120 cm)
Push buttons	48" (120 cm)
Elevator and hoistway control buttons	42" (105 cm)
Bed lights	72" (180 cm)
Patient bedside stations	48" (120 cm)
Clock outlet	96" (240 cm) when possible, or 6" (15 cm) below ceiling
Bells, buzzers, chimes	96" (240 cm) when possible, or 6" (15 cm) below ceiling
Fire alarm pull stations	48" (120 cm)
Fire alarms (gongs, bells, horns, lights)	80" (200 cm) above floor finish line, or 6" (15 cm) below ceiling

F-C-1069

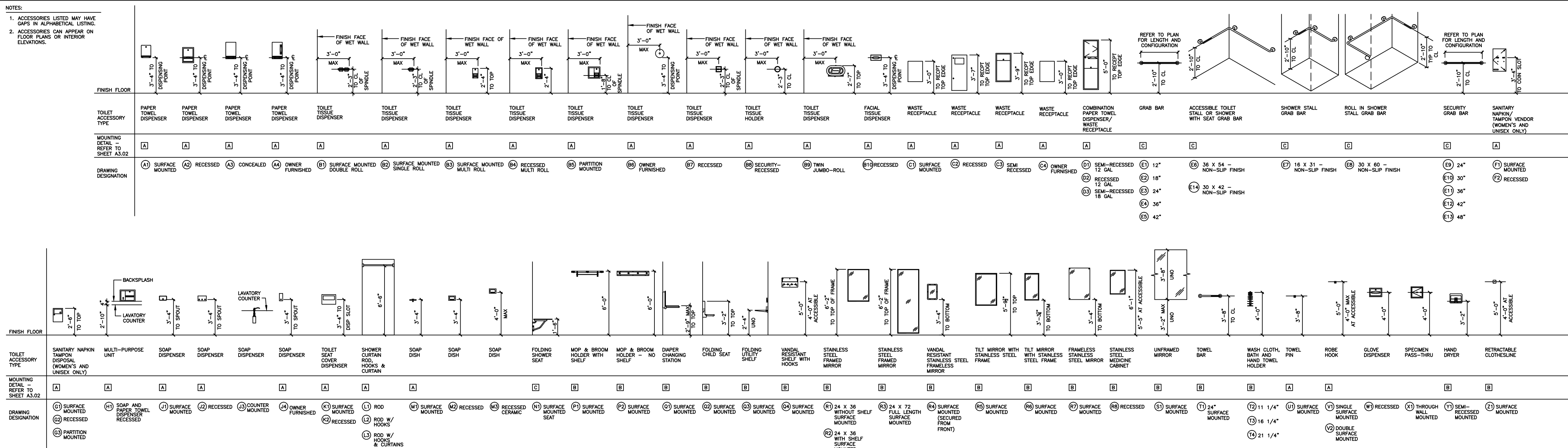


F-C-3054

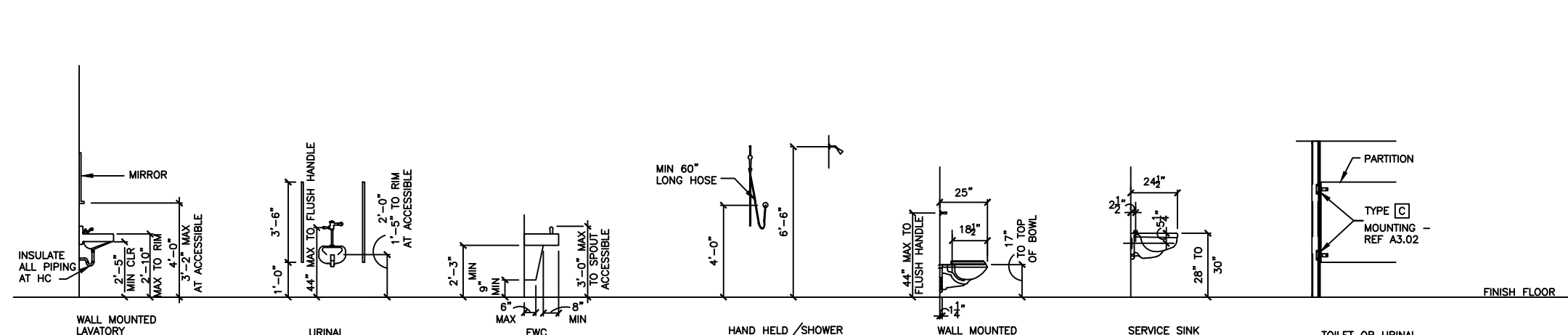
- Flooring assembly:  
A. Floor system: 5/8" thick plywood/2" x 4" continuous wood decking.  
B. Trusses: 2" x 4" lumber in conjunction with gable steel plates or 2" x 10" wood floor joist.  
C. Ceiling system: 1 layer of 5/8" gypsum wallboard per UL Design.
- Cables: The following types and sizes of cable may be used:  
A. Maximum three-conductor with ground No. 10 AWG (or smaller) PVC insulation and jacket.  
B. Maximum 100-pair No. 24 AWG (or smaller) PVC insulation and jacket.  
C. Maximum 7/8" No. 12 AWG copper conductor control cables. The annular space shall be 1/2".
- Forming material (optional): Foam backer rod firmly packed into opening as a permanent form.
- Type 1A: Minimum 1/2" thick sealant applied within annulus, flush with the top surface of the floor and bottom of ceiling assembly.

## TOILET ACCESSORY MOUNTING DIAGRAMS

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



## FIXTURE AND PARTITION MOUNTING DIAGRAMS

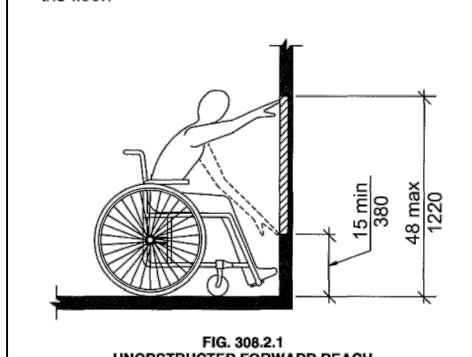


308 Reach Ranges

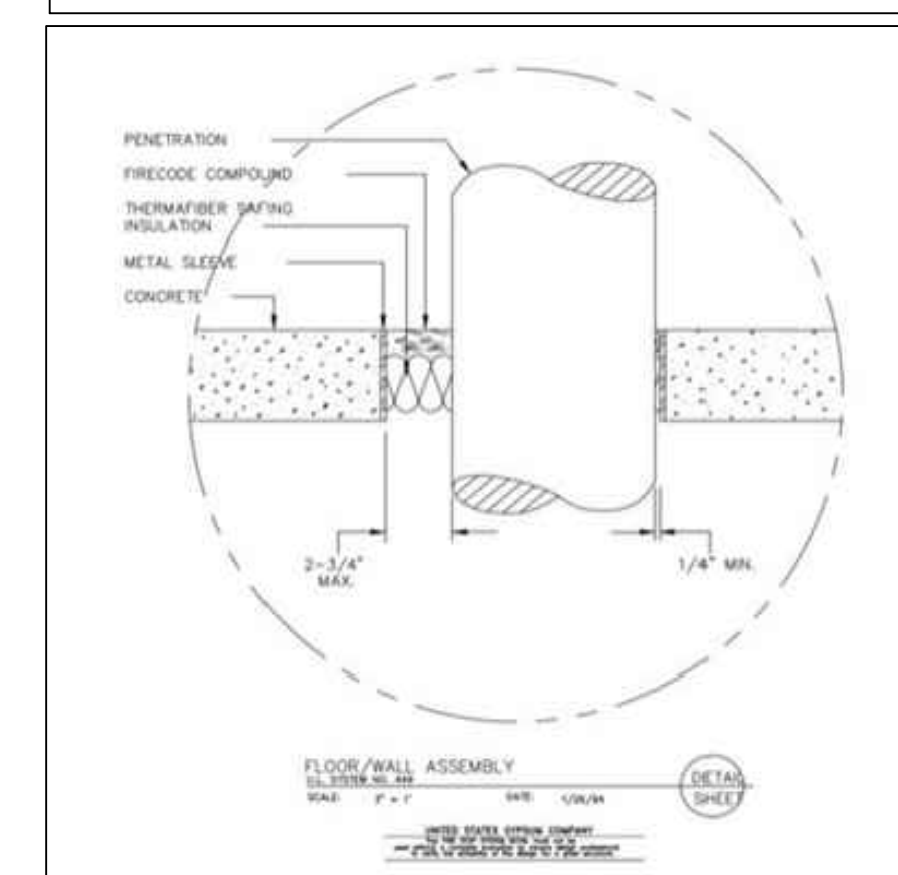
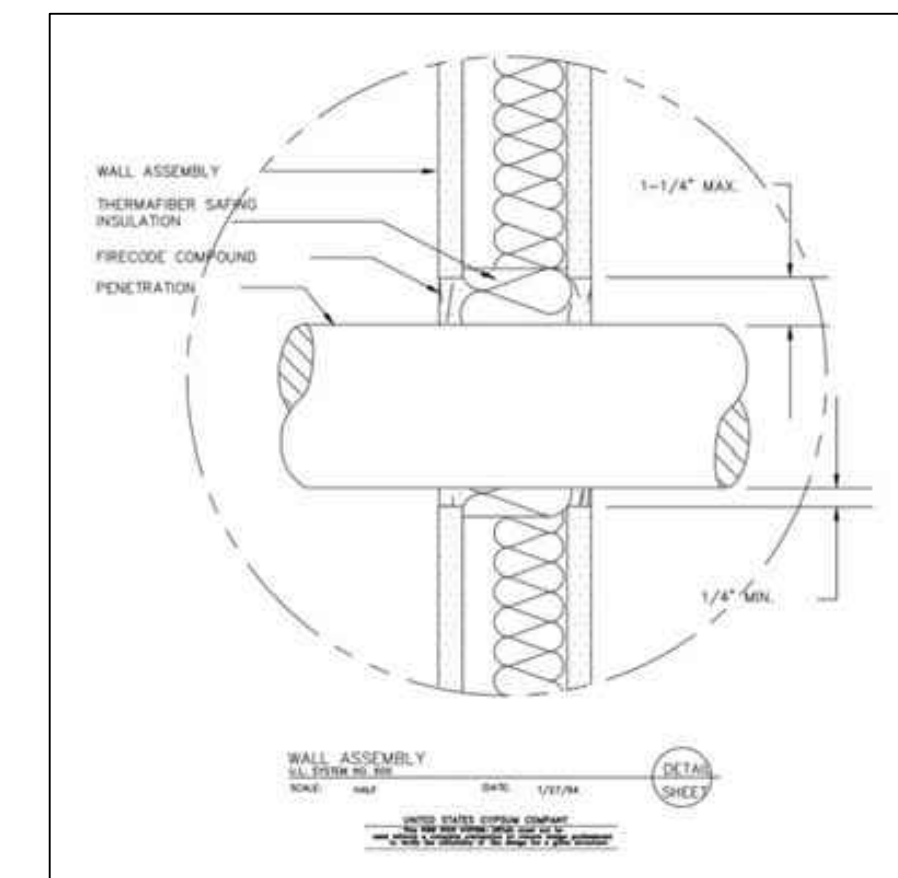
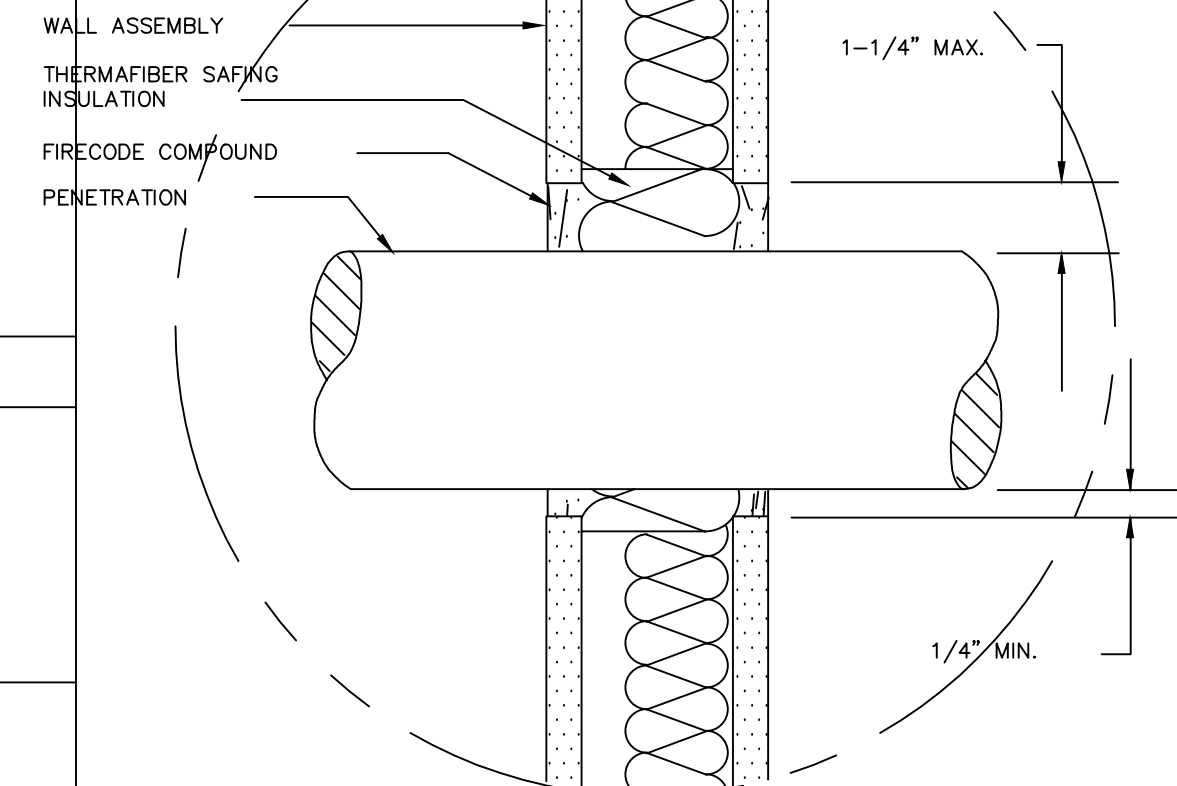
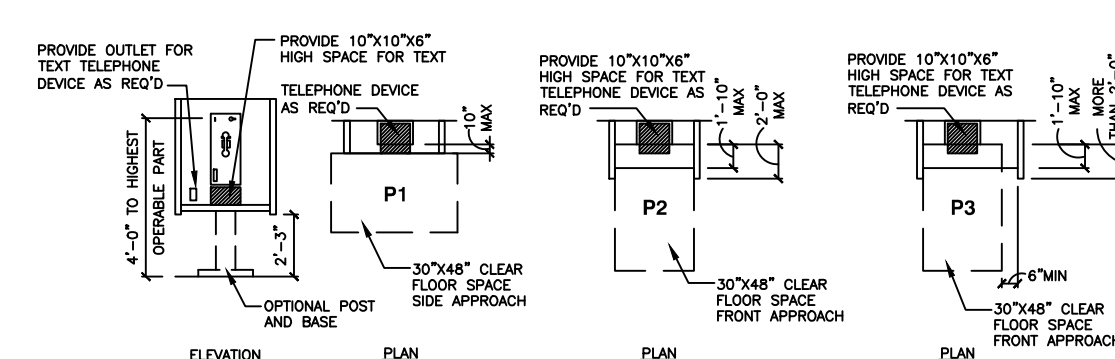
308.1 General. Reach ranges shall comply with Section 308.

308.2 Forward Reach.

308.2.1 Unobstructed. Where a forward reach is unobstructed, the high forward reach shall be 48 inches (1220 mm) maximum and the low forward reach shall be 15 inches (380 mm) minimum above the floor.



308.2.2 Obstructed High Reach. Where a high forward reach is over an obstruction, the clear floor space complying with Section 305 shall extend beneath the element for a distance not less than the required reach depth over the obstruction. The high forward reach shall be 48 inches (1220 mm) maximum above the floor where the reach depth is 20 inches (510mm) maximum. Where the reach depth exceeds 20 inches (510 mm), the high forward reach shall be 44 inches (1120 mm) maximum above the floor, and the reach depth shall be 25 inches (635 mm) maximum.



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consultant:

project:  
Tenant Finish  
for  
Brighton Recovery  
Campus

4905, 4911, 4915, 4925,  
4931, 4953 South 900 East  
Salt Lake County, Utah

date  
DECEMBER 28, 2016

revisions  
JANUARY 3, 2017  
SECOND SUBMITTAL FOR  
EACH SEPARATE BUILDING PARCEL  
JANUARY 6, 2017  
ADDENDUM #2-BUILDING 'C'  
JANUARY 17, 2017  
FEBRUARY 24, 2017  
ADDENDUM #4-BUILDING 'B'  
BUILDING 'F', 'B', 'C', 'D', 'E'  
MARCH 20, 2017  
ADDENDUM #6-BUILDING 'A'  
BUILDING 'F'

data  
project no:  
drawn by:  
checked by:  
title

ACCESSIBLE &  
FIRE PENETRATION  
DETAILS  
sheet

A8 2



SLCO Project #: 170178

Subject: Brighton Recovery Campus Building C –Plan Review Comments #2

**MECHANICAL REVIEW COMMENTS:**

M1. Sheet MP1C: Please address the following:

A. – C. *Resolved.*

D. Please address the working platform requirements and construction details for the control side of all roof top appliances and equipment in accordance with 306.1.

**PC2:** *The response provided was regarding guards. Please detail on the plans the required working platform requirements and construction details for all rooftop appliances.*

**Response:** *See updated sheet MP1C. Manufacturer's recommended service clearance boundaries are indicated at each RTU. The RTUs are to reside in similar locations of replaced RTUs within the equipment well.*

E. – F. *Resolved.*

G. Please clearly indicate the minimum distances required for vents and exhausts from all building air intake openings.

**PC2:** *It is acknowledged Sheet Note 7 has been added to the plans. However, every location shown on the mech/plumb roof plan is located closer than the required 10-feet. Based upon the floor plans and this sheet, please clarify how this requirement will be met.*

**Response:** *See updated sheet MP1C. A 10 foot offset from all RTU fresh air intakes is identified to clarify the intent. All VTRs have been repositioned accordingly.*

**ENERGY REVIEW COMMENTS:**

N1. Please provide complete information on the plans showing the extent of the thermal envelope and the corresponding R-values as required by IECC C402.1.3.

**PC2:** *The energy compliance report provided is a REScheck based upon the multi-family use buildings. Please provide a COMcheck for the commercial use structure.*

**Response:** *Please see attached ComCheck certificates.*

N3. Please provide heating and cooling load calculations for the sizing of the mechanical equipment in accordance with the requirements of IECC C403.2.1.

**PC2:** *This information does not appear to have been provided. Please address.*

**Response:** *Please see attached load analysis report.*

Sincerely,



**Benjamin J. Schlup - Spectrum Engineers**



# COMcheck Software Version COMcheckWeb

## Envelope Compliance Certificate

### Project Information

Energy Code: 2015 IECC  
Project Title: Brighton Recovery Campus Bldg C  
Location: Salt Lake City, Utah  
Climate Zone: 5b  
Project Type: Alteration  
Vertical Glazing / Wall Area: 30%

Construction Site:  
Utah

Owner/Agent:

Designer/Contractor:

### Building Area

### Floor Area

1-Office : Nonresidential	4800
---------------------------	------

### Envelope Assemblies

Post-Alteration Assembly	R-Value		Proposed		Max. Allowed	
	Cavity	Cont.	U-Factor	SHGC	U-Factor	SHGC
Roof: Attic Roof, Wood Joists, [Bldg. Use 1 - Office]	19.0	20.0	0.025	---	0.027	---
Ext. Wall: Wood-Framed, 24in. o.c., [Bldg. Use 1 - Office]	13.0	7.5	0.050	---	0.064	---
Window: Metal Frame with Thermal Break: Fixed, Clear, Fixed, Fixed, [Bldg. Use 1 - Office]	---	---	0.380	0.400	0.380	0.644
Door: , Entrance Door, Entrance Door, [Bldg. Use 1 - Office]	---	---	0.380	0.400	0.770	0.644
Floor: Unheated Slab-On-Grade, [Bldg. Use 1 - Office]	---	---		---	0.540	---

(a) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.

(b) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

### Envelope PASSES

### Envelope Compliance Statement

**Compliance Statement:** The proposed envelope alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2015 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.





# COMcheck Software Version COMcheckWeb

## Mechanical Compliance Certificate

### Project Information

Energy Code: 2015 IECC  
Project Title: Brighton Recovery Campus Bldg C  
Location: Salt Lake City, Utah  
Climate Zone: 5b  
Project Type: Alteration

Construction Site: Utah      Owner/Agent:      Designer/Contractor:

### Mechanical Systems List

#### Quantity System Type & Description

- 4 RTUs (Single Zone):
  - Heating: 1 each - Other, Gas, Capacity = 96 kBtu/h  
No minimum efficiency requirement applies
  - Cooling: 1 each - Other, Capacity = 36 kBtu/h, Air-Cooled Condenser, Air Economizer  
No minimum efficiency requirement applies
  - Fan System: FAN SYSTEM 1 | Level 1 -- Compliance (Motor nameplate HP method) : Passes
  - Fans:
    - FAN 1 Supply, Constant Volume, 1200 CFM, 0.8 motor nameplate hp, 80.0 fan efficiency
- 1 HVAC System (Unknown w/ PerimeterSystem):
  - Heating: 2 each - Unit Heater, Electric, Capacity = 2 kBtu/h  
No minimum efficiency requirement applies
- 1 HVAC System (Unknown w/ PerimeterSystem):
  - Heating: 1 each - Unit Heater, Electric, Capacity = 3 kBtu/h  
No minimum efficiency requirement applies
- 1 Water Heater:
  - Gas Storage Water Heater, Capacity: 48 gallons, Input Rating: 60 Btu/h w/ Circulation Pump  
Proposed Efficiency: 95.00 EF, Required Efficiency: 0.53 EF

### Mechanical Compliance Statement

*Compliance Statement:* The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2015 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.



# Inspection Checklist

Energy Code: 2015 IECC

Requirements: 61.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR1] <sup>1</sup>	Plans and/or specifications provide all information with which compliance can be determined for the building envelope and document where exceptions to the standard are claimed.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C103.2 [PR2] <sup>1</sup>	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical systems and equipment and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C103.2 [PR3] <sup>1</sup>	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the service water heating systems and equipment and document where exceptions to the standard are claimed. Hot water system sized per manufacturer's sizing guide.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C402.4.1 [PR10] <sup>1</sup>	The vertical fenestration area <= 30 percent of the gross above-grade wall area.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C402.4.1 [PR11] <sup>1</sup>	The skylight area <= 3 percent of the gross roof area.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C402.4.2 [PR14] <sup>1</sup>	In enclosed spaces > 2,500 ft <sup>2</sup> directly under a roof with ceiling heights >15 ft. and used as an office, lobby, atrium, concourse, corridor, storage, gymnasium/exercise center, convention center, automotive service, manufacturing, non-refrigerated warehouse, retail store, distribution/sorting area, transportation, or workshop, the following requirements apply: (a) the daylight zone under skylights is >= half the floor area; (b) the skylight area to daylight zone is >= 3 percent with a skylight VT >= 0.40; or a minimum skylight effective aperture >= 1 percent.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.

1 High Impact (Tier 1)    2 Medium Impact (Tier 2)    3 Low Impact (Tier 3)



Section # & Req.ID	Footings / Foundation Inspection	Complies?	Comments/Assumptions
C303.2 [FO4] <sup>2</sup>	Slab edge insulation installed per manufacturer's instructions.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C303.2.1 [FO6] <sup>1</sup>	Exterior insulation protected against damage, sunlight, moisture, wind, landscaping and equipment maintenance activities.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C402.2.5 [FO3] <sup>2</sup>	Slab edge insulation R-value.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
C402.2.6 [FO12] <sup>3</sup>	Radiant heating systems panels insulated to $\geq R-3.5$ on face opposite space being heated.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply. See the Envelope Assemblies table for values.
C403.2.4.5, C403.2.4.6 [FO9] <sup>3</sup>	Snow/ice melting system sensors for future connection to controls. Freeze protection systems have automatic controls installed.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

**Additional Comments/Assumptions:**

Section # & Req.ID	Framing / Rough-In Inspection	Complies?	Comments/Assumptions
C303.1.3 [FR12] <sup>2</sup>	Fenestration products rated in accordance with NFRC.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Default values are used.
C303.1.3 [FR13] <sup>1</sup>	Fenestration products are certified as to performance labels or certificates provided.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C402.4.3 [FR10] <sup>1</sup>	Vertical fenestration SHGC value.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
C402.4.3, C402.4.3.4 [FR8] <sup>1</sup>	Vertical fenestration U-Factor.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
C402.4.4 [FR14] <sup>2</sup>	U-factor of opaque doors associated with the building thermal envelope meets requirements.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
C402.5.1 [FR16] <sup>1</sup>	The building envelope contains a continuous air barrier that is sealed in an approved manner and either constructed or tested in an approved manner. Air barrier penetrations are sealed in an approved manner.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
C402.5.2, C402.5.4 [FR18] <sup>3</sup>	Factory-built fenestration and doors are labeled as meeting air leakage requirements.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Field fabricated fenestration assemblies.
C402.5.7 [FR17] <sup>3</sup>	Vestibules are installed on all building entrances. Doors have self-closing devices.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.

**Additional Comments/Assumptions:**

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.5, C404.5.1, C404.5.2 [PL6] <sup>3</sup>	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
C404.5, C404.5.1, C404.5.2 [PL6] <sup>3</sup>	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
C404.5, C404.5.1, C404.5.2 [PL6] <sup>3</sup>	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
C404.5, C404.5.1, C404.5.2 [PL6] <sup>3</sup>	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.6.1, C404.6.2 [PL3] <sup>1</sup>	Automatic time switches installed to automatically switch off the recirculating hot-water system or heat trace.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.6.3 [PL7] <sup>3</sup>	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C404.6.3 [PL7] <sup>3</sup>	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
C404.6.3 [PL7] <sup>3</sup>	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
C404.6.3 [PL7] <sup>3</sup>	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.7 [PL8] <sup>3</sup>	Water distribution system that pumps water from a heated-water supply pipe back to the heated-water source through a cold-water supply pipe is a demand recirculation water system. Pumps within this system have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.7 [PL8] <sup>3</sup>	Water distribution system that pumps water from a heated-water supply pipe back to the heated-water source through a cold-water supply pipe is a demand recirculation water system. Pumps within this system have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C404.7 [PL8] <sup>3</sup>	Water distribution system that pumps water from a heated-water supply pipe back to the heated-water source through a cold-water supply pipe is a demand recirculation water system. Pumps within this system have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C404.7 [PL8] <sup>3</sup>	Water distribution system that pumps water from a heated-water supply pipe back to the heated-water source through a cold-water supply pipe is a demand recirculation water system. Pumps within this system have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

**Additional Comments/Assumptions:**

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.2.6 [ME41] <sup>3</sup>	Thermally ineffective panel surfaces of sensible heating panels have insulation $\geq R-3.5$ .	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.5.5, C403.2.4.3 [ME3] <sup>3</sup>	Stair and elevator shaft vents have motorized dampers that automatically close.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
C402.5.5, C403.2.4.3 [ME58] <sup>3</sup>	Outdoor air and exhaust systems have motorized dampers that automatically shut when not in use and meet maximum leakage rates. Check gravity dampers where allowed.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
C403.2.12.1 [ME65] <sup>3</sup>	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. <i>See the Mechanical Systems list for values.</i>
C403.2.12.1 [ME65] <sup>3</sup>	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. <i>See the Mechanical Systems list for values.</i>
C403.2.12.3 [ME117] <sup>2</sup>	Fans have efficiency grade (FEG) $\geq 67$ . The total efficiency of the fan at the design point of operation $\leq 15\%$ of maximum total efficiency of the fan.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Fans integral to equipment listed under Section C403.2.3.
C403.2.12.3 [ME117] <sup>2</sup>	Fans have efficiency grade (FEG) $\geq 67$ . The total efficiency of the fan at the design point of operation $\leq 15\%$ of maximum total efficiency of the fan.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.13 [ME71] <sup>2</sup>	Unenclosed spaces that are heated use only radiant heat.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.3 [ME55] <sup>2</sup>	HVAC equipment efficiency verified.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<i>See the Mechanical Systems list for values.</i>
C403.2.6.1 [ME59] <sup>1</sup>	Demand control ventilation provided for spaces $>500$ ft <sup>2</sup> and $>25$ people/1000 ft <sup>2</sup> occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow $>3,000$ cfm.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.6.2 [ME115] <sup>3</sup>	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.7 [ME57] <sup>1</sup>	Exhaust air energy recovery on systems meeting Table C403.2.7(1) and C403.2.7(2).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

☐ 1 High Impact (Tier 1)
 ☒ 2 Medium Impact (Tier 2)
 ☐ 3 Low Impact (Tier 3)



Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.2.8 [ME116] <sup>3</sup>	Kitchen exhaust systems comply with replacement air and conditioned supply air limitations, and satisfy hood rating requirements and maximum exhaust rate criteria.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.9 [ME60] <sup>2</sup>	HVAC ducts and plenums insulated. Where ducts or plenums are installed in or under a slab, verification may need to occur during Foundation Inspection.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.9 [ME10] <sup>2</sup>	Ducts and plenums sealed based on static pressure and location.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.9.1.3 [ME11] <sup>3</sup>	Ductwork operating >3 in. water column requires air leakage testing.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
C403.2.9.1.3 [ME11] <sup>3</sup>	Ductwork operating >3 in. water column requires air leakage testing.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
C403.2.9.1.3 [ME11] <sup>3</sup>	Ductwork operating >3 in. water column requires air leakage testing.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
C403.4.4.6 [ME110] <sup>3</sup>	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply. <i>See the Mechanical Systems list for values.</i>
C403.4.4.6 [ME110] <sup>3</sup>	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply. <i>See the Mechanical Systems list for values.</i>
C403.4.4.6 [ME110] <sup>3</sup>	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply. <i>See the Mechanical Systems list for values.</i>
C404.2.1 [ME111] <sup>2</sup>	Gas-fired water-heating equipment installed in new buildings: where a singular piece of water-heating equipment $\geq 1,000$ kBtu/h serves the entire building, thermal efficiency $\geq 90$ Et. Where multiple pieces of water-heating equipment serve the building with combined rating $\geq 1,000$ kBtu/h, the combined input-capacity-weighted-average thermal efficiency $\geq 90$ Et. Exclude input rating of equipment in individual dwelling units and equipment $\leq 100$ kBtu/h.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.2.1 [ME53] <sup>3</sup>	Air outlets and zone terminal devices have means for air balancing.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
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Section # & Req.ID	Insulation Inspection	Complies?	Comments/Assumptions
C303.1 [IN3] <sup>1</sup>	Roof insulation installed per manufacturer's instructions. Blown or poured loose-fill insulation is installed only where the roof slope is ≤3 in 12.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C303.1 [IN10] <sup>2</sup>	Building envelope insulation is labeled with R-value or insulation certificate providing R-value and other relevant data.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C303.2 [IN7] <sup>1</sup>	Above-grade wall insulation installed per manufacturer's instructions.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C303.2.1 [IN14] <sup>2</sup>	Exterior insulation is protected from damage with a protective material. Verification for exposed foundation insulation may need to occur during Foundation Inspection.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
C402.2.1 [IN17] <sup>3</sup>	Insulation intended to meet the roof insulation requirements cannot be installed on top of a suspended ceiling. Mark this requirement compliant if insulation is installed accordingly.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C402.2.3 [IN6] <sup>1</sup>	Above-grade wall insulation R-value.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
C402.2.5 [IN8] <sup>2</sup>	Floor insulation R-value.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
C402.2.6 [IN18] <sup>3</sup>	Radiant panels and associated components, designed for heat transfer from the panel surfaces to the occupants or indoor space are insulated with a minimum of R-3.5.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
C402.4.2.2 [IN2] <sup>1</sup>	Roof R-value. For some ceiling systems, verification may need to occur during Framing Inspection.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
C402.5.1.1 [IN1] <sup>1</sup>	All sources of air leakage in the building thermal envelope are sealed, caulked, gasketed, weather stripped or wrapped with moisture vapor-permeable wrapping material to minimize air leakage.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

**Additional Comments/Assumptions:**

1 High Impact (Tier 1)    2 Medium Impact (Tier 2)    3 Low Impact (Tier 3)



Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.3 [FI8] <sup>3</sup>	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C402.5.3 [FI51] <sup>3</sup>	Where open combustion air ducts provide combustion air to open combustion fuel burning appliances, the appliances and combustion air opening are located outside the building thermal envelope or enclosed in a room, isolated from inside the thermal envelope. Such rooms are sealed and insulated.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement is not applicable.
C402.5.6 [FI37] <sup>1</sup>	Weatherseals installed on all loading dock cargo doors.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
C402.5.8 [FI26] <sup>3</sup>	Recessed luminaires in thermal envelope to limit infiltration and be IC rated and labeled. Seal between interior finish and luminaire housing.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
C403.2.2 [FI27] <sup>3</sup>	HVAC systems and equipment capacity does not exceed calculated loads.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.1 [FI47] <sup>3</sup>	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.2.4.1 [FI47] <sup>3</sup>	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.2.4.1 [FI47] <sup>3</sup>	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.2.4.1.2 [FI38] <sup>3</sup>	Thermostatic controls have a 5 °F deadband.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.1.3 [FI20] <sup>3</sup>	Temperature controls have setpoint overlap restrictions.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.2 [FI39] <sup>3</sup>	Each zone equipped with setback controls using automatic time clock or programmable control system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

1 High Impact (Tier 1)
2 Medium Impact (Tier 2)
3 Low Impact (Tier 3)



Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C403.2.4.2.1, C403.2.4.2.2 [FI40] <sup>3</sup>	Automatic Controls: Setback to 55°F (heat) and 85°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.2.3 [FI41] <sup>3</sup>	Systems include optimum start controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<b>Exception:</b> Requirement does not apply.
C404.3 [FI11] <sup>3</sup>	Heat traps installed on supply and discharge piping of non-circulating systems.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.4 [FI25] <sup>2</sup>	All piping insulated in accordance with section details and Table C403.2.10.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.6.1 [FI12] <sup>3</sup>	Controls are installed that limit the operation of a recirculation pump installed to maintain temperature of a storage tank. System return pipe is a dedicated return pipe or a cold water supply pipe.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.1 [FI28] <sup>1</sup>	Commissioning plan developed by registered design professional or approved agency.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.3.1 [FI31] <sup>1</sup>	HVAC equipment has been tested to ensure proper operation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.3.2 [FI10] <sup>1</sup>	HVAC control systems have been tested to ensure proper operation, calibration and adjustment of controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.4 [FI29] <sup>1</sup>	Preliminary commissioning report completed and certified by registered design professional or approved agency.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5.1 [FI7] <sup>3</sup>	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5.3 [FI43] <sup>1</sup>	An air and/or hydronic system balancing report is provided for HVAC systems.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5.4 [FI30] <sup>1</sup>	Final commissioning report due to building owner within 90 days of receipt of certificate of occupancy.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

**Additional Comments/Assumptions:**

1 High Impact (Tier 1)    2 Medium Impact (Tier 2)    3 Low Impact (Tier 3)



# System Component Selection Summary

By Spectrum Engineers

## Alternative 1

### System Description: RTU

System Type: Single Zone

Number of Zones: 1







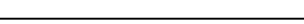
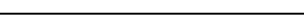
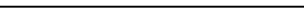


Number of Rooms: 1

Component	Sizing Method	Location	Quantity
<b>Cooling</b>			
Main Clg Coil	Peak	Zone	1
Primary Clg Fan	Peak	Zone	1
<b>Heating</b>			
Main Htg Coil	Peak	Zone	1
<b>Miscellaneous</b>			
System Exhaust Fan	Vent+Inf-RmExh	System	1
Return Fan	Return Airflow	System	1

Coil Location			Cooling Coil Selection											
System	Zone	Room	Component	Time Of Peak Mo/Hr	Total Capacity ton      MBh		Sensible Capacity MBh	Airflow At Coil Peak cfm	Enter DB/ WB/ HR °F   °F   gr/lb			Leave DB/ WB/ HR °F   °F   gr/lb		
	BLDG C	Block Load	Main Clg Coil	7/14	10.6	127.7	124.2	5,312	76.7	55.1	41.5	52.0	44.8	40.1







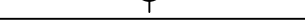
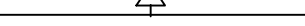





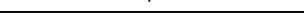
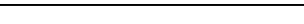



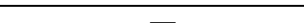
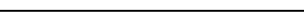
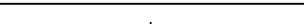

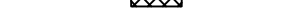
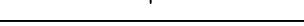

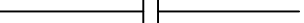
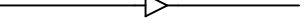




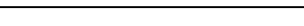



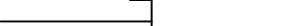


Coil Location			Heating Coil Selection				
System	Zone	Room	Component	Total Capacity MBh	Airflow cfm	Entering Dry Bulb °F	Leaving Dry Bulb °F
		BLDG C Block Load	Main Htg Coil	-170.5	5,312	66.1	100.0



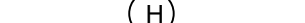


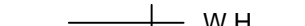
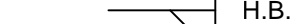



Component Location			Miscellaneous Component Selection							
System	Zone	Room	Component	Design Airflow cfm Ach/hr		Outside Air %	SADB Clg Htg °F °F		Clg VAV Minimum cfm	Htg VAV Maximum cfm
RTU			Return Fan	5,528						
RTU			Optional Vent Fan	408		100				
RTU			System Exhaust Fan	624						
		BLDG C Block Load	Primary Fan	5,312		7.7	52.0			
		BLDG C Block Load	Diffuser	5,312	7.4	7.7	52.0	100.0		


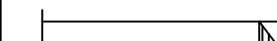

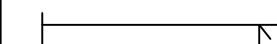

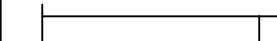

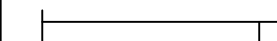

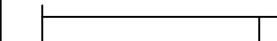

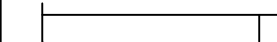

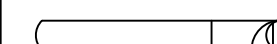

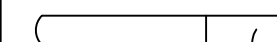

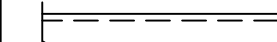
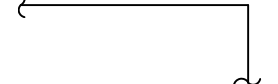
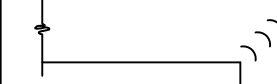
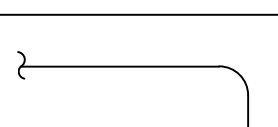
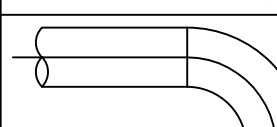

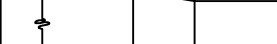
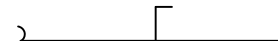
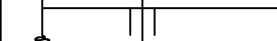
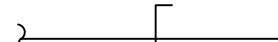
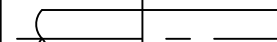

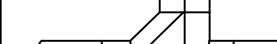
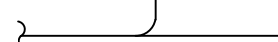
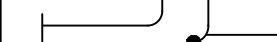
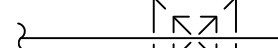

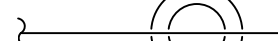
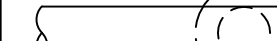
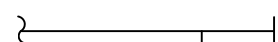
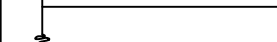
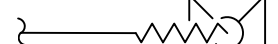

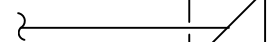

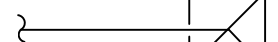

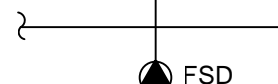

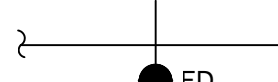
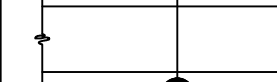
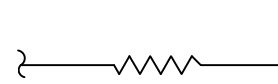


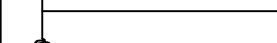
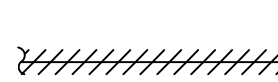

SYMBOL LEGEND	
SYMBOL	DESCRIPTION
HVAC PIPING	
	HOT WATER SUPPLY
	HOT WATER RETURN
	TEMPERED WATER SUPPLY
	CHILLED WATER SUPPLY
	CHILLED WATER RETURN
	REFRIGERANT LIQUID
	REFRIGERANT SUCTION
	CONDENSER WATER SUPPLY
	CONDENSER WATER RETURN
	DRAIN LINE
	EXISTING PIPE
	EXISTING PIPE TO BE REMOVED










ABBREVIATIONS			
NOTE: ALL ABBREVIATIONS MAY NOT BE USED			
AD AIR COND APD BD BHP BTU BTU/HOUR CFH CFM CLG COMP COND CV CW DIA DISCH DP DB (E) EER EFF EG ELEC ELEV ENT EVAP EWT EXT (F) FC FD FLA FPI FPM FPS FSD FT GAL GPH GPM HG HR HT HTG HP HW HZ ID IN KW LAT LBS LG LH LRA LVG LWT MBH	ACCESS DOOR AIR CONDITION(-ING,-ED) AIR PRESSURE DROP BALANCING DAMPER BRAKE HORSE POWER BRITISH THERMAL UNIT BTU/HOUR CUBIC FEET PER HOUR CUBIC FEET PER MINUTE COOLING COMPONENT CONDENS(-ER,-ING,-ATION) CONTROL VALVE COLD WATER DIAMETER DISCHARGE DEPTH OR DEEP DRY BULB TEMPERATURE EXISTING ENERGY EFFICIENCY RATIO EFFICIENCY ETHYLENE GLYCOL ELECTRIC ELEVATION ENTERING EVAPORAT(-E,-ING,-ED,-OR) ENTERING WATER TEMP EXTERNAL FUTURE FAHRENHEIT FLEXIBLE CONNECTION FIRE DAMPER FULL LOAD AMPS FINS PER INCH FEET PER MINUTE FEET PER SECOND FIRE SMOKE DAMPER FEET GALLON(S) GALLONS PER HOUR GALLONS PER MINUTE HEAD MERCURY HOUR HEIGHT HEATING HORSE POWER HOT WATER HERTZ(FREQUENCY) INSIDE DIAMETER INCH KILOWATT LEAVING AIR TEMPERATURE POUNDS LENGTH LATENT HEAT LOCKED ROTOR AMPS LEAVING LEAVING WATER TEMP THOUSAND BTU PER HOUR	MCA MFR MIN N/A NC NC NC NO NPSH NTS OA OD OZ PD PG PH PPM PRESS PSF PSI PSIA PSIG R RA RECIRC REFR REQD RPM RW SA SC SCW SF SH SL SP SPEC(S) SQ STD TEMP TSTAT V VAC VAV VEL VENT VFD WG WPD WB	MINIMUM CIRCUIT AMPS MANUFACTURER MINIMUM NOT APPLICABLE NORMALLY CLOSED NOISE CRITERIA NOT IN CONTRACT NORMALLY OPEN NET POSITIVE SUCTION HEAD NOT TO SCALE OUTSIDE AIR OUTSIDE DIAMETER OUNCE PRESSURE DROP OR DIFF. PROPYLENE GLYCOL PHASE PARTS PER MILLION PRESSURE POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH PSI ABSOLUTE PSI GAUGE THERMAL RESISTANCE RETURN AIR RECIRCULATE REFRIGERATION REQUIRED REVOLUTIONS PER MINUTE RAINWATER SUPPLY AIR SHADING COEFFICIENT SOFT COLD WATER SAFETY FACTOR SENSIBLE HEAT SEA LEVEL STATIC PRESSURE SPECIFICATION(S) SQUARE STANDARD TEMPERATURE THERMOSTAT VOLT VACUUM VARIABLE AIR VOLUME VELOCITY VENT, VENTILATION VARIABLE FREQUENCY DRIVE WATER COLUMN WATER GAUGE WATER PRESSURE DROP WET BULB

DEFINITIONS	
NOTE: ALL DEFINITIONS MAY NOT BE USED.	
INDICATED: THE TERM "INDICATED" REFERS TO GRAPHIC REPRESENTATIONS, NOTES, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN," "NOTED," "SCHEDULED," AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED.	
DIRECTED: TERMS SUCH AS "DIRECTED," "REQUESTED," "AUTHORIZED," "SELECTED," "APPROVED," "REQUIRED," AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER," "REQUESTED BY THE ENGINEER," AND SIMILAR PHRASES.	
APPROVE: THE TERM "APPROVE," WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS.	
FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."	
INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS TO MAKE THE ITEM FULLY OPERATIONAL."	
PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."	
INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.	

SYMBOL LEGEND	
SYMBOL	DESCRIPTION
VALVES, METERS, AND GAUGES	
	SHUT OFF VALVE
	GATE VALVE
	CHECK VALVE
	AUTO 2-WAY VALVE
	AUTO 3-WAY VALVE
	GLOBE VALVE
	BALL VALVE
	RELIEF VALVE
	CHAIN OPERATED GATE VALVE
	PRESSURE REDUCING VALVE
	BUTTERFLY VALVE
	SOLENOID VALVE
	ANGLE VALVE
	VENTURI
	BALANCING OR PLUG COCK
	FLOW SETTER
	EXPANSION VALVE (REFRIG.)
	TEMPERATURE SENSOR
	MANUAL AIR VENT
	STRAINER
	GAUGE COCK
	FLEXIBLE CONNECTION
	PRESSURE GAUGE
	THERMOMETER
	VICTAULIC COUPLING
	REDUCER CONCENTRIC
	REDUCER ECCENTRIC
	REFRIGERANT SITE GLASS
	REFRIGERANT STRAINER
	REFRIGERANT FILTER DRIER
	90° ELBOW UP
	90° ELBOW DOWN
	90° TEE UP
	90° TEE DOWN
	UNION
	CAPPED PIPE
	ANCHOR
	FLOAT AND THERMOSTATIC TRAP

HVAC SYMBOLS	
	THERMOSTAT
	TEMPERATURE SENSOR
	HUMIDISTAT
PLUMBING SYMBOLS	
	CATCH BASIN
	MANHOLE
	WALL HYDRANT
	HOSE BIBB
	CLEANOUT TO GRADE
	FLOOR CLEANOUT
	WALL CLEANOUT

SYMBOL LEGEND		
SYMBOL	DESCRIPTION	
DUCTWORK		
SINGLE LINE	DOUBLE LINE	DESCRIPTION
		RECTANGULAR SUPPLY DUCT UP
		RECTANGULAR SUPPLY DUCT DOWN
		RECTANGULAR RETURN DUCT UP
		RECTANGULAR RETURN DUCT DOWN
		RECTANGULAR EXHAUST DUCT UP
		RECTANGULAR EXHAUST DUCT DOWN
		ROUND DUCT UP
		ROUND DUCT DOWN
		ACOUSTICALLY LINED RECTANGULAR DUCT
		90° RECTANGULAR ELBOW WITH TURNING VANES
		90° RADIUS ELBOW R=1.5
		DUCT SIZE OR SHAPE TRANSITION
		OPPOSED BLADE BALANCING DAMPER (O.B.D.) IN RECT DUCT
		BUTTERFLY BALANCING DAMPER IN ROUND DUCTS
		COMBINATION TEE
		SPLITTER DAMPER
		SQUARE OR RECTANGULAR CEILING DIFFUSER
		ROUND CEILING DIFFUSER
		SIDEWALL REGISTER SUPPLY OR RETURN
		ROUND FLEXIBLE DUCT
		RETURN GRILLE
		EXHAUST GRILLE
		FIRE/SMOKE DAMPER
		FIRE DAMPER
		FLEXIBLE CONNECTION
		EXISTING DUCT
		DUCT TO BE REMOVED

GENERAL MECHANICAL NOTES	
1.  ALL CEILING DIFFUSERS SHOWN AS SUCH ARE CD-1, CFM AS NOTED, UNLESS OTHERWISE NOTED.	
2.  ALL CEILING RETURN GRILLES SHOWN AS SUCH ARE RG-1 UNLESS OTHERWISE NOTED. PROVIDE SOUND BOOT	
3.  ALL CEILING EXHAUST GRILLES SHOWN AS SUCH ARE EG-1, CFM AS NOTED, UNLESS OTHERWISE NOTED.	
4. DO NOT ROUTE DUCTS AND PIPES ABOVE ELECTRICAL PANELS. ALL ELECTRICAL PANELS MUST HAVE CLEAR ACCESS SPACE IN FRONT OF PANEL 4'-0" DEEP AND 6'-6" HIGH. DO NOT ROUTE DUCTS AND PIPES IN ELECTRICAL ROOMS, EXCEPT DUCTS AND PIPES SERVING THE ROOM OR WITHIN APPROPRIATE ENCLOSURE.	
5. COORDINATE EXACT LOCATIONS OF CEILING DIFFUSERS AND GRILLES WITH ARCHITECTURAL REFLECTED CEILING PLANS.	
6. ALL DUCT DIMENSIONS ARE INSIDE FREE AREA DIMENSIONS. ADJUST SHEET METAL DIMENSION FOR LINED DUCT.	
7. ALL FIRE DAMPERS SHOWN ARE 1-1/2 HOUR UNLESS OTHERWISE NOTED.	
8. IF CONTRACTOR ENCOUNTERS MATERIAL WHICH MAY CONTAIN ASBESTOS IMMEDIATELY STOP WORK IN THIS AREA AND NOTIFY THE OWNER.	
9. PROVIDE CEILING ACCESS PANELS AS REQUIRED WHERE MECHANICAL EQUIPMENT, VALVES, HEAT PUMPS, FIRE DAMPERS, ETC. ARE LOCATED ABOVE INACCESSIBLE CEILINGS. ACCESS PANELS TO BE LISTED AND FIRE RATED EQUAL TO OR GREATER THAN THE RATING OF THE ASSEMBLY THEY ARE INSTALLED IN.	
10. ALL DUCT AND FLUE PENETRATIONS THRU 1 HOUR ROOF ASSEMBLY TO BE ENCLOSED WITH 2 SHEET ROCK LAYERS FROM SHEET ROCK AT BOTTOM OF ROOF TRUSSES TO ROOF DECK.	
11. STEEL ROOF DECK SHALL NOT BE USED TO SUPPORT LOADS FROM PIPING, DUCTWORK OR EQUIPMENT, UNLESS NOTED OTHERWISE. HANGER LOADS LESS THAN 50 LBS. MAY BE HUNG FROM THE STEEL ROOF DECK IN CASES WHEN HANGING FROM THE STEEL ROOF DECK CANNOT BE AVOIDED; THE ATTACHMENT METHOD MUST DISTRIBUTE THE LOAD ACROSS THE DECK AS APPROVED BY THE STRUCTURAL ENGINEER.	
12. THE EQUIPMENT INSTALLER IS TO APPLY AND SIGN A CERTIFICATION LABEL TO EACH GAS-FIRED APPLIANCE, STATING THE APPLIANCE HAS BEEN ADJUSTED OR MODIFIED PER MANUFACTURER'S REQUIREMENTS FOR OPERATION AT THE PROJECT ALTITUDE AND WITH THE BTU-CONTENT OF THE AVAILABLE FUEL-GAS.	
SYMBOL LEGEND	
SYMBOL	DESCRIPTION
REFERENCE AND LINE SYMBOLS	
	DETAIL INDICATOR: # INDICATES DETAIL NUMBER, SHEET INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN.
	ELEVATION OR SECTION INDICATOR, EXTERIOR: # INDICATES ELEVATION OR SECTION NUMBER, SHEET INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
	ELEVATION OR SECTION INDICATOR, INTERIOR: # INDICATES ELEVATION OR SECTION NUMBER, SHEET INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
	DIFFUSER/GRILLE INDICATOR.
	DIFFUSER/GRILLE INDICATOR.
	NEW CONNECTION POINT TO EXISTING
MECHANICAL SCOPE OF WORK	
NEW CONSTRUCTION NOTES:	
ELECTRIC UNIT HEATERS WILL BE PLACED WATER ENTRY ROOMS AND MAIN BUILDING ENTRY LOCATIONS.	
ROOFTOP UNITS ARE TO BE INSTALLED WITHIN EXISTING EQUIPMENT WELLS ON ROOF OF EACH BUILDING. SUPPLY AND RETURN DUCTWORK IS TO ROUTE THROUGH EXISTING TRUSS SYSTEM. TERMINAL SUPPLY AND RETURN GRILLES ARE TO INCORPORATE INTEGRAL BALANCING DAMPERS.	
CLOTHES DRYER AND BATHROOM EXHAUST DUCTWORK IS TO TERMINATE AT UNDERSIDE OF EXISTING BUILDING OVERHANGS.	
THE NEW SYSTEM COMPONENTS WILL ALLOW FOR FUTURE OFFICE & TEMPORARY RESIDENT SPACES.	

MECH/PLUMB SHEET INDEX	
SHEET NO	SHEET TITLE
M01	MECHANICAL GENERAL NOTES & LEGEND
M02	MECHANICAL EQUIPMENT SPECIFICATIONS
M11	MECHANICAL SCHEDULES
M12	MECHANICAL DETAILS
M13	MECHANICAL DETAILS
P01	PLUMBING GENERAL NOTES & LEGEND
P02	PLUMBING EQUIPMENT SPECIFICATIONS
P11	PLUMBING SCHEDULES
P12	PLUMBING DETAILS
P13	PLUMBING DETAILS
MP1C	MECH/PLUMB ROOF PLAN - BUILDING 'C'
M1C	MECHANICAL PLAN - BUILDING 'C'
P1C	PLUMBING PLAN - BUILDING 'C'

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consultant:



project:

Tenant Finish  
for New  
Brighton  
Recovery  
Campus  
4905, 4911, 4915,  
4925, 4931, & 4953  
South 900 East  
Salt Lake County,  
Utah

date

April 11, 2017

revisions

PERMIT SET--December 28, 2016  
ADDENDUM #1--January 04, 2017  
ADDENDUM #3--January 11, 2017  
ADDENDUM #4--January 17, 2017  
ADDENDUM #5--January 20, 2017  
ADDENDUM #7--February 24, 2017  
ADDENDUM #8 -- March 20, 2017  
ADDENDUM #9 -- April 11, 2017

data

project no:  
drawn by:  
checked by:  
title  
MECHANICAL  
GENERAL NOTES  
& LEGEND  
sheet

M01

BUILDING 'C'

Building 'C' 4905 South 900 East Parcel # 220818500800000



GENERAL MECHANICAL NOTES	GENERAL MECHANICAL NOTES	MECH. PIPING GENERAL NOTES	PENETRATION FIRESTOPPING NOTES	MECHANICAL SPECIFICATIONS	MECHANICAL SPECIFICATIONS																																	
<div>1. THESE DRAWINGS AND SPECIFICATIONS ARE FOR THE DIVISION 23 CONTRACTOR TO ENGINEER, DESIGN, BID AND INSTALL A HEATING, AIR CONDITIONING AND VENTILATION SYSTEM PER THE DESIGN INTENT SHOWN.</div> <div>2. ALL EQUIPMENT, PIPING, DUCTWORK, COMPONENT AND ACCESSORY SIZES, CAPACITIES, AND TYPES SHOWN IN THESE DRAWINGS AND SPECIFICATIONS SHALL BE ADHERED TO.</div> <div>3. THE DIVISION 23 CONTRACTOR SHALL DESIGN AND INSTALL A COMPLETE AND FULLY OPERATIONAL SYSTEM.</div> <div>4. DESIGN AND AS-BUILT DRAWINGS SHOWING ALL EQUIPMENT, COMPONENTS, PIPING, AND CONTROLS SHALL BE PREPARED TO THE SAME SCALE AS THESE DRAWINGS. COPIES SHALL BE PROVIDED TO THE OWNER AND ARCHITECT/ENGINEER.</div> <div>5. PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO CONSTRUCT A COMPLETE, OPERATIONAL HVAC SYSTEM FOR THE ENTIRE PROJECT AS SHOWN ON THESE DRAWINGS, INCLUDING ALL NECESSARY FEES AND PERMITS.</div> <div>6. THE ENTIRE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE MOST RECENTLY ADOPTED BUILDING CODE, MECHANICAL CODE, PLUMBING CODE, ELECTRICAL CODE, AND ALL OTHER APPLICABLE CITY, COUNTY, SCHOOL, DISTRICT, STATE, AND FEDERAL CODES AND REGULATIONS IN EFFECT AT THE DATE OF THE BID. CONFORM TO ANY CODES, RULES, REGULATIONS AND REQUIREMENTS THAT THE PROJECT OWNER HAS.</div> <div>7. PRIOR TO FABRICATION AND INSTALLATION, COORDINATE THE INSTALLATION OF ALL HVAC PIPING, DUCTWORK, AND EQUIPMENT WITH PLUMBING PIPING, PLUMBING EQUIPMENT, REFRIGERATION TRENCHES AND PIPING, FIRE PROTECTION PIPING AND ALL OTHER TRADES INCLUDING BUT NOT LIMITED TO: THE MECHANICAL CONTRACTOR, REFRIGERATION CONTRACTOR, ELECTRICAL CONTRACTOR, FIRE PROTECTION CONTRACTOR, GENERAL CONTRACTOR, AND ANY CONTRACTOR HIRED DIRECTLY BY THE OWNER. WHERE CONFLICTS MAY OCCUR, THEY SHALL BE RESOLVED PRIOR TO INSTALLATION.</div> <div>8. THE DRAWINGS SHOW THE GENERAL DESIGN, ARRANGEMENTS AND THE EXTENT OF THE SYSTEM. IT SHALL BE THE WORK OF THE CONTRACTOR TO MAKE SUCH SLIGHT ALTERATIONS AS MAY BE NECESSARY TO MAKE THE SYSTEM COMPLETE AND OPERATIONAL IN ACCORDANCE WITH THE DESIGN INTENT. MAJOR DEVIATIONS SUCH AS CHANGES IN COMPONENT SIZES, WEIGHTS, QUANTITIES, OR MATERIAL REQUIRE PRIOR APPROVAL BY THE CONSULTING ENGINEER.</div> <div>9. ALL HVAC INFORMATION IS NOT SHOWN ON THE HVAC DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING INFORMATION ON ALL OTHER CONSTRUCTION DOCUMENTS INCLUDING ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS.</div> <div>10. THE WORKING DRAWINGS ARE DIAGRAMMATIC. BECAUSE OF THE SMALL SCALE OF THE DRAWINGS, THEY DO NOT SHOW EVERY OFFSET, BEND OR ELBOW NECESSARY FOR THE COMPLETE INSTALLATION IN THE SPACE PROVIDED. ALL LOCATIONS FOR HVAC EQUIPMENT AND PIPING SHALL BE CHECKED AND COORDINATED WITH THE ARCHITECTURAL, MECHANICAL, STRUCTURAL AND ELECTRICAL DRAWINGS.</div> <div>11. SPACE ABOVE ALL CEILINGS IS LIMITED. CAREFUL COORDINATION IS REQUIRED WITH ALL TRADES BEFORE ANY PIPE, DUCT, OR EQUIPMENT IS ORDERED AND/OR INSTALLED. ANY CONFLICTS AND/OR CHANGES FOUND DURING INSTALLATION, THAT RESULT FROM LACK OF COORDINATION BY THE CONTRACTORS DURING THE SHOP DRAWING PROCESS ARE THE RESPONSIBILITY OF THE CONTRACTOR.</div> <div>12. 1/8" SCALE SHOP DRAWINGS (SUBMITTED FOR APPROVAL) ARE REQUIRED FOR ALL DUCTWORK AND PIPING SYSTEMS.</div> <div>13. THE DRAWINGS AND SPECIFICATIONS HAVE BEEN PREPARED TO SUPPLEMENT EACH OTHER AND THEY SHALL BE INTERPRETED AS AN INTEGRAL UNIT WITH THE ITEMS SHOWN ON ONE AND NOT THE OTHER BEING FURNISHED AND INSTALLED AS THOUGH SHOWN AND CALLED OUT IN BOTH.</div> <div>14. DETAILS: THE CONTRACTOR IS RESPONSIBLE TO REVIEW AND USE WHERE APPROPRIATE ALL OF THE MECHANICAL DETAILS SHOWN ON THE DRAWINGS. DETAILS MAY OR MAY NOT BE CALLED OUT ON THE DRAWINGS WITH SYMBOLS OR KEYED NOTES. ANY CHANGES RESULTING FROM FAILURE TO INSTALL THE MECHANICAL SYSTEM WITHOUT USING THE INCLUDED DETAILS IS THE RESPONSIBILITY OF THE CONTRACTOR.</div> <div>15. PIPING SCHEMATICS: THE CONTRACTOR IS RESPONSIBLE TO REVIEW THE PIPING SCHEMATICS INCLUDED WITH THE DRAWINGS FOR PIPING CONNECTIONS TO ALL MECHANICAL EQUIPMENT. THE PIPING SCHEMATICS SHOW DETAILED CONNECTIONS INCLUDING NECESSARY VALVES, FITTINGS, PRESSURE AND TEMPERATURE GAUGES, ETC., THAT ARE NOT SHOWN ON THE PIPING PLANS. ANY CHANGES RESULTING FROM FAILURE TO INSTALL THE MECHANICAL SYSTEM WITHOUT USING THE INCLUDED PIPING SCHEMATICS IS THE RESPONSIBILITY OF THE CONTRACTOR.</div> <div>16. THE STRUCTURE SHOWN ON ALL DETAILS MAY OR MAY NOT PERTAIN TO A PORTION OR ANY PORTION OF THE BUILDING. COORDINATE MOUNTING REQUIREMENTS WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.</div> <div>17. ANY PART OF THIS INSTALLATION THAT FAILS, IS UNFIT, OR BECOMES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.</div> <div>18. COORDINATE THE RETURN OF ALL MECHANICAL EQUIPMENT REMOVED DURING DEMOLITION WITH THE OWNER'S REPRESENTATIVE.</div> <div>19. ALL EQUIPMENT SHALL PROVIDE THE SCHEDULED PERFORMANCE AT THE SITE ALTITUDE.</div> <div>20. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL FITTINGS, TRANSITIONS, VALVES, DAMPERS, AND OTHER DEVICES AND ACCESSORIES REQUIRED FOR A COMPLETE, WORKABLE INSTALLATION.</div> <div>21. THE DIVISION 23 CONTRACTOR SHALL FURNISH ALL REQUIRED MOTORS. ALL MOTOR STARTING EQUIPMENT, WHEN NOT A PART OF THE EQUIPMENT, WILL BE FURNISHED BY THE ELECTRICAL CONTRACTOR.</div> <div>22. EXISTING INTERIOR PIPING, EQUIPMENT, AND DUCTWORK HAS BEEN LOCATED IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL VERIFY LOCATIONS AND POINTS OF CONNECTION AND PIPE ROUTING THROUGH EXISTING CONDITIONS PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL PERFORM THE WORK IN A MANNER THAT WILL CAUSE A MINIMUM DISRUPTION TO BUILDING TENANT USE AND SHALL COORDINATE THE WORK WITH THE BUILDING OWNER'S REPRESENTATIVE.</div> <div>23. THE CONTRACTOR IS RESPONSIBLE FOR HVAC EQUIPMENT CHECK-IN, SAFEKEEPING, AND DAMAGE.</div> <div>24. DO NOT ROUTE DUCTS AND PIPES ABOVE ELECTRICAL PANELS. ALL ELECTRICAL PANELS MUST HAVE CLEAR ACCESS SPACE IN FRONT OF PANEL 4'-0" DEEP AND 6'-6" HIGH. DO NOT ROUTE DUCTS AND PIPES IN ELECTRICAL ROOMS, EXCEPT DUCTS AND PIPES SERVING THE ROOM OR IF PROPER ENCLOSURE IS PROVIDED.</div> <div>25. COORDINATE EXACT LOCATIONS OF CEILING DIFFUSERS AND GRILLES WITH ARCHITECTURAL REFLECTED CEILING PLAN.</div> <div>26. ALL FIRE DAMPERS SHOWN ARE 1-1/2 HOUR UNLESS OTHERWISE NOTED.</div> <div>27. IF CONTRACTOR ENCOUNTERS MATERIAL WHICH MAY CONTAIN ASBESTOS, IMMEDIATELY STOP WORK IN THIS AREA AND NOTIFY THE OWNER.</div> <div>28. PROVIDE CEILING ACCESS PANELS AS REQUIRED WHERE MECHANICAL EQUIPMENT, VALVES, VAV BOXES, FIRE DAMPERS, ETC. ARE LOCATED ABOVE INACCESSIBLE CEILINGS.</div> <div>29. ENCLOSE ALL DUCT AND FLUE PENETRATIONS THROUGH 1 HOUR ROOF ASSEMBLIES WITH 2 SHEET ROCK LAYERS FROM SHEET ROCK CEILING AT BOTTOM OF ROOF TRUSSES TO ROOF DECK.</div> <div>30. DO NOT USE STEEL ROOF DECK TO SUPPORT LOADS FROM PIPING, DUCTWORK OR EQUIPMENT. HANGER LOADS LESS THAN 50 LBS. MAY BE HUNG FROM THE STEEL ROOF DECK IN CASES WHERE HANGING FROM THE STEEL ROOF DECK CANNOT BE AVOIDED. THE ATTACHMENT METHOD MUST DISTRIBUTE THE LOAD ACROSS THE DECK AS APPROVED BY THE STRUCTURAL ENGINEER.</div>	<div>31. PROPERLY LUBRICATE ALL PIECES OF EQUIPMENT BEFORE TURNING THE SYSTEM OVER TO THE OWNER.</div> <div>32. PREPARE SUBMITTALS IN AN INDEXED, LABELED FOLDER CONTAINING FULL PERFORMANCE, MATERIAL AND INSTALLATION INFORMATION ABOUT ALL EQUIPMENT, PIPING, COMPONENTS AND ACCESSORIES TO BE USED. SUBMITTALS WILL BE CHECKED AT MOST TWICE. TIME SPENT ON SUBSEQUENT SUBMITTALS WILL BE BILLED TO THE CONTRACTOR BY THE ENGINEER AT ITS CURRENT HOURLY RATES.</div> <div>33. TWO OPERATING AND MAINTENANCE MANUALS SHALL BE PROVIDED IN HARD BACK LOOSE LEAF BINDERS. MANUALS SHALL CONTAIN PRODUCT CUT SHEETS AND OPERATING AND MAINTENANCE INSTRUCTIONS ON ALL EQUIPMENT, ACCESSORIES, FIXTURES, VALVES, ETC., PROVIDED FOR THE PROJECT.</div> <div>34. UPON COMPLETION OF THE WORK, REMOVE ALL SURPLUS MATERIALS AND RUBBISH. MAKE ALL REQUIRED PATCHING AND REPAIRS OF OTHER TRADES' WORK DAMAGED BY THE CONTRACTOR, AND LEAVE THE PREMISES IN A CLEAN, ORDERLY CONDITION.</div> <div>35. THE CONTRACTOR SHALL OPERATE THE SYSTEM AND DEMONSTRATE ALL ASPECTS TO THE ENGINEER AND/OR OWNER, TO PROVE ITS OPERATION. ALL FILTERS USED DURING CONSTRUCTION SHALL BE REPLACED PRIOR TO THE TEST RUN PERIOD.</div> <div>36. THE CONTRACTOR SHALL GUARANTEE THE HVAC SYSTEM FOR A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.</div> <div>37. THE CONTRACTOR SHALL, DURING CONSTRUCTION, MAINTAIN A SET OF AS-BUILT REDLINED RECORD DRAWINGS AT THE PROJECT SITE. ALL CHANGES IN LAYOUT, ROUTING, EQUIPMENT, COMPONENTS, AND ACCESSORIES SHALL BE RECORDED. THESE REDLINES SHALL BE GIVEN TO THE ARCHITECT/ENGINEER AFTER THE FINAL INSPECTION</div>	<div>1. CAULK AROUND ALL PIPING THAT PASSES THROUGH FIRE RATED PARTITIONS WITH A NON-HARDENING CAULKING SIMILAR TO 3M "FIRE BARRIER".</div> <div>2. PROVIDE PROPER PROVISIONS FOR EXPANSION OR MOVEMENT OF ALL PIPING.</div> <div>3. PROVIDE LARGE ENOUGH PIPE SLEEVES THROUGH WALLS OR FLOORS TO ALLOW FOR ANTICIPATED DIFFERENTIAL MOVEMENTS.</div> <div>4. AT VERTICAL RISERS SUPPORT THE WEIGHT OF THE RISER AT A POINT OR POINTS ABOVE THE CENTER OF GRAVITY OF THE RISER. PROVIDE LATERAL GUIDES AT THE TOP AND BOTTOM OF THE RISER, AND AT THE INTERMEDIATE POINTS NOT TO EXCEED 30'-0" ON CENTER.</div> <div>5. ALL PIPING SHALL BE SUPPORTED WITH TYPE I STEEL CLEVIS PIPE HANGERS.</div> <div>6. ALL STEEL CLEVIS HANGERS USED TO SUPPORT PLASTIC PIPING SHALL BE PLASTIC COATED.</div> <div>7. ALL STEEL HANGERS USED TO SUPPORT COPPER PIPING SHALL BE COPPER PLATED OR PLASTIC COATED.</div> <div>8. PERFORATED METAL OR PLASTIC STRAPPING (PLUMBERS TAPE) IS NOT AN ACCEPTABLE MATERIAL FOR HANGING OR SECURING PIPE.</div> <div>9. PROVIDE PIPE HANGERS WITHIN 18 INCHES OF ALL 90 DEGREE ELBOWS.</div> <div>10. PROVIDE SWAY BRACING ON PIPING 4" AND LARGER AT CHANGES IN DIRECTION GREATER THAN 45 DEGREES.</div> <div>11. ALL PIPING SHALL BE INSTALLED IN A NEAT ARRANGEMENT PARALLEL TO BUILDING STRUCTURE.</div>	<div>1. FIRE RATED PENETRATIONS DETAILS SHOWN ON THE CONSTRUCTIONS DOCUMENTS SHOW GENERAL METHOD OF MECHANICAL (HVAC) AND PLUMBING PENETRATION FIRESTOPPING.</div> <div>2. CONTRACTOR SHALL REVIEW CONSTRUCTION DOCUMENTS AND PROVIDE SPECIFIC FIRESTOPPING DETAILS FROM A SPECIFIC FIRESTOPPING MANUFACTURER FOR EACH MECHANICAL (HVAC) AND PLUMBING PIPE OR DUCT PENETRATION FOR EACH FIRE RATED ASSEMBLY.</div> <div>3. PROVIDE PENETRATION FIRESTOPPING THAT IS PRODUCED AND INSTALLED TO RESIST SPREAD OF FIRE ACCORDING TO REQUIREMENTS INDICATED, RESIST PASSAGE OF SMOKE AND OTHER GASES, AND MAINTAIN ORIGINAL FIRE-RESISTANCE RATING OF CONSTRUCTION PENETRATED.</div> <div>4. PENETRATION FIRESTOPPING SYSTEMS SHALL BE COMPATIBLE WITH ONE ANOTHER, WITH THE SUBSTRATES FORMING OPENINGS, AND WITH PENETRATING ITEMS IF ANY.</div> <div>5. PENETRATIONS IN FIRE-RESISTANCE-RATED WALLS: PROVIDE PENETRATION FIRESTOPPING WITH RATINGS DETERMINED PER ASTM E 814 OR UL 1479, BASED ON TESTING AT A POSITIVE PRESSURE DIFFERENTIAL OF 0.01-INCH WG</div> <div>6. PENETRATION FIRESTOPPING PRODUCTS SHALL BEAR UL, ETL OR FM GLOBAL CLASSIFICATION MARKING OF QUALIFIED TESTING AND INSPECTING AGENCY.</div> <div>7. DO NOT INSTALL PENETRATION FIRESTOPPING WHEN AMBIENT OR SUBSTRATE TEMPERATURES ARE OUTSIDE LIMITS PERMITTED BY PENETRATION FIRESTOPPING MANUFACTURERS OR WHEN SUBSTRATES ARE WET BECAUSE OF RAIN, FROST, CONDENSATION, OR OTHER CAUSES.</div> <div>8. COORDINATE CONSTRUCTION OF OPENINGS AND PENETRATING ITEMS TO ENSURE THAT PENETRATION FIRESTOPPING IS INSTALLED ACCORDING TO SPECIFIED REQUIREMENTS.</div> <div>9. COORDINATE SIZING OF SLEEVES, OPENINGS, CORE-DRILLED HOLES, OR CUT OPENINGS TO ACCOMMODATE PENETRATION FIRESTOPPING.</div> <div>10. INSTALL PENETRATION FIRESTOPPING TO COMPLY WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS AND PUBLISHED DRAWINGS FOR PRODUCTS AND APPLICATIONS INDICATED.</div> <div>11. INSTALL FORMING MATERIALS AND OTHER ACCESSORIES OF TYPES REQUIRED TO SUPPORT FILL MATERIALS DURING THEIR APPLICATION AND IN THE POSITION NEEDED TO PRODUCE CROSS-SECTIONAL SHAPES AND DEPTHS REQUIRED TO ACHIEVE FIRE RATINGS INDICATED.</div> <div>12. IDENTIFY PENETRATION FIRESTOPPING WITH PREPRINTED METAL OR PLASTIC LABELS. ATTACH LABELS PERMANENTLY TO SURFACES ADJACENT TO AND WITHIN 6 INCHES OF FIRESTOPPING EDGE SO LABELS WILL BE VISIBLE TO ANYONE SEEKING TO REMOVE PENETRATING ITEMS OR FIRESTOPPING.</div>	<div>230553 - MECHANICAL IDENTIFICATION</div> <div>1. PIPE MARKERS: PLASTIC TAPE: PROVIDE MANUFACTURER'S STANDARD COLOR-CODED PRESSURE-SENSITIVE (SELF ADHESIVE) VINYL TAPE, NOT LESS THAN 3 MILS THICK. 1-1/2" WIDE TAPE MARKERS ON PIPES WITH OUTSIDE DIAMETERS LESS THAN 6" (INCLUDING INSULATION, IF ANY); 2-1/2" WIDE TAPE FOR LARGER PIPES.</div> <div>2. DUCT MARKERS: PROVIDE MANUFACTURER'S STANDARD LAMINATE PLASTIC, COLOR CODED DUCT MARKERS.</div> <div>3. COLOR: COMPLY WITH ANSI A13.1</div> <div>4. LETTERING: MANUFACTURER'S STANDARD PRE-PRINTED NOMENCLATURE WHICH BEST DESCRIBES PIPING OR DUCT SYSTEM IN EACH INSTANCE OR AS SELECTED BY ARCHITECT OR ENGINEER IN CASES OF VARIANCE WITH NAMES AS SHOWN.</div> <div>5. ARROWS: PRINT EACH MARKER WITH ARROWS INDICATING DIRECTION OF FLOW.</div> <div>6. VALVE TAGS: PROVIDE PLASTIC LAMINATE VALVE TAGS; MANUFACTURER'S STANDARD 3/32" THICK ENGRAVED TAGS WITH PIPING SYSTEM ABBREVIATION IN 1/4" HIGH LETTERS AND SEQUENCED VALVE NUMBERS 1/2" HIGH WITH 5/32" HOLE FOR FASTENER. PROVIDE 1-1/2" SQUARE BLACK TAGS WITH WHITE LETTERING.</div> <div>7. VALVE TAG FASTENERS: PROVIDE MANUFACTURER'S STANDARD SOLID BRASS CHAIN (WIRE LINK OR BEADED TYPE), OR SOLID BRASS S-HOOKS OF THE SIZED REQUIRED FOR PROPER ATTACHMENT OF TAGS TO VALVES, AND MANUFACTURED SPECIFICALLY FOR THAT PURPOSE.</div> <div>230593 - TESTING, ADJUSTING, AND BALANCING</div> <div>OBTAIN THE SERVICES OF AN INDEPENDENT TESTING AND BALANCING AGENCY TO BALANCE AND ADJUST THE SYSTEM. THIS SHALL BE DONE BY PERSONS FULLY FAMILIAR WITH SYSTEMS OF THIS TYPE. BALANCING SHALL BE DONE IN ACCORDANCE TO AABC OR NEBB STANDARDS. ALL DATA SHALL BE RECORDED AND A REPORT SUBMITTED TO THE ENGINEER PRIOR TO JOB CLOSE OUT.</div> <div>230700 - MECHANICAL INSULATION</div> <div>1. PIPE INSULATION TO BE SNAP-ON GLASS FIBER TYPE WITH VAPOR JACKET. SEAL ALL ENDS AND JOINTS TO PROVIDE A COMPLETELY SEALED SYSTEM. ALTERNATIVELY, USE FLEXIBLE UNICELLULAR ASTM 534 TYPE 1 INSULATION. USE 1" THICKNESS FOR PIPE UP TO 2"Ø, AND 1 1/2" FOR PIPE OVER 2"</div> <div>2. WRAP ALL SUPPLY AND RETURN DUCTWORK WITH 1-1/2" THICK FOIL FACED FIBERGLASS INSULATION. WRAP INSULATION TIGHTLY ON THE DUCT WITH ALL CORNER/INTERFURAL JOINTS BUTTED AND LONGITUDINAL JOINTS OVERLAPPED A MIN. OF 2". COVER ALL JOINTS WITH FOIL-REINFORCED KRAFT TAPE, 3" WIDE. DUCTWORK INTERIOR TO BUILDING ENVELOPE WITH A MINIMUM R-5 WHILE EXTERIOR DUCTWORK INSULATION SHALL BE MINIMUM R-12.</div> <div>3. NO RETURN AIR DUCT INSULATION IS REQUIRED IF THE RETURN AIR AND PLENUM TEMPERATURE DIFFERENCE IS LESS THAN 10°F</div> <div>4. OUTDOOR DUCTWORK EXPOSED TO THE WEATHER SHALL HAVE 2" INSULATION AND SHALL BE FITTED WITH 0.016 EMBOSSED ALUMINUM JACKET POP-RIVETED FOR A TIGHT WEATHERPROOF FIT.</div> <div>233113 - METAL DUCTWORK</div> <div>1. ALL DUCTWORK SHALL BE CONSTRUCTED, ERECTED, AND TESTED IN ACCORDANCE WITH THE MOST RESTRICTIVE OF LOCAL REGULATIONS AND PROCEDURES DETAILED IN THE ASHRAE HANDBOOK OF FUNDAMENTALS, OR THE APPLICABLE STANDARDS ADOPTED BY THE SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION. (SMACNA).</div> <div>2. TRANSITION ALL NEW DUCTWORK TO CONNECT TO EXISTING, AS REQUIRED.</div> <div>3. DUCTWORK SHALL BE GALVANIZED STEEL THROUGHOUT, FABRICATED AND INSTALLED SO THAT NO VIBRATION OR NOISE RESULTS. IT SHALL BE MADE FROM THE BEST GRADE OF GALVANIZED MILLED STEEL SHEETS OF U.S. STANDARD GAUGE AND BE FREE FROM RUSTERS, SLIVERS, AND RITS. ALL SEAMS SHALL BE AIRTIGHT. THE CONSTRUCTION OF ALL DUCTWORK, INCLUDING GAUGES OF METAL, BRACING LAYOUT, ETC., SHALL BE IN ACCORDANCE WITH SMACNA. SLEEVES FOR FIRE DAMPERS AND DUCT SECTIONS FORMING AN EXTENSION OF THE FIRE WALL SHALL BE 10 GAUGE STEEL.</div> <div>4. SEAL DUCTWORK ACCORDING TO THE FOLLOWING SMACNA DUCT SEALING CLASS:<table><tr><th rowspan="2">DUCT LOCATION</th><th colspan="4">DUCT TYPE</th></tr><tr><th colspan="2">SUPPLY</th><th rowspan="2">EXHAUST</th><th rowspan="2">RETURN</th></tr><tr><th></th><th>&lt;2in. Wg.</th><th>2-26in. Wg.</th><th></th><th></th></tr><tr><td>OUTDOORS</td><td>A</td><td>A</td><td>A</td><td>A</td></tr><tr><td>UNCONDITIONED SPACES</td><td>B</td><td>A</td><td>B</td><td>B</td></tr><tr><td>CONDITIONED SPACES (CONCEALED DUCTWORK)</td><td>C</td><td>B</td><td>B</td><td>B</td></tr><tr><td>CONDITIONED SPACES (EXPOSED DUCTWORK)</td><td>A</td><td>A</td><td>B</td><td>B</td></tr></table></div> <div>5. HANGERS FOR DUCTS UP TO 18" IN WIDTH OR DIAMETER SHALL BE PLACED ON NOT MORE THAN 8 FOOT CENTERS. DUCTS 19" AND OVER IN WIDTH OR DIAMETER SHALL BE SUPPORTED ON NOT MORE THAN 4 FOOT CENTERS. DUCT HANGERS SHALL BE CONSTRUCTED OF GALVANIZED BAND IRON 1-1/8" FOR DUCTS UP TO 36" IN WIDTH OR DIAMETER. HANGERS SHALL EXTEND DOWN SIDES AND A MINIMUM OF 1" UNDER RECTANGULAR DUCTS, AND WRAP COMPLETELY AROUND ROUND DUCTS. ALL DUCTS SHALL BE RIGIDLY SUPPORTED.</div> <div>6. ALL DUCTWORK SHALL BE CLEANED PRIOR TO THE INSTALLATION OF CEILING AND DIFFUSERS. OPERATE FANS TO BLOW OUT DUCTWORK.</div> <div>7. RECTANGULAR LOW-PRESSURE SUPPLY AND RETURN AIR DUCTWORK SHALL BE LINED WITH 1" FACED FIBERGLASS INSULATION SECURELY BUTTONED OR LAPPED AND SEALED. INSULATION SHALL BE 1-1/2 POUND DENSITY.</div> <div>8. OUTDOOR DUCTWORK EXPOSED TO THE WEATHER SHALL BE LINED WITH MINIMUM R-8 FACED FIBERGLASS INSULATION SECURELY BUTTONED OR LAPPED AND SEALED. INSULATION SHALL BE FITTED WITH A 0.016 EMBOSSED ALUMINUM JACKET POP-RIVETED FOR A WEATHERPROOF FIT.</div> <div>9. DUCT DIMENSIONS SHOWN ON DRAWINGS ARE INSIDE CLEAR AREA AND SHALL BE INCREASED TO ACCOMMODATE INSULATION. DUCT LINER TO BE BY KNAUF GmbH, JOHN MANVILLE OR SCHULLER INTERNATIONAL.</div> <div>10. CLASS I KITCHEN EXHAUST HOOD DUCT SYSTEMS:<div>A. TYPE I COMMERCIAL HOOD AND GREASE DUCT SHALL MEET CLEARANCE REQUIREMENTS FROM COMBUSTIBLE AND NONCOMBUSTIBLE CONSTRUCTION IN ACCORDANCE TO 2012 IMC SECTION 507.8 AND ASTM E23-36.</div><div>B. CONSTRUCT EXHAUST DUCT OF WELDED 16 GAUGE CARBON STEEL SHEETS FOR CONCEALED DUCTS, AND WELDED OR FLANGED 18 GAUGE STAINLESS STEEL FOR EXPOSED DUCTS.</div><div>C. SLOPE HORIZONTAL DUCT AT 1/4" PER FOOT TOWARD HOOD.</div><div>D. PROVIDE ACCESS DOORS AT EACH CHANGE OF DIRECTION.</div><div>E. PROVIDE RESIDUE TRAP AT THE BASE OF EACH VERTICAL RISER, WITH PROVISIONS FOR CLEANOUT.</div><div>F. ALL SEAMS, JOINTS AND PENETRATIONS SHALL HAVE A LIQUID-TIGHT, CONTINUOUS, EXTERNAL WELD.</div><div>G. PROVIDE AND INSTALL ONE OF THE FOLLOWING SYSTEMS: DUCT ENCLOSURE WITH 2-HR FIRE RESISTIVE CONSTRUCTION OR, A DUCT WRAP SYSTEM - 3M FIREMASTER GREASE DUCT FIRE PROTECTION SYSTEM OR APPROVED EQUAL, OR A PREFABRICATED GREASE DUCT SYSTEM - METAL FAB MODEL "NO CHASE IPIC", OR APPROVED EQUAL. WHOEVER METHOD IS CHOSEN MUST HAVE APPROVAL FROM THE ADMINISTRATIVE AUTHORITY AND STATE FIRE MARSHAL.</div></div>	DUCT LOCATION	DUCT TYPE				SUPPLY		EXHAUST	RETURN		<2in. Wg.	2-26in. Wg.			OUTDOORS	A	A	A	A	UNCONDITIONED SPACES	B	A	B	B	CONDITIONED SPACES (CONCEALED DUCTWORK)	C	B	B	B	CONDITIONED SPACES (EXPOSED DUCTWORK)	A	A	B	B
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CONDITIONED SPACES (EXPOSED DUCTWORK)	A	A	B	B																																		

 233300 - DUCTWORK ACCESSORIES  1. FLEXIBLE DUCTWORK: THE FINAL 5 FOOT CONNECTION TO GRILLES AND DIFFUSERS IN LAY-IN CEILINGS, OR TO FLOOR MOUNTED GRILLES, MAY BE MADE WITH FLEXIBLE DUCT, FLEXMASTER TYPE SM ONLY. ENDS SHALL BE SEALED.  2. SQUARE/RECTANGULAR ELBOWS SHALL BE PROVIDED WITH TURNING VANES.  3. PROVIDE FLEXIBLE CONNECTIONS NOT LESS THAN 4" WIDE CONSTRUCTED OF HEAVY, WATERPROOF, WOVEN PLASTIC COATED GLASS FABRIC AT SUPPLY AND RETURN CONNECTIONS TO HEAT PUMPS, AIR HANDLING, ROOFTOP, MAKE-UP AIR OR FAN-COIL UNITS. CORNERS SHALL BE SEWN TIGHT. CONNECTIONS SHALL BE 20 OUNCE VENTFABRICS OR EQUAL.  4. COMBINATION FIRE AND SMOKE DAMPERS, SMOKE DAMPERS, OR FIRE DAMPERS IN DUCTWORK THROUGH ALL FLOORS AND FIRE WALLS SHALL BE FURNISHED AND INSTALLED AS REQUIRED TO CONFORM TO THE LATEST NFPA BULLETIN CONCERNING THIS TYPE OF BUILDING AND SHALL BE LISTED AND LABELED IN ACCORDANCE WITH THE STANDARDS AND REQUIREMENTS OF UL555 AND UL658. DAMPERS, COMPLETE WITH MOUNTING ANGLES, SHALL BE MULTIBLADE, FUSIBLE LINK, SPRING ACTING WITH 11 GAUGE SLEEVE. FUSIBLE LINK SHALL BE RATED AT 165°F. CONTROLLED BY AUTOMATIC SMOKE DETECTION IN DUCT OR AREA OF SMOKE DISPERSION.  5. DUCT MOUNTED BALANCING DAMPERS SHALL BE USED TO CONTROL SUPPLY AIR TO EACH DIFFUSER AND GRILLE. AN OPERATING HEAD SHALL BE PLACED ON THE SIDE OF THE DUCT WITH A POSITIVE LOCKING QUADRANT. DAMPERS SHALL BE PROVIDED IN RETURN AND EXHAUST AIR DUCTS WHERE SHOWN ON DRAWINGS. COORDINATE THE LOCATION OF CEILING ACCESS PANELS.  6. PROVIDE CEILING ACCESS DOORS AT ALL LOCATIONS OF BALANCING DAMPERS, FIRE DAMPERS, FIRE-SMOKE DAMPERS, VALVES, ETC., WHERE THERE IS NOT A LIFT-OUT TYPE CEILING. ACCESS DOORS SHALL BE HINGED OF METAL CONSTRUCTION WITH SCREWDRIVER LATCHES. ACCESS DOORS TO BE LISTED AND FIRE RATED EQUAL TO OR GREATER THAN THE RATING ASSEMBLY THEY ARE INSTALLED IN.  7. AT FIRE DAMPERS, A DUCT MOUNTED SHEET METAL HINGED DOOR SHALL BE PROVIDED AND INSTALLED WITH POSITIVE LOCKING HANDLE. WHERE DUCTS ARE INSULATED, COVERS SHALL BE INSULATED. FIRE DAMPERS SHALL BE LISTED AND LABELED IN ACCORDANCE WITH THE STANDARDS AND REQUIREMENTS OF UL555, CONTROLLED BY FIRE DETECTOR, FUSABLE LINK, OR ELECTRICAL FUSABLE LINK. PROVIDE 1, 1-1/2, OR 3 HR FIRE RATED MATERIALS AT ALL PENETRATIONS OF FIRE BARRIERS BY DUCTS. SYSTEM APPROVED BY ASTM E 814 OR EQUAL.  8. GRAVITY OR BACKDRAFT DAMPERS SHALL BE ALL ALUMINUM CONSTRUCTION, INTERCONNECTED AND BLADED, PRESSURE DROP THROUGH DAMPERS SHALL NOT EXCEED 0.04" W.G.  9. FIRE ALARM CONTRACTOR SHALL TEST FOR FIRE-SMOKE DAMPERS AS REQUIRED BY LOCAL BUILDING OFFICIAL AND FIRE AUTHORITY PRIOR TO OCCUPANCY.  233416 - FANS  1. ROOF MOUNTED EXHAUST FANS SHALL BE COMPLETE WITH BACKDRAFT DAMPERS. A DISCONNECT SWITCH SHALL BE PROVIDED AT THE FAN.  2. THE DISCONNECT SWITCH SHALL TURN OFF THE FAN WITH THE ACTIVATION OF SMOKE DETECTION.  3. THE FAN SHALL BE COMPLETE WITH INSECT SCREEN AND PREFABRICATED ROOF CURB MATCHING THE FAN SIZE.  4. CEILING MOUNTED EXHAUST FANS SHALL BE COMPLETE WITH LOUVERED GRILLE, BACKDRAFT DAMPER, AND WALL CAP OR ROOF CAP. SEE PLANS.  5. FANS FOR GREASE HOOD APPLICATIONS SHALL BE UPLIST TYPE, LISTED AND LABELED FOR GREASE HOOD USE AND INSTALLED PER APPLICABLE CODES.  6. UTILITY FAN SETS SHALL BE BELT DRIVE, CENTRIFUGAL, FANS CONSISTING OF WEATHER PROOF HOUSING, WHEEL, FAN SHAFT, BEARINGS, MOTOR, DISCONNECT SWITCH, DRIVE ASSEMBLY, DRAIN CONNECTION AND ACCESSORIES.  7. MANUFACTURERS: COOK, ILG, PENN, GREENHECK, & BROWN  233713 - GRILLES, DIFFUSER AND LOUVERS  1. ALL GRILLES, DIFFUSERS, AND REGISTERS SHALL BE COMPLETE WITH FRAMES AND RUBBER GASKETS. FINISH FOR ALL REGISTERS, DIFFUSERS, AND GRILLES SHALL BE WHITE.  2. COORDINATE THE LOCATIONS OF ALL CEILING DIFFUSERS, REGISTERS, AND GRILLES WITH THE ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL LIGHTING LAYOUT, AND ARCHITECTURAL ELEVATIONS.  3. LOUVERS SHALL HAVE MINIMUM FREE AREA AND MAXIMUM PRESSURE DROP AS LISTED IN THE SCHEDULES. LOUVER SHALL HAVE FRAME AND SILLS COMPATIBLE WITH ADJACENT SUBSTRATE AND FIT ACCURATELY FOR WEATHERPROOF INSTALLATION. LOUVERS SHALL BE COMPLETE WITH 1/2" MESH ANODIZED ALUMINUM BIRD SCREEN. || THE DESIGNS SHOWN AND DESCRIBED HEREIN INCLUDING ALL TECHNICAL DRAWINGS, GRAPHIC REPRESENTATION & MODELS THEREOF, ARE PROPRIETARY & CAN NOT BE COPIED, DUPLICATED, OR COMMERCIALLY EXPLOITED IN WHOLE OR IN PART WITHOUT THE SOLE AND EXPRESS WRITTEN PERMISSION FROM DONALD L. WELCH ARCHITECT  THESE DRAWINGS ARE AVAILABLE FOR LIMITED REVIEW AND EVALUATION BY CLIENTS, CONSULTANTS, CONTRACTORS, GOVERNMENT AGENCIES, VENDORS, AND OFFICE PERSONNEL ONLY IN ACCORDANCE WITH THIS NOTICE.  project: Tenant Finish for New Brighton Recovery Campus  4905, 4911, 4915, 4925, 4931, & 4953 South 900 East Salt Lake County, Utah  date April 11, 2017  revisions PERMIT SET-December 28, 2016  ▲ ADDENDUM #1-January 04, 2017  ▲ ADDENDUM #2-January 11, 2017  ▲ ADDENDUM #3-January 17, 2017  ▲ ADDENDUM #4-January 20, 2017  ▲ ADDENDUM #5-February 24, 2017  ▲ ADDENDUM #6- March 20, 2017  ▲ ADDENDUM #9 - April 11, 2017  data  project no: drawn by: checked by:  title  MECHANICAL EQUIPMENT SPECIFICATIONS sheet  M02  BUILDING 'C' | | | | | |

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consultant:

REGISTERED PROFESSIONAL ENGINEER

04-11-2017  
No. 9520491

BENJAMIN J. SCHLUP

STATE OF UTAH

project: Tenant Finish for New Brighton Recovery Campus

4905, 4911, 4915, 4925, 4931, & 4953 South 900 East Salt Lake County, Utah

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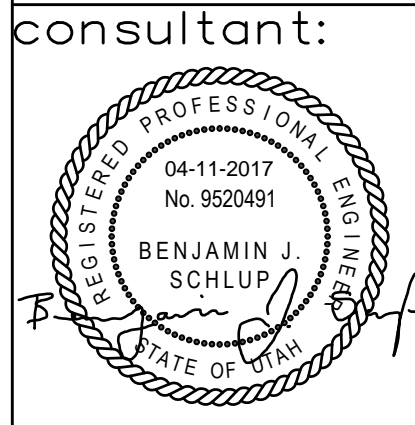
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Δ ADDENDUM #8 -- March 20, 2017  
Δ ADDENDUM #9 -- April 11, 2017

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M02

BUILDING 'C'

ELECTRIC UNIT HEATER SCHEDULE											
SYMBOL	MANUFACTURER AND MODEL NO.	LOCATION	ARRANGEMENT	CFM	ELECTRICAL				OPERATING WEIGHT (LBS.)	NOTES	ACCESSORIES AND REMARKS
					KW	MOTOR	VOLT	PHASE			
						H.P.					
EUH-1	TRANE UHEC03	WATER ENTRIES	VERTICAL	400	3.3	1/125	208	1	132	3	WALL HUNG
EUH-2	TRANE UHCA02	EXIT DOORS	HORIZONTAL	-	2.0	-	208	1	-	1,2	RECESSED, CEILING MOUNTED
EUH-3	TRANE UHAA15	CUSTODIAN	VERTICAL	-	1.5	-	208	1	22	1,2	RECESSED, WALL MOUNTED

- NOTES:  
(1) UNIT MOUNTED TAMPERPROOF THERMOSTAT  
(2) UNIT MOUNTED DISCONNECT SWITCH  
(3) PROVIDE WALL MOUNTED LINE VOLTAGE THERMOSTAT AND TAMPERPROOF WALL BRACKET

DIFFUSER AND GRILLE SCHEDULE						
SYMBOL	MANUFACTURER AND MODEL NO.	LOCATION	CFM	OVERALL SIZE	NOTES	ACCESSORIES AND REMARKS
SG-1	TITUS 300R	CEILING	SEE PLANS	14 X 6 10 X 6	3,5	CEILING SUPPLY GRILLE W/ FIRE DAMPER
CD-1	TITUS PAS-FR	CEILING	SEE PLANS	24 X 24 12 X 12	2,5	CEILING DIFFUSER W/ FIRE DAMPER
RG-1	TITUS PAR-FR	CEILING	SEE PLANS	24 X 24 16 X 16	2,5	RETURN GRILLE W/ FIRE DAMPER
EG-1	TITUS 63F	EXTERIOR EXHAUST TERMINATION	SEE PLANS	8X6	4	EXHAUST DISCHARGE GRILLE, ALUMINUM
DG-1	TITUS CT-700L	DOOR TRANSFER	SEE PLANS	18 X 12	1	DOOR GRILLE
FIRE RATING NOTE: ALL CEILING DUCTWORK & DIFFUSER PENETRATIONS TO HAVE UL CLASSIFIED FIRE DAMPERS TO MAINTAIN FIRE RATING. (TYPICAL)						

- NOTES:  
(1) PROVIDE AUXILIARY FRAME FOR TO ALLOW FOR FINISHED LOOK ON BOTH SIDES OF DOOR.  
(2) PROVIDE FRAME AND BALANCING DAMPER ACCESSIBLE THROUGH GRILLE FOR HARDLID CEILING APPLICATIONS AS REQUIRED.  
(3) PROVE DOUBLE DEFLECTION GRILLE WITH INTEGRAL BALANCING DAMPER.  
(4) PROVIDE NECESSARY FRAME TO ALLOW FOR INSTALLATION ON BOTTOM SIDE OF EXISTING EXTERIOR OVERHANG.  
(5) PROVIDE UL CLASSIFIED FIRE RATED CEILING DIFFUSER ASSEMBLY.

EXHAUST FAN SCHEDULE												
SYMBOL	MANUFACTURER AND MODEL NO.	LOCATION	TYPE	FAN		ELECTRICAL				OPERATING WEIGHT (LBS.)	CONTROL METHOD	ACCESSORIES AND REMARKS
				CFM	ESP	MOTOR		VOLT	PHASE			
						H.P.	WATTS					
EF-1	PANASONIC FV-05-11VKS1	PRIVATE UNIT BATHROOMS	CEILING	110	0.5	-	57	115	1	27	1	CEILING MOUNTED W/ WHITE GRILLE
EF-2	PANASONIC FV-11-15VKS1	PUBLIC RESTROOM	CEILING	150	0.5	-	13	115	1	27	1	CEILING MOUNTED W/ WHITE GRILLE

- CONTROL METHOD:  
(1) CONTROLLED BY WALL SWITCH  
(2) FAN RUNS CONTINUOUSLY DURING BUILDING OCCUPANCY  
(3) CONTROLLED BY LINE VOLTAGE SPACE THERMOSTAT
- ACCESSORIES:  
(1) STANDARD DISCONNECT NEMA 1  
(2) BACKDRAFT DAMPER  
(3) FLEX DUCT CONNECTION  
(4) FAN SPEED CONTROLLER 5A 120V PREWIRED  
(5) RUBBER ISOLATOR SET (4)  
(6) PROVIDE UL LISTED CEILING RADIATION DAMPER TO MATCH FAN TYPE (PANASONIC-RD05C3)

ROOFTOP UNIT SCHEDULE (2-STAGE HEATING/COOLING)														
SYMBOL	MANUFACTURER	MODEL #	CFM	ESP	VOLT/PH	EER	COOLING CAP HI STAGE (BTUH)	HEATING INPUT (BTUH)	ELECTRICAL		DIMENSIONS H X W X L	WEIGHT (LBS)	COMMENTS	
									VOLT/PH	MCA (AMPS)				MAX FUSE
RTU-1	TRANE	4YCZ6036	1200	1.0	208/3	16.0	36,000	96,000	208/3	19.1	30 A	48" X 45" X 52"	550	HORIZONTAL SUPPLY/RETURN
RTU-2	TRANE	YHC047E3	1600	1.0	208/3	16.0	50,500	120,000	208/3	28.9	40 A	41" X 53" X 88"	800	HORIZONTAL SUPPLY/RETURN

- (1) PROVIDE DIGITAL REMOTE PROGRAMMABLE THERMOSTAT IN LOCKABLE COVER.  
(2) 0-25% MANUAL FRESH AIR DAMPER (BUILDING B RTUS)  
(3) 0-100% HORIZONTAL ECONOMIZER (BUILDINGS A & C THRU F RTUS)  
(4) 13" HIGH ROOF CURB/PLATFORM  
(5) CRANKCASE HEATER FOR LOW AMBIENT COOLING  
(6) PROVIDE INSULATED DUCT SHROUD ON ALL EXTERIOR DUCTWORK  
(7) GAS PRESSURE REGULATOR & ISOLATION VALVE  
(8) 120 V CONVENIENCE OUTLET INTEGRAL TO UNIT  
(9) CONDENSER COIL HAIL GUARD  
(10) NON-FUSED DISCONNECT INTEGRAL TO UNIT  
(11) GAS & ELECTRIC FEEDS TO ENTER THROUGH BASE OF UNIT

DUCTLESS SPLIT SYSTEM HEAT PUMP														
SYMBOL	MANUFACTURER	INDOOR UNIT					COOLING CAPACITY (BTUH)	HEATING CAPACITY (BTUH)	OUTDOOR UNIT					COMMENTS
		MODEL #	CFM	VOLT/PH	RLA (AMPS)	SYMBOL			VOLT/PH	MCA (AMPS)	MODEL #	HSPF	SEER	
DSS-1	LENNOX	MS8-HI-24P	590	208/1	0.24	25,000	26,000	CU-1	208/1	16.0	MS8-HO-24P	10.20	18.00	HIGH SIDEWALL STYLE (BLDGS. A, B, D, E & F)
DSS-2	LENNOX	MS8-HI-30P	705	208/1	0.40	30,000	33,000	CU-2	208/1	20.0	MS8-HO-30P	8.20	16.00	HIGH SIDEWALL STYLE (BLDG. C)

- (1) PROVIDE REMOTE PROGRAMMABLE THERMOSTAT. BUILDINGS A, B, D, E & F MAX TEMP 85F (ADJ.) BUILDING C COOLING SETPOINT 70F (ADJ.) MAINTAIN 50F HEATING SETPOINT (ADJ.)  
(2) BUILT IN CONDENSATE PUMP / DISCHARGE CONDENSATE TO APPROVED LOCATION  
(3) MULTI-SPEED FAN  
(4) DEFROST CONTROL  
(5) COMPRESSOR OVERCURRENT PROTECTION  
(6) PROVIDE MANUFACTURER'S WALL CHANNEL (SPEEDICHANNEL SYSTEM) TO CONCEAL ALL REFRIGERANT PIPING EXPOSED TO VIEW AND EXTERIOR CONDITIONS.  
(7) PROVIDE MANUFACTURER'S CONDENSER PAD 18 X 36 X 2

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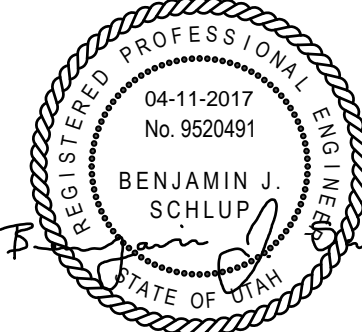


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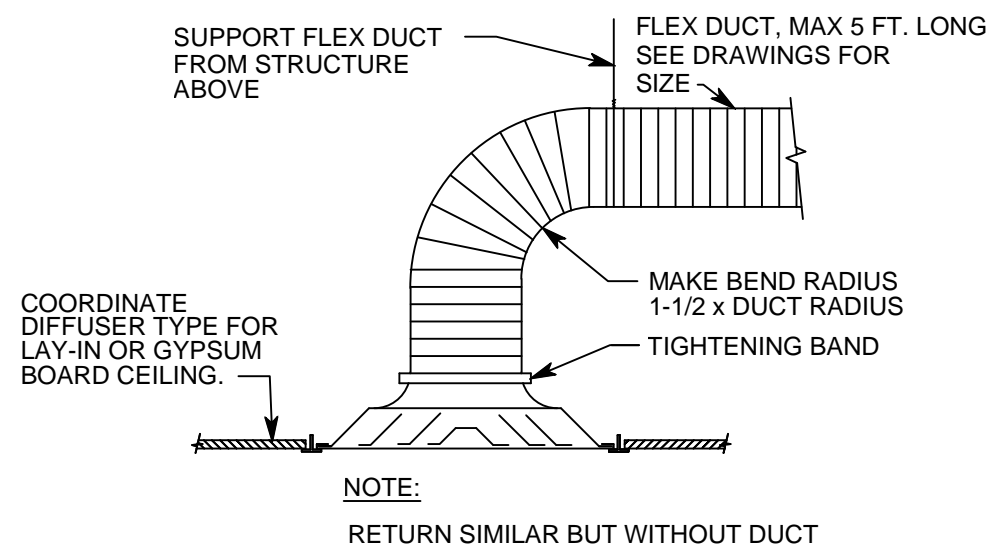
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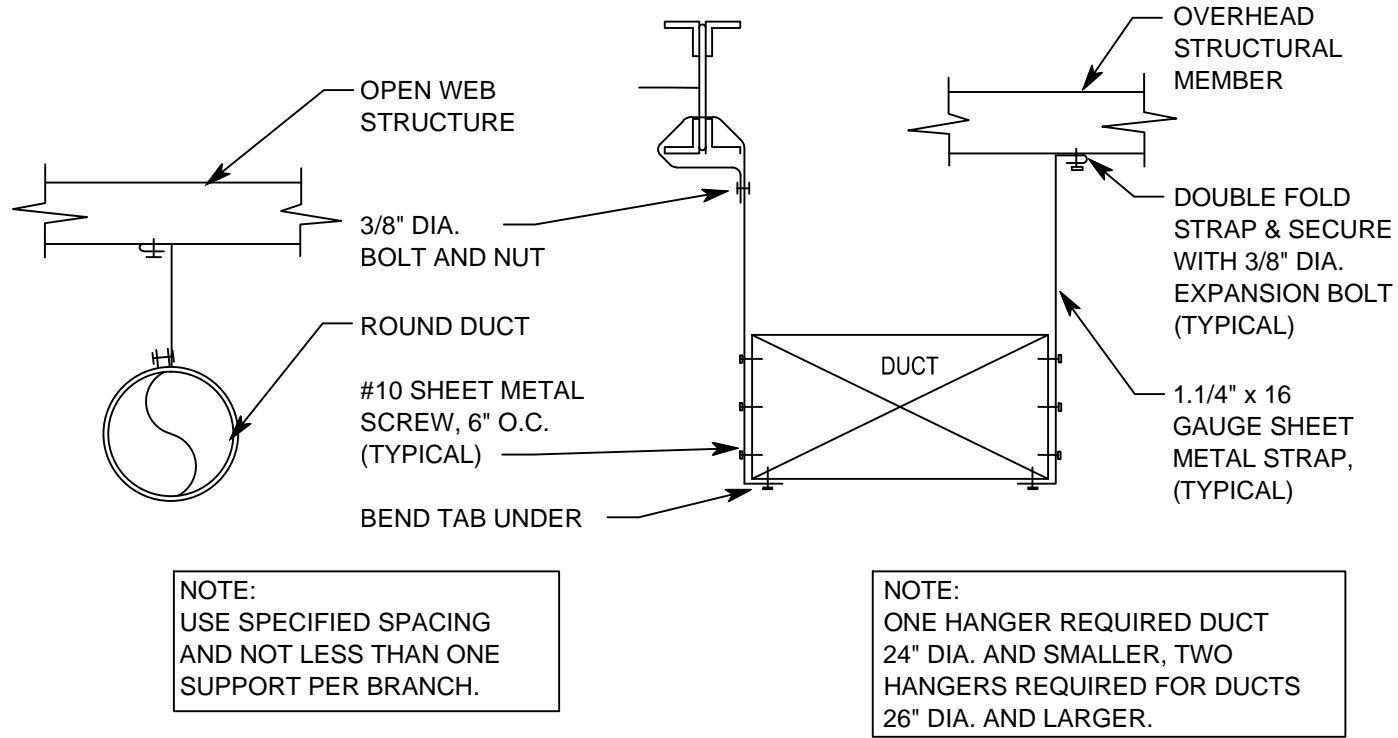
M11

BUILDING 'C'





8 DIFFUSER CONNECTION  
SCALE: NTS



9 DUCT HANGER  
SCALE: NTS

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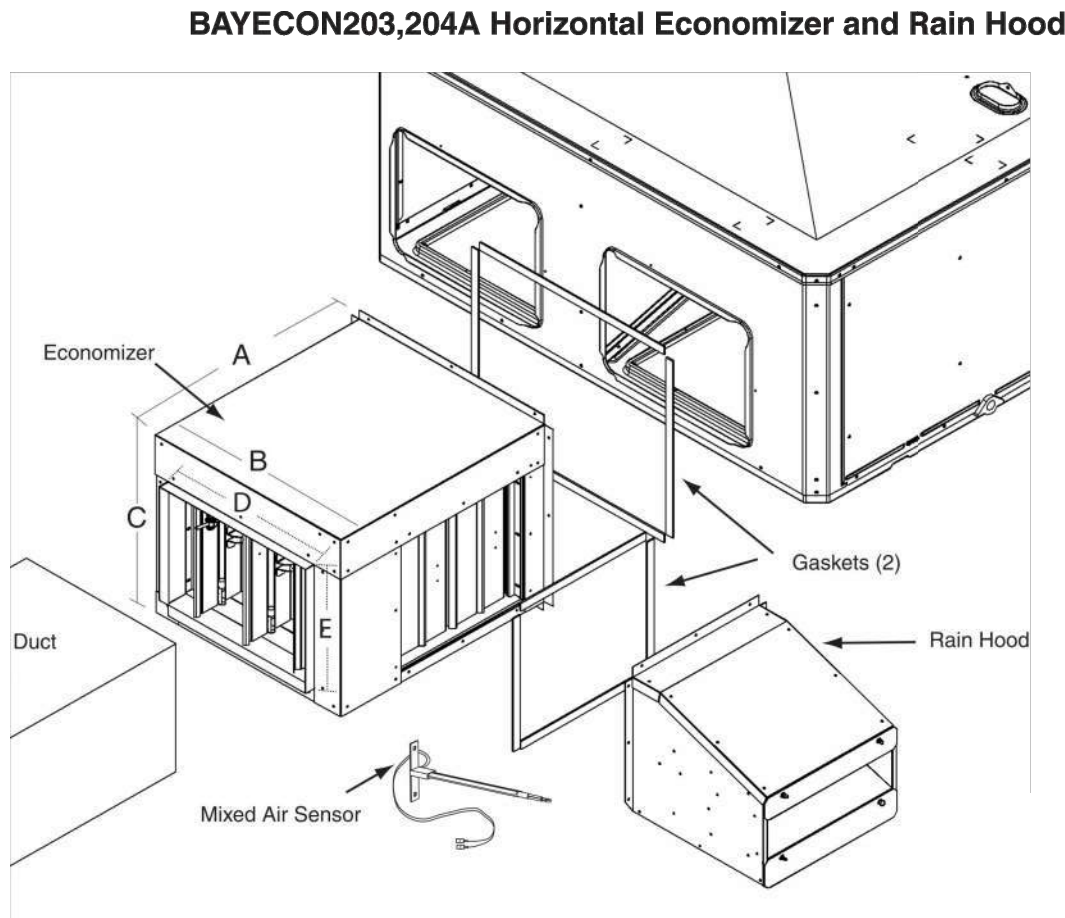
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DETAILS

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M12

BUILDING 'C'



Economizer	A	B	C	D	E	F
BAYECON203AA	22"	20"	16 7/8	15 11/16	11 11/16	15

### 3 HORIZONTAL ECONOMIZER DETAIL (3 TON)

SCALE: NTS

#### Stainless Steel Drain Pan

For excellent corrosion and oxidation resistance, the optional stainless steel drain pan provides a cleanable surface that complement other IAQ solutions such as high efficiency filtration (MERV 8 or 13), demand control ventilation (CO<sub>2</sub>), and hot gas reheat.

#### Powered or Unpowered Convenience Outlet



This option is a GFCI, 120V/15amp, 2 plug, convenience outlet, either powered or unpowered. This option can only be ordered when Through the Base Electrical with either the Disconnect Switch or Circuit Breaker option is ordered.  
**Note:** Not available on 460V/575V units.

#### Through-the-Base Electrical Utility Access



An electrical service entrance shall be provided allowing electrical access for both control and main power connections inside the curb and through the base of the unit. Option will allow for field installation of liquid-tight conduit and an external field installed disconnect switch.



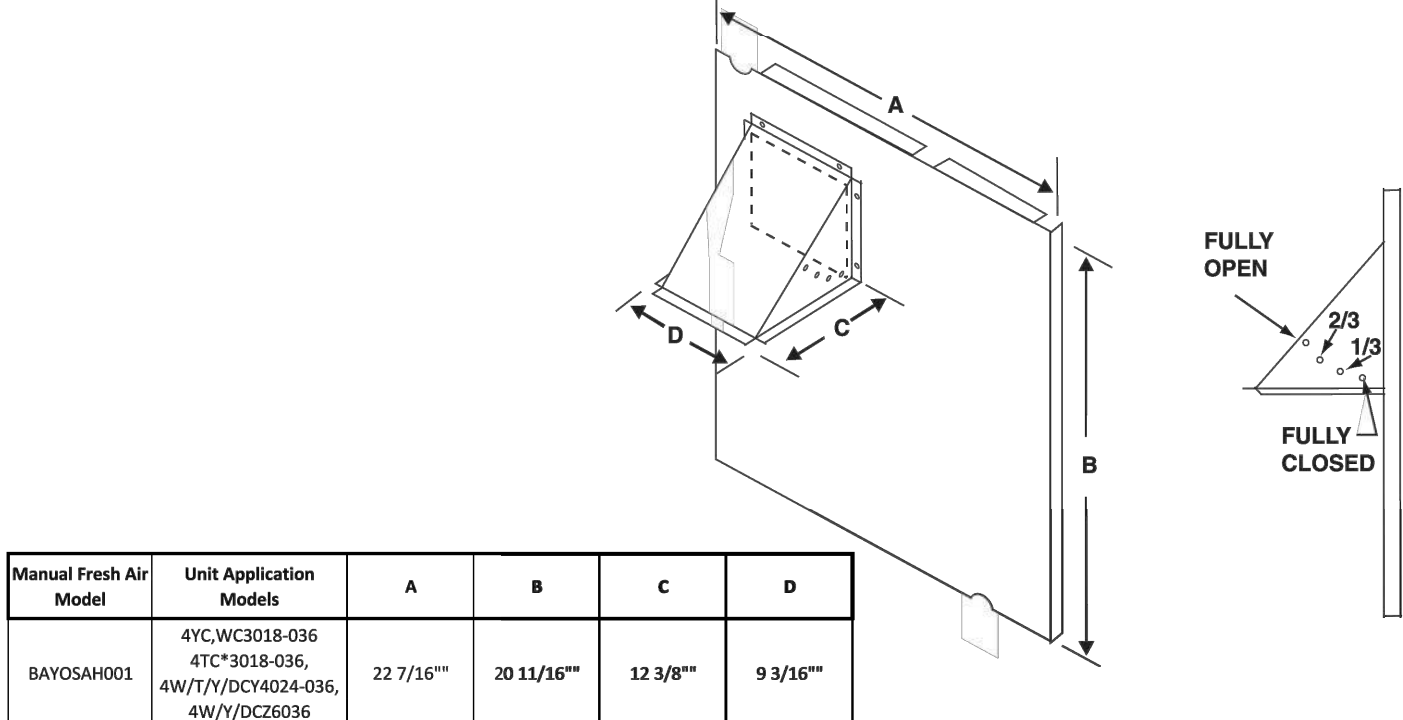
Factory provided through the base openings simplify wiring and piping. Because these utility openings frequently minimize the number of roof penetration integrity of roofing materials is enhanced.

### 6 RTU ACCESSORY & INSTALLATION DETAIL

SCALE: NTS

#### Optional Equipment

##### BAYOSAH001,002A, 25% Outside Air Damper (Replaces Filter/Coil Access Panel)

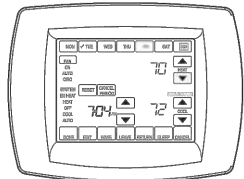


Manual Fresh Air Model	Unit Application Models	A	B	C	D
BAYOSAH001	4YC-WC3018-036 4TC*3018-036, 4W/71/7/DC14024-036, 4W/7/DC26036	22 7/16"	20 11/16"	12 3/8"	9 3/16"

### 2 25% OUTSIDE AIR DAMPER (3 TON)

SCALE: NTS

#### Touchscreen Programmable Thermostat (2H/2C)



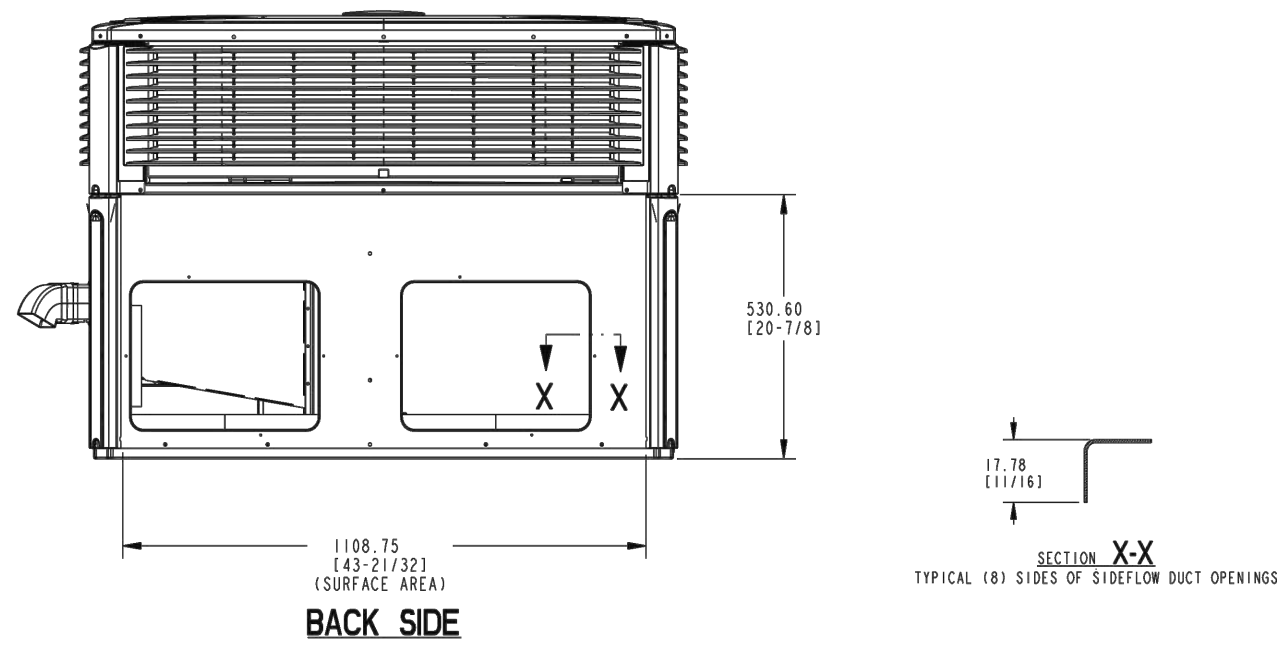
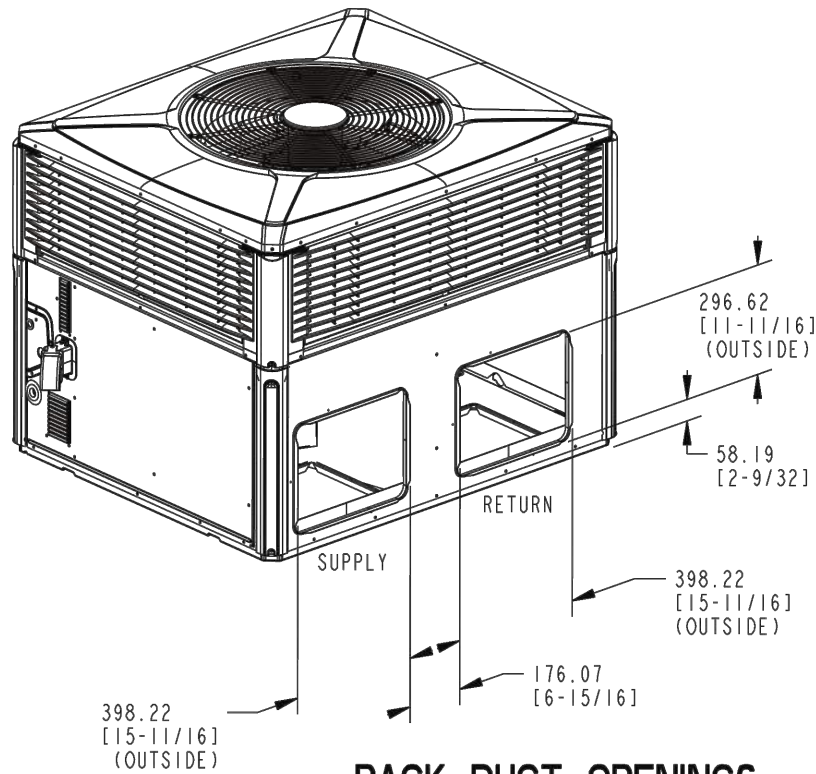
Two Heat/Two Cool programmable thermostat with touch screen digital display. Menu-driven programming. Effortless set-up. Program each day separately with no need to copy multiple days. All programming can be done on one screen. Easy to read and use. Large, clear backlit digital display.

### 5 RTU THERMOSTAT DETAIL

SCALE: NTS

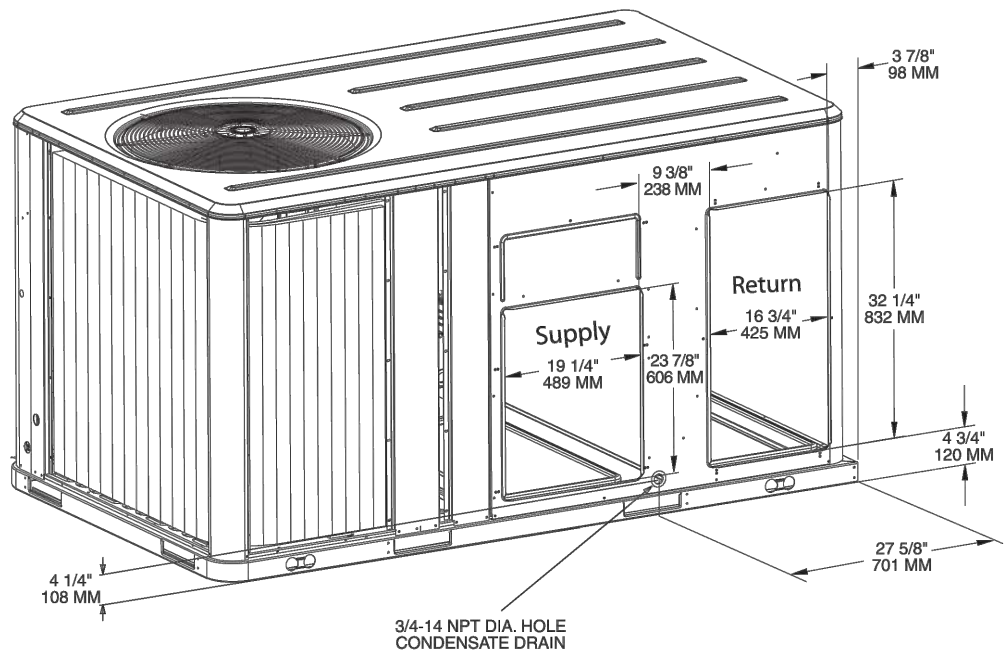
RECOMMENDED SERVICE CLEARANCE MM/IN.		
		WITH ECONOMIZER
BACK SIDE	304.8 (12)	762.0 (30)
LEFT SIDE	762.0 (30)	914.4 (36)
RIGHT SIDE	914.4 (36)	-
FRONT SIDE	1066.8 (42)	-

CLEARANCE TO COMBUSTIBLE MATERIAL MM/IN.	
BOTTOM	0
BACK SIDE	25.4 (1)
LEFT SIDE	152.4 (6)
RIGHT SIDE	304.8 (12)
FRONT SIDE	304.8 (12)
TOP	914.4 (36)



### 1 ROOFTOP UNIT DETAIL (3 TON)

SCALE: NTS



### 4 ROOFTOP UNIT DETAIL (4 TON)

SCALE: NTS

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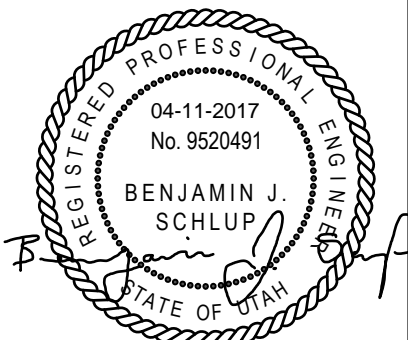


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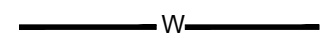

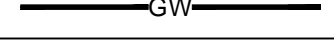
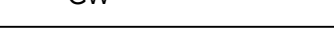
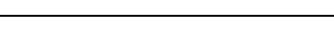
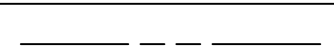
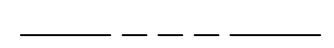

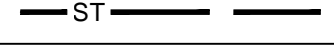
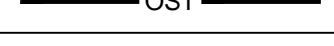
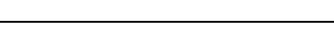
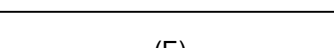
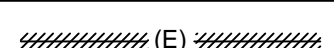
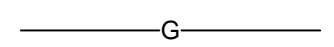


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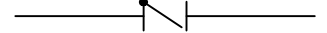



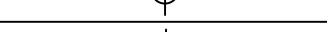
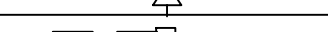
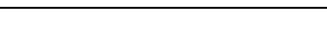




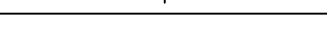
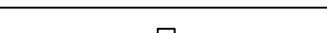


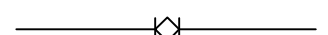
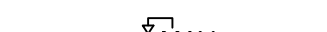
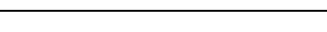
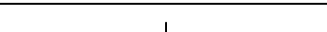
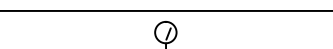
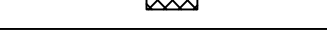
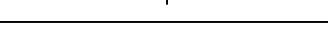

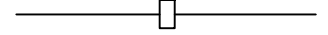
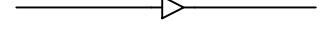


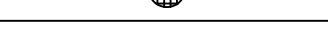
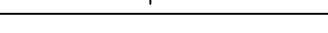
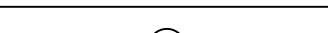


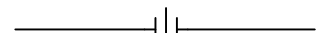




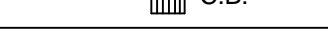
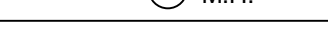
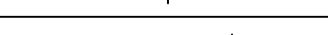
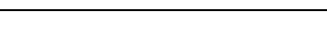
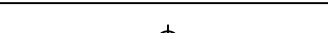




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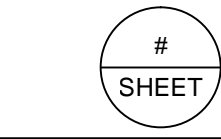
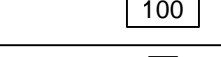
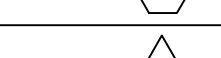
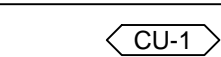

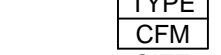
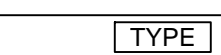
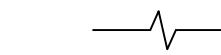
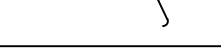
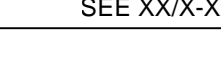
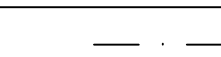
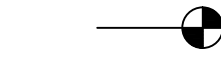


M13

BUILDING 'C'



SYMBOL LEGEND	
SYMBOL	DESCRIPTION
PLUMBING PIPING	
	SOIL, WASTE - ABOVE GRADE
	SOIL, WASTE - BELOW GRADE
	GREASE WASTE - ABOVE GRADE
	GREASE WASTE - BELOW GRADE
	VENT
	COLD WATER
	HOT WATER
	HOT WATER CIRCULATE
	STORM - ABOVE GRADE
	STORM - BELOW GRADE
	OVERFLOW STORM ABOVE GRADE
	OVERFLOW STORM BELOW GRADE
	VENT THRU ROOF
	EXISTING PIPE
	EXISTING PIPE TO BE REMOVED
	GAS

SYMBOL LEGEND	
SYMBOL	DESCRIPTION
VALVES, METERS, AND GAUGES	
	SHUT OFF VALVE
	GATE VALVE
	CHECK VALVE
	AUTO 2-WAY VALVE
	AUTO 3-WAY VALVE
	GLOBE VALVE
	BALL VALVE
	RELIEF VALVE
	CHAIN OPERATED GATE VALVE
	PRESSURE REDUCING VALVE
	BUTTERFLY VALVE
	SOLENOID VALVE
	ANGLE VALVE
	VENTURI
	BALANCING OR PLUG COCK
	FLOW SETTER
	EXPANSION VALVE (REFRIG.)
	GAS COCK
	MANUAL AIR VENT
	STRAINER
	GAUGE COCK
	FLEXIBLE CONNECTION
	PRESSURE GAUGE
	THERMOMETER
	VICTAULIC COUPLING
	REDUCER CONCENTRIC
	REDUCER ECCENTRIC
	REFRIGERANT SITE GLASS
	REFRIGERANT STRAINER
	REFRIGERANT FILTER DRIER
	90° ELBOW UP
	90° ELBOW DOWN
	90° TEE UP
	90° TEE DOWN
	UNION
	CAPPED PIPE
	ANCHOR
	FLOAT AND THERMOSTATIC TRAP
PLUMBING SYMBOLS	
	CATCH BASIN
	MANHOLE
	WALL HYDRANT
	HOSE BIBB
	CLEANOUT TO GRADE
	FLOOR CLEANOUT
	WALL CLEANOUT
	1/2 GRATE
	3/4 GRATE
	FULL GRATE

ABBREVIATIONS	
NOTE: ALL ABBREVIATIONS MAY NOT BE USED	
AD ACCESS DOOR	MCA MINIMUM CIRCUIT AMPS
AC AIR CONDITION(-ING,-ED)	MFR MANUFACTURER
APD AIR PRESSURE DROP	MIN MINIMUM
BD BALANCING DAMPER	NA NOT APPLICABLE
BHP BRAKE HORSE POWER	NC NORMALLY CLOSED
BTU BRITISH THERMAL UNIT	NC NOISE CRITERIA
BTU/H BTU/HOUR	NIC NOT IN CONTRACT
CFH CUBIC FEET PER HOUR	NO NORMALLY OPEN
CFM CUBIC FEET PER MINUTE	NPSH NET POSITIVE SUCTION HEAD
CLG COOLING	NTS NOT TO SCALE
COMP COMPONENT	OA OUTSIDE AIR
COND CONDENS(-ER,-ING,-ATION)	OD OUTSIDE DIAMETER
CV CONTROL VALVE	OZ OUNCE
CW COLD WATER	PD PRESSURE DROP
DIA DIAMETER	PG PROPYLENE GLYCOL
DISCH DISCHARGE	PH PHASE
DP DEPTH OR DEEP	PPM PARTS PER MILLION
DB DRY BULB TEMPERATURE	PRESS PRESSURE
(E) EXISTING	PSF POUNDS PER SQUARE FOOT
EER ENERGY EFFICIENCY RATIO	PSI POUNDS PER SQUARE INCH
EFF EFFICIENCY	PSIA PSI ABSOLUTE
EG ETHYLENE GLYCOL	PSIG PSI GAUGE
ELEC ELECTRIC	R THERMAL RESISTANCE
ELEV ELEVATION	RA RETURN AIR
ENT ENTERING	RECIRC RECIRCULATE
EVAP EVAPORAT(-E,-ING,-ED,-OR)	REFR REFRIGERATION
EWT ENTERING WATER TEMP	REQD REQUIRED
EXT EXTERNAL	RPM REVOLUTIONS PER MINUTE
(F) FUTURE	RW RAINWATER
F FAHRENHEIT	SA SUPPLY AIR
FC FLEXIBLE CONNECTION	SC SHADING COEFFICIENT
FD FIRE DAMPER	SCW SOFT COLD WATER
FLA FULL LOAD AMPS	SF SAFETY FACTOR
FPI FINS PER INCH	SH SENSIBLE HEAT
FFM FEET PER MINUTE	SL SEA LEVEL
FFS FEET PER SECOND	SP STATIC PRESSURE
FSD FIRE SMOKE DAMPER	SPEC SPECIFICATION
FT FEET	SQ SQUARE
GAL GALLON(S)	STD STANDARD
GPH GALLONS PER HOUR	STM STEAM
GPM GALLONS PER MINUTE	TEMP TEMPERATURE
HD HEAD	TD TEMP. DROP OR DIFF.
HG MERCURY	TOT TOTAL
HR HOUR	TSTAT THERMOSTAT
HT HEIGHT	V VENT
HTG HEATING	VAC VACUUM
HP HORSE POWER	VAV VARIABLE AIR VOLUME
HW HOT WATER	VEL VELOCITY
HZ HERTZ(FREQUENCY)	VENT VENT, VENTILATION
ID INSIDE DIAMETER	VERT VERTICAL
IN INCH	VOL VOLUME
KW KILOWATT	WC WATER COLUMN
LAT LEAVING AIR TEMPERATURE	WG WATER GAUGE
LBS POUNDS	WPD WATER PRESSURE DROP
LG LENGTH	WTR WATER
LH LATENT HEAT	WT WEIGHT
LRA LOCKED ROTOR AMPS	WB WET BULB TEMP
LVG LEAVING WATER TEMP	
LWT MAXIMUM	
MBH THOUSAND BTU PER HOUR	
SYMBOL LEGEND	
SYMBOL	DESCRIPTION
REFERENCE AND LINE SYMBOLS	
	DETAIL INDICATOR: # INDICATES DETAIL NUMBER, SHEET INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN.
	ROOM OR SPACE NUMBER.
	KEYNOTE INDICATOR.
	REVISION INDICATOR.
	EQUIPMENT INDICATOR.
	PLUMBING FIXTURE INDICATOR.
	DIFFUSER/GRILLE INDICATOR.
	DIFFUSER/GRILLE INDICATOR.
	BREAK, STRAIGHT
	BREAK, ROUND.
	MATCH LINE INDICATOR
	HIDDEN FEATURES LINE: HIDDEN, THIN LINE.
	CONTRACT LIMIT LINE: DASHDOT, WIDE LINE.
	NEW CONNECTION POINT TO EXISTING

PLUMBING SCOPE OF WORK	
DEMOLITION NOTES:	
PLUMBING CONTRACTOR TO UTILIZE SELECTIVE DEMOLITION APPROACH. MANY AREAS INCLUDE PLUMBING EQUIPMENT AND ACCESSORIES LOCATED ABOVE HARDLID CEILINGS OR WITHIN INACCESSIBLE SPACES. FIELD TRACING OF DEMOLITION IS REQUIRED.	
ALL EXISTING PLUMBING FIXTURES AND ACCESSORIES ARE TO BE REMOVED TO ALLOW FOR NEW TENANT SPACES. ALL PLUMBING EQUIPMENT, FIXTURES, PIPING, AND ACCESSORIES THAT ARE CURRENTLY ABANDONED IN PLACE ARE TO BE REMOVED.	
ALL STORM WATER / ROOF DRAINAGE PIPING WITHIN THE BUILDING IS TO REMAIN UNCHANGED.	
EXISTING GAS METERS TO REMAIN. EXISTING GAS PIPING SEGMENTS MAY BE REUSED IF SIZING AND ROUTING ARE SIMILAR TO NEW PIPING LAYOUT. PUBLIC UTILITY COMPANY TO VERIFY NATURAL GAS CAPACITIES AND ASSOCIATED PRESSURES.	
CAP/REPLACE ALL WASTE AND VENT LINES BACK TO NEAREST MAIN TO ALLOW FOR FUTURE CONNECTIONS.	
NEW CONSTRUCTION NOTES:	
NEW WATER ENTRIES WILL BE INSTALLED AS INDICATED ON PLANS.	
ALL DOMESTIC COLD WATER AND FIRE WATER PIPING SEGMENTS EXPOSED TO ENVIRONMENT ARE TO BE INSULATED AND HEAT TRACED FOR FREEZE PROTECTION.	
ALL EXISTING STORM DRAIN TERMINATIONS ARE TO CONNECT TO CIVIL DRAINAGE SYSTEM.	
ALL GREASE WASTE PIPING DESIGNATED TO SERVE FUTURE WARMING KITCHEN WILL TIE INTO NEW GREASE INTERCEPTOR AS SHOWN ON CIVIL DRAWINGS. A VENT LINE FOR THE GREASE INTERCEPTOR WILL BE PROVIDED AND WILL TERMINATE THROUGH ROOF OF BUILDING 'D'.	
THE NEW SYSTEM COMPONENTS WILL ALLOW FOR FUTURE OFFICE AND TEMPORARY RESIDENT SPACES AS INDICATED ON PLANS.	
DOMESTIC WATER, WASTE, AND GREASE WASTE LINES (AS APPLICABLE) WILL BE PROVIDED TO EACH BUILDING AS INDICATED.	
HEATING OF DOMESTIC WATER WILL BE PROVIDED BY INDIVIDUAL BUILDING WATER HEATERS.	
DOMESTIC COLD WATER SUBMETERS TO BE INSTALLED IN EACH BUILDING'S WATER ENTRY ROOM. VERIFY NEED WITH OWNER PRIOR TO INSTALLATION.	

FIRE PROTECTION SCOPE OF WORK	
NEW CONSTRUCTION NOTES:	
NEW FIRE ENTRIES TO BE INSTALLED AS INDICATED ON PLANS.	
FIRE PROTECTION LINES TO BE ROUTED ON WARM SIDE OF BUILDING INSULATION.	
INSTALL FIRE PROTECTION SYSTEM PER NOTES INDICATED ON P02 OF THIS DRAWING SET.	
ALL BREEZEWAY SOFFITS TO INCORPORATE DRY PIPE FIRE PROTECTION SYSTEM FED FROM FIRE ENTRY ROOM PIPING AS REQUIRED.	
IN THE EVENT THAT ROUTING MAY PROVE DIFFICULT DUE TO EXISTING CONDITIONS A DRY-PIPE SYSTEM SHOULD BE EVALUATED. LOCATE AIR COMPRESSOR IN ASSOCIATED FIRE ENTRY ROOM AS REQUIRED.	
SEE SHEET P02 (SPEC SECTION 221316) AND SHEET P13 FOR FURTHER SYSTEM REQUIREMENTS & DETAILS.	
DIVISION 26 CONTRACTOR TO PROVIDE POWER TO ASSOCIATED SYSTEM FLOW SWITCH.	

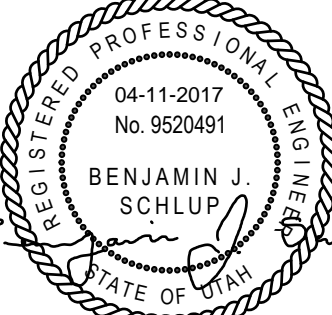
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consultant:



project:

Tenant Finish  
for New  
Brighton  
Recovery  
Campus  
4905, 4911, 4915,  
4925, 4931, & 4953  
South 900 East  
Salt Lake County,  
Utah

date

April 11, 2017

revisions

PERMIT SET-December 28, 2016  
ADDENDUM #1-January 04, 2017  
ADDENDUM #3-January 11, 2017  
ADDENDUM #4-January 17, 2017  
ADDENDUM #5-January 20, 2017  
ADDENDUM#7-February 24, 2017  
ADDENDUM#8 - March 20, 2017  
ADDENDUM#9 - April 11, 2017

data

project no:  
drawn by:  
checked by:

title

PLUMBING  
GENERAL NOTES  
& LEGEND  
sheet

P01

BUILDING 'C'

## PLUMBING SPECIFICATIONS

### 2220100 - BASIC PIPING MATERIALS & METHODS

- CORE CUT ALL PIPE PENETRATION OF EXISTING MASONRY OR CONCRETE WALLS AND FLOORS. SLEEVE ALL PENETRATIONS THROUGH NEW WALLS AND FLOORS. SEAL ALL PENETRATIONS WATER TIGHT WITH SILICONE SEALANT. USE FIRE RATED SEALANT (3M "FIRE BARRIER" OR EQUAL ) FOR 1 HOUR OR 2 HOUR PENETRATIONS.
- CAULK AROUND ALL PIPING THAT PASSES THROUGH FIRE-RATED PARTITIONS WITH A NON-HARDENING CAULKING SIMILAR TO 3M "FIRE BARRIER".
- SEAL ALL PIPING THROUGH WALLS AIR TIGHT.

### 2220533 - HEAT TRACING CABLE

- PROVIDE RAYCHEM ELECTRIC SELF REGULATING HEATING CABLE WITH ALL NECESSARY ACCESSORIES TO MAINTAIN THE TEMPERATURE IN THE TRACED PIPE SYSTEM AT 45°F.
- FOR DOMESTIC HOT WATER USE, THE CABLE SHALL BE DESIGNED, MANUFACTURED AND U.L. LISTED FOR DOMESTIC HOT WATER TEMPERATURE MAINTENANCE.
- CABLE SHALL CONSIST OF TWO (2) 16-AWG NICKEL-COATED COPPER BUS WIRES EMBEDDED IN A RADIATION-CROSSLINKED CONDUCTIVE POLYMER CORE. IT SHALL BE COVERED BY A RADIATION-CROSSLINKED, POLYOLEFIN, DIELECTRIC JACKET SURROUNDED BY A POLYMER-COATED ALUMINUM WRAP, AND ENCLOSED IN A TINNED COPPER BRAID OF 14 AWG EQUIVALENT WIRE SIZE. THE BRAID SHALL BE COVERED WITH A (NOMINAL) 40-MIL POLYOLEFIN OUTER JACKET, COLOR CODED FOR EASY IDENTIFICATION.

### 2220548 - VIBRATION ISOLATION AND SEISMIC

- ALL PLUMBING EQUIPMENT AND PIPING MUST BE VIBRATION ISOLATED AND SEISMICALLY BRACED FOR THE SITE SPECIFIC SEISMIC DESIGN CATEGORY AND SEISMIC USE GROUP, IN ACCORDANCE WITH THE LATEST ADOPTED EDITIONS OF THE BUILDING CODES AND ASHRAE. PROVIDE SEISMIC PRODUCTS BY AMBER-BOOTH OR MASON INDUSTRIES.
- IN GENERAL, PROVIDE SPRING MOUNTS TO ATTENUATE LOW FREQUENCY SOUND AND VIBRATION. PROVIDE NEOPRENE PADS TO ATTENUATE HIGH FREQUENCY SOUND
- VIBRATION: SEISMIC BRACING/MOUNTING CAN BE COMBINED WITH VIBRATION ISOLATION AS APPLICABLE.
- CONTRACTOR MANUFACTURED SEISMIC BRACING/RESTRAINT METHODS ARE NOT ACCEPTABLE.
- PROVIDE A SIGNED AND STAMPED LETTER FROM A PROFESSIONAL ENGINEER CERTIFYING THAT THE SUPPLIED PRODUCTS ARE CORRECT FOR THE APPLICATION AND THAT THE INSTALLATION IS IN COMPLIANCE WITH ALL APPLICABLE CODES.

### 2220719 - INSULATION

- PIPE INSULATION: SNAP-ON GLASS FIBER TYPE WITH VAPOR JACKET. SEAL ALL ENDS AND JOINTS TO PROVIDE COMPLETELY SEALED SYSTEM. ALTERNATIVELY, FOR INTERIOR WATER PIPING, USE FLEXIBLE UNICELLULAR ASTM 534 TYPE 1 INSULATION. USE 1" THICKNESS FOR PIPE UP TO 2"Ø AND 1-1/2" FOR PIPE OVER 2"Ø
- PROVIDE ADA COMPLIANT FIXTURES WITH SNAP ON ADA ARTICLE 4.19 22FF COMPLIANT WHITE INSULATION. TRUEBRO SNV GUARD, BASIN GUARD OR LAV SHIELD.
- THERMAL AND SOUND INSULATION AND COVERING WHICH ARE INSTALLED AND EXPOSED SPACES AND COVERING PIPE AND TUBING SHALL BE TESTED IN ACCORDANCE WITH ASTM E 84 AND HAVE A FLAME SPREAD OF 0-25 AND A SMOKE INDEX OF 0-450.
- THERMAL AND SOUND INSULATION AND COVERING OVER PIPE AND TUBING WHICH ARE INSTALLED IN CONCEALED PLENUM SPACES SHALL BE TESTED IN ACCORDANCE WITH ASTM E 84 AND HAVE A FLAME SPREAD OF 0-25 AND A SMOKE INDEX OF 0-50.

### 2221116 - WATER DISTRIBUTION PIPING

- UNDERGROUND WATER PIPING:  
  
2" AND SMALLER:  
ASTM 88 TYPE "K" COPPER WITH A MINIMUM NUMBER OF SOLDERED JOINTS. USE 95-5 TIN ANTIMONY COPPER SOLDER.  
  
2-1/2" AND LARGER:  
PVC AWWA 900 CLASS 100 WITH SOLVENT CEMENTED JOINTS, OR PB PLASTIC PIPE ASTM D3309 SDR 11 WITH HEAT FUSION JOINTS.
- NO TYPE "M" OR "DWV" COPPER IS TO BE USED IN THIS PROJECT.
- ALL ABOVE GROUND HOT AND COLD WATER PIPING:  
ASTM B 88 TYPE "L" COPPER, WITH WROUGHT COPPER FITTINGS AND SOLDERED WITH 95-5 TIN-ANTIMONY SOLDER.
- INSTALL PIPE HANGERS WITH THE FOLLOWING MINIMUM ROD SIZES AND MAXIMUM SPACING. UPON COMPLETION OF HANGER INSTALLATION, ALL ADJUSTMENTS HAVING THE POSSIBILITY OF TURNING SHALL BE LOCKED SECURELY IN PLACE BY DOUBLE NUTTING AT THE HANGER ROD ATTACHMENT TO THE STRUCTURE, AND AT THE PIPE HANGER.

NOM. PIPE SIZE-INCHES	MAX SPAN-FT.	MIN. ROD SIZE-INCHES
1	7	3/8
1-1/2	9	3/8
2	10	3/8
3	12	1/2
4	14	5/8
6	17	3/4
- ALL PIPE HANGERS AND EQUIPMENT SUPPORTS SHALL BE LOCATED A MINIMUM DISTANCE OF 2" FROM ANY REFRIGERANT PIPE.
- ALL PLUMBING FIXTURES CONNECTED TO A POTABLE WATER SYSTEM WITH HOSE CONNECTIONS ON THE OUTLET SIDE AND OWNER FURNISHED EQUIPMENT WITH DIRECT CONNECTIONS, SHALL BE PROVIDED WITH BACKFLOW PREVENTION.

## PLUMBING SPECIFICATIONS

### 2221316 - DRAINAGE AND VENT SYSTEMS

- UNDERGROUND BUILDING DRAIN PIPE AND FITTINGS:  
A. NO HUB ABS OR PVC PLASTIC PIPE AND FITTINGS PER ASTM D2661 WITH ASTM D2235 SOLVENT OR  
B. ASTM A74 SERVICE WEIGHT, HUB AND SPIGOT CAST IRON SOIL PIPE, OR ASTM A888 (OR CISPI 301) HUBLESS CAST IRON SOIL PIPE WITH ASTM C564 HEAVY DUTY SHIELDED STAINLESS STEEL COUPLINGS.  
  
A. NO ASTM D2729 PIPE SHALL USED UNDERGROUND.
- ABOVE GROUND SANITARY DRAINAGE AND VENT PIPING, IN ALL AREAS EXCEPT AIR PLENUMS AND EXCEPT IN A FIRE RATED BUILDING, SHALL BE ABS TYPE DWV PLASTIC PIPE AND FITTINGS PER ASTM D2661 WITH ASTM D2265 SOLVENT, OR PVC PLASTIC PIPE AND FITTINGS PER ASTM D2665 WITH ASTM D2564 SOLVENT, OR SERVICE WEIGHT, NO HUB CAST IRON COUPLED PIPE AND FITTINGS WITH COMPRESSION TYPE NEOPRENE GASKETS AND STAINLESS STEEL BANDS.
- FORCE SEWER MAINS UP TO 4" SHALL BE TYPE L HARD COPPER TUBE WITH WROUGHT COPPER PRESSURE FITTINGS AND SOLDERED JOINTS, OR DUCTILE IRON PIPE AND FITTINGS WITH MECHANICAL JOINTS.
- ALL SANITARY DRAINAGE AND VENT PIPING INSIDE AIR PLENUMS AND ANYWHERE IN A FIRE RATED BUILDING SHALL BE NO HUB SERVICE WEIGHT CAST IRON COUPLED PIPE AND FITTINGS WITH COMPRESSION TYPE NEOPRENE GASKETS AND STAINLESS STEEL BANDS. ASTM B306 COPPER PIPE MAY BE USED WITH SOLDERED JOINTS FOR PIPE 3" AND SMALLER.
- ABOVE GROUND ROOF DRAIN LINES, EXCEPT IN AIR PLENUMS AND ANYWHERE IN A FIRE RATED BUILDING, SHALL BE ABS TYPE DWV PLASTIC PIPE AND FITTINGS PER ASTM D2661 WITH ASTM D2255 SOLVENT, OR PV C PLASTIC PIPE PER ASTM D2665 WITH ASTM D2564 SOLVENT.
- ALL ROOF DRAIN LINES INSIDE AIR PLENUMS, OR ANYWHERE IN A FIRE RATED BUILDING, SHALL BE SERVICE WEIGHT CAST IRON PIPE TO CISPI STANDARD 301.
- ALL ROOF DRAIN LINES SHALL BE FULLY INSULATED.
- OVERFLOW ROOF DRAINS SHALL DAYLIGHT 18" ABOVE THE SURROUNDING HORIZONTAL AREA.
- INSTALL SANITARY DRAIN LINES 2-1/2" AND LESS WITH A SLOPE OF 2%. INSTALL SANITARY DRAIN LINES 3"-6" WITH A SLOPE OF NOT LESS THAN 1%.
- SLOPE ROOF DRAIN LINES DOWN IN DIRECTION OF FLOW, 1/8" PER FOOT (1%).
- CLEANOUTS  
  
A. FINISHED WALL CLEANOUTS: SMITH FIGURE 4472 COMPLETE WITH CAST BRONZE TAPER THREADED PLUG, STAINLESS STEEL COVER AND SCREW.  
B. FLOOR CLEANOUTS (UNFINISHED AREAS): SMITH FIGURE 4223 DUCO CAST IRON CLEANOUT WITH ROUND ADJUSTABLE SCORIATED SECURED CAST IRON TOP, TAPER THREADED BRONZE PLUG AND SPIGOT OUTLET.  
C. FINISHED FLOOR CLEANOUTS (CONCRETE FLOORS): SMITH FIGURE 4023 DUCO CAST IRON CLEANOUT WITH ADJUSTABLE SCORIATED SECURED NICKEL BRONZE TOP, TAPER THREADED CAST BRONZE PLUG AND SPIGOT OUTLET.  
D. FINISHED FLOOR CLEANOUTS (CARPETED FLOORS): SMITH FIGURE 4023-Y SAME AS CONCRETE FLOORS WITH CARPET MARKER  
E. FINISHED FLOOR CLEANOUTS (TILE FLOORS): SMITH FIGURE 4163 DUCO CAST IRON CLEANOUT WITH SQUARE ADJUSTABLE SECURED NICKEL BRONZE TOP WITH 1/8" RECESS, TAPER THREADED BRONZE PLUG AND SPIGOT OUTLET.  
F. EXTERIOR CLEANOUTS (CLEANOUT TO GRADE): SMITH FIGURE 4253 DUCO CAST IRON CLEANOUT AND DOUBLE FLANGED HOUSING WITH HEAVY DUTY SECURED SCORIATED CAST IRON COVER WITH LIFTING DEVICE, TAPER THREADED BRONZE PLUG AND SPIGOT OUTLET.
- FLOOR DRAINS:  
  
FD-1 FLOOR DRAIN: SMITH FIGURE 2010-BP CAST IRON BODY AND FLASHING COLLAR WITH PROTECTIVE CAP AND SQUARE NICKEL BRONZE ADJUSTABLE STRAINER HEAD WITH SECURED SQUARE HOLE GRATE, AND TRAP PRIMER CONNECTION.  
  
FD-2 MECHANICAL ROOM DRAIN: SMITH FIGURE 2110-NB MEDIUM DUTY FLOOR DRAIN. CAST IRON BODY AND FLASHING COLLAR WITH NICKEL BRONZE BAR GRATE.
- ROOF DRAINS (AS REQUIRED IF REPLACEMENT IS NECESSARY)  
  
RD-1 ROOF DRAIN: SMITH FIGURE 1010-ERC CAST IRON BODY WITH COMBINED FLASHING CLAMP AND CAST IRON GRAVEL STOP, CAST IRON DOME, EXTENSION, SUMP RECEIVER AND UNDERDECK CLAMP.  
  
ORD-1 OVERFLOW ROOF DRAIN: SMITH FIGURE 1080-ERC CAST IRON BODY WITH FLASHING CLAMP, GRAVEL STOP, CAST IRON DOME, 2" HIGH CAST IRON WATER COLLAR, EXTENSION, SUMP RECEIVER AND UNDERDECK CLAMP.  
  
DSN-1 DOWNSPOUT NOZZLE: SMITH FIGURE 1770 DOWNSPOUT NOZZLE. CAST BRONZE BODY AND FLANGE. PROVIDE BRONZE BOLTS TO SECURE NOZZLE TO WALL. INSTALL 12" ABOVE FOUNDATION UNLESS NOTED OTHERWISE.
- FIRE/WATER ENTRIES  
  
FIRE ENTRY: WATTS 757DCDA OSY OR EQUAL. DOUBLE CHECK DETECTOR ASSEMBLY. TWO INDEPENDENTLY OPERATING TRI-LINK CHECK VALVES, TWO SHUTOFF VALVES, AND FOUR TEST COCKS. STAINLESS STEEL HOUSING AND SLEEVE. MAXIMUM WORKING PRESSURE: 175PSI. PROVIDE FLOW SWITCH WITH LINE VOLTAGE POWER.  
  
DOMESTIC WATER ENTRY: WATTS LF909 OR EQUAL. LEAD FREE REDUCED PRESSURE ZONE ASSEMBLY. HORIZONTAL OR VERTICAL (UP OR DOWN) INSTALLATION. TEMPERATURE RANGE: 33°F - 140°F. MAXIMUM WORKING PRESSURE: 175PSI. TEMPERATURE RANGE: 33°F - 210°F. MAXIMUM WORKING PRESSURE: 175PSI (FOR MAIN SERVICE WATER ENTRY APPLICATIONS)  
  
DOMESTIC WATER DOUBLE CHECK: WATTS LF719 OR EQUAL. LEAD FREE DOUBLE CHECK VALVE ASSEMBLY. SEPARATE ACCESS, TOP ENTRY CHECK VALVE, REVERSIBLE SEAT DISC RUBBER, VALVE TEST COCKS, TEMPERATURE RANGE: 33°F - 180°F. MAXIMUM WORKING PRESSURE: 175PSI (FOR APPLICATIONS DOWNSTREAM OF WATER ENTRY PRESSURE REDUCING VALVE)

## PLUMBING SPECIFICATIONS

### 2221613 - NATURAL GAS SYSTEMS

- NATURAL GAS PIPING ABOVE GROUND OR INSIDE BUILDINGS: SCHEDULE 40 BLACK STEEL WITH WELDED OR MALLEABLE IRON FITTINGS.
- UNDERGROUND GAS PIPE: EITHER POLYETHYLENE ASTM D2513, OR SCHEDULE 40 BLACK STEEL PRIMED AND WRAPPED IN ACCORDANCE WITH LOCAL GAS COMPANY REQUIREMENTS.
- GAS MAINS INSIDE BUILDINGS ARE SIZED FOR 2 PSIG PRESSURE. LOCATE PRESSURE REGULATORS AS SHOWN ON THE DRAWINGS TO REDUCE PRESSURE FROM 2 PSIG TO 7" W.G. PROVIDE FULL SIZE VENT LINES FROM GAS PRESSURE REGULATORS AND EXTEND TO OUTSIDE OR THROUGH ROOF. FLASH PENETRATIONS AND MAKE WATER TIGHT. INSTALL VENTLESS GAS REGULATOR AS ALTERNATE.
- PROVIDE GAS SHUT OFF VALVE AT EACH PIECE OF GAS UTILIZING EQUIPMENT.
- THE EQUIPMENT INSTALLER SHALL APPLY AND SIGN A CERTIFICATION LABEL TO EACH GAS-FIRED APPLIANCE, STATING THE APPLIANCE HAS BEEN ADJUSTED OR MODIFIED PER MANUFACTURER'S REQUIREMENTS FOR OPERATION AT THE PROJECT ALTITUDE AND WITH THE BTU-CONTENT OF THE AVAILABLE FUEL-GAS.

### 223000 - WATER HEATERS

- INSTALL UNITS PLUMB AND LEVEL AND FIRMLY ANCHORED PER SEISMIC REQUIREMENTS. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES. ORIENT SO CONTROLS AND DEVICES NEEDING SERVICING ARE ACCESSIBLE.
- CONNECT HOT AND COLD WATER PIPING TO UNITS WITH SHUT-OFF VALVES AND UNIONS. CONNECT HOT WATER CIRCULATING PIPING TO UNIT WITH SHUT-OFF VALVE, CHECK VALVE AND UNION.
- USE DIELECTRIC FITTINGS AND UNIONS WHERE PIPING CONNECTIONS ARE DISSIMILAR METALS.
- INSTALL VACUUM RELIEF VALVE IN COLD WATER INLET PIPING. EXTEND RELIEF VALVE DISCHARGE TO CLOSEST FLOOR DRAIN. INSTALL DRAIN AS INDIRECT WASTE TO SPILL INTO OPEN DRAIN OR OVER FLOOR DRAIN.
- PROVIDE AND INSTALL EXPANSION TANK AS SCHEDULED IN DRAWINGS.  
  
EXPANSION TANK: DIAPHRAGM TYPE, PRE- PRESSURIZED STEEL TANK WITH RELIEF VALVE SETTING @ 120 PSI MAXIMUM PRESSURE.
- CONNECT GAS SUPPLY PIPING TO BURNER WITH DRIP LEG, TEE, GAS COCK, AND UNION, MINIMUM SIZE SAME AS INLET CONNECTION. INSTALL GAS PRESSURE REGULATORS WHERE INDICATED.
- CONNECT OIL PIPING TO OIL BURNER WITH SHUT-OFF VALVE AND UNION IN SUPPLY AND CHECK VALVE AND UNION IN RETURN PIPING.
- ELECTRICAL CONNECTIONS: POWER WIRING AND DISCONNECT SWITCHES ARE SPECIFIED IN DIVISION 16. CONNECT UNIT COMPONENTS TO GROUND IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
- VENT CONNECTIONS: CONNECT GAS FIRED WATER HEATER DRAFT HOOD TO VENT SYSTEM, UNLESS OTHERWISE INDICATED, PROVIDE VENT SAME SIZE AS OUTLET ON HEATER. COMPLY WITH GAS UTILITY REQUIREMENTS.
- CONNECT OIL-FIRED WATER HEATER VENT AND DRAFT REGULATOR TO VENT SYSTEM. PROVIDE VENT AND DRAFT REGULATOR SAME SIZE AS OUTLET ON HEATER.
- PROVIDE SEALED COMBUSTION SYSTEMS WITH CONNECTIONS FOR OUTSIDE COMBUSTION AIR.
- PROVIDE CONCENTRIC VENT TERMINATION KIT FOR ROOF OR WALL APPLICATIONS.
- PROVIDE PVC COMBUSTION AIR AND VENT PIPING FROM WATER HEATER TO TERMINATION KIT.
- PROVIDE CONDENSATE DRAIN FROM WATER HEATER OR VENT AS REQUIRED.

## PLUMBING SPECIFICATIONS

### 2224213 - PLUMBING FIXTURES

- PROVIDE AND INSTALL CARRIERS AS REQUIRED FOR FLOOR OR WALL MOUNTED PLUMBING FIXTURES. INSTALL ALL FIXTURES WITH ACCESSORIES AS REQUIRED TO PROVIDE A COMPLETE, WORKABLE INSTALLATION.
- PLUMBING FIXTURES SHALL INCLUDE COMPRESSION STOPS ABOVE FLOOR IN SUPPLIES TO ALL FIXTURES AND A MINIMUM 17 GAUGE P-TRAP.
- ALL LAVATORIES AND HAND SINKS WILL HAVE A COMBINATION FAUCET OR PREMIXING FAUCET CAPABLE OF SUPPLYING WARM WATER FOR A MINIMUM OF 10 SECONDS.
- ALL JANITORIAL SINK FAUCETS MUST BE PROVIDED WITH AN APPROVED BACKFLOW PREVENTION DEVICE.
- FLOOR DRAINS AND FLOOR SINKS ARE SHOWN IN THE APPROXIMATE LOCATION. COORDINATE FINAL LOCATION WITH EQUIPMENT AND DRAINAGE REQUIREMENTS. PROVIDE BLOCKOUTS AS NECESSARY.

## PENETRATION FIRESTOPPING NOTES

- CONTRACTOR SHALL REVIEW CONSTRUCTION DOCUMENTS AND PROVIDE SPECIFIC FIRESTOPPING DETAILS FROM A SPECIFIC FIRESTOPPING MANUFACTURER FOR EACH MECHANICAL (HVAC) AND PLUMBING PIPE OR DUCT PENETRATION FOR EACH FIRE RATED ASSEMBLY.
- PROVIDE PENETRATION FIRESTOPPING THAT IS PRODUCED AND INSTALLED TO RESIST SPREAD OF FIRE ACCORDING TO REQUIREMENTS INDICATED, RESIST PASSAGE OF SMOKE AND OTHER GASES, AND MAINTAIN ORIGINAL FIRE-RESISTANCE RATING OF CONSTRUCTION PENETRATED.
- PENETRATION FIRESTOPPING SYSTEMS SHALL BE COMPATIBLE WITH ONE ANOTHER, WITH THE SUBSTRATES FORMING OPENINGS, AND WITH PENETRATING ITEMS IF ANY.
- PENETRATIONS IN FIRE-RESISTANCE-RATED WALLS: PROVIDE PENETRATION FIRESTOPPING WITH RATINGS DETERMINED PER ASTM E 814 OR UL 1479, BASED ON TESTING AT A POSITIVE PRESSURE DIFFERENTIAL OF 0.01-INCH WG
- PENETRATION FIRESTOPPING PRODUCTS SHALL BEAR UL, ETL OR FM GLOBAL CLASSIFICATION MARKING OF QUALIFIED TESTING AND INSPECTING AGENCY.
- DO NOT INSTALL PENETRATION FIRESTOPPING WHEN AMBIENT OR SUBSTRATE TEMPERATURES ARE OUTSIDE LIMITS PERMITTED BY PENETRATION FIRESTOPPING MANUFACTURERS OR WHEN SUBSTRATES ARE WET BECAUSE OF RAIN, FROST, CONDENSATION, OR OTHER CAUSES.
- COORDINATE CONSTRUCTION OF OPENINGS AND PENETRATING ITEMS TO ENSURE THAT PENETRATION FIRESTOPPING IS INSTALLED ACCORDING TO SPECIFIED REQUIREMENTS.
- COORDINATE SIZING OF SLEEVES, OPENINGS, CORE-DRILLED HOLES, OR CUT OPENINGS TO ACCOMMODATE PENETRATION FIRESTOPPING.
- INSTALL PENETRATION FIRESTOPPING TO COMPLY WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS AND PUBLISHED DRAWINGS FOR PRODUCTS AND APPLICATIONS INDICATED.
- INSTALL FORMING MATERIALS AND OTHER ACCESSORIES OF TYPES REQUIRED TO SUPPORT FILL MATERIALS DURING THEIR APPLICATION AND IN THE POSITION NEEDED TO PRODUCE CROSS-SECTIONAL SHAPES AND DEPTHS REQUIRED TO ACHIEVE FIRE RATINGS INDICATED.
- IDENTIFY PENETRATION FIRESTOPPING WITH PREPRINTED METAL OR PLASTIC LABELS. ATTACH LABELS PERMANENTLY TO SURFACES ADJACENT TO AND WITHIN 6 INCHES OF FIRESTOPPING EDGE SO LABELS WILL BE VISIBLE TO ANYONE SEEKING TO REMOVE PENETRATING ITEMS OR FIRESTOPPING.

## FIRE SPRINKLER SYSTEM REQUIREMENTS (NFPA-13)

THESE DRAWINGS AND SPECIFICATIONS ARE FOR THE FIRE PROTECTION CONTRACTOR TO ENGINEER, DESIGN, BID AND INSTALL A COMPLETE AND OPERATIONAL FIRE PROTECTION SYSTEM, PER THE DESIGN INTENT AS SHOWN.

- CONTRACTOR TO PROVIDE A HYDRAULICALLY-DESIGNED, FUSIBLE LINK, FULLY SPRINKLED, WET PIPE FIRE PROTECTION SYSTEM FOR BUILDING SPACES NOT SUBJECT TO FREEZING.
- CONTRACTOR TO PROVIDE A HYDRAULICALLY-DESIGNED, FUSIBLE LINK, FULLY SPRINKLED, DRY PIPE OR GLYCOL FIRE PROTECTION SYSTEM. BUILDING SPACES SUBJECT TO FREEZING, INCLUDING PARKING GARAGES, ENTRANCE CANOPIES AND OVERHANGS.
- ALL DESIGN SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED EDITIONS OF THE BUILDING CODE, FIRE CODE, MECHANICAL CODE, PLUMBING CODE, AND ANY OTHER LOCAL, STATE OR FEDERAL REGULATIONS AND CODES, AS WELL AS INSTRUCTIONS FROM THE AUTHORITY HAVING JURISDICTION.
- SUBMIT FIRE PROTECTION LAYOUT DRAWINGS AND CALCULATIONS TO THE ENGINEER FOR GENERAL APPROVAL OF SYSTEM LAYOUT, LOCATION OF COMPONENTS ETC. THEN SUBMIT TO THE FIRE MARSHALL HAVING JURISDICTION AND OBTAIN APPROVAL. CONTRACTOR TO PAY ALL PERMIT/APPROVAL/PLAN/CHECK FEES AND COSTS INVOLVED.
- SYSTEM DESIGN SHALL BE BASED ON THE FOLLOWING CRITERIA:
  - LIGHT HAZARD IN ALL AREAS, EXCEPT ORDINARY HAZARD GROUP 1 IN THE KITCHEN AREA.
  - DESIGN THE SYSTEM USING THE AREA/DENSITY METHOD IN NFPA 13.
  - FLOW TEST DATA TO BE DETERMINED BY THE FIRE PROTECTION CONTRACTOR.
- PROVIDE COVERAGE FOR A SINGLE FIRE ZONE.
- PROVIDE INSPECTOR'S TEST CONNECTION IN A LOCATION APPROVED BY THE OWNER AND THE FIRE MARSHALL.
- DUE CONSIDERATION SHALL BE GIVEN TO THE LOCATION OF BUILDING ELEMENTS, (I.E. BEAMS, COLUMNS, LIGHT FIXTURES, ETC.) IN DETERMINING SPRINKLER HEAD SPACING AND ARRANGEMENT. THE STRUCTURE SHOWN ON ALL DETAILS MAY OR MAY NOT PERTAIN TO A PORTION OR ANY PORTION OF THE BUILDING. COORDINATE MOUNTING REQUIREMENTS WITH ARCHITECTURAL DRAWINGS AND STRUCTURAL.
- ALL EQUIPMENT, PIPING, COMPONENT, AND ACCESSORY SIZES, CAPACITIES AND TYPES SHOWN IN THESE DRAWINGS AND SPECIFICATIONS SHALL BE ADHERED TO.
- AUXILIARY DRAINS SHALL BE INCLUDED AS NECESSARY TO DRAIN ALL SPRINKLER SYSTEM DISTRIBUTION LINES AND BRANCHES DOWNSTREAM OF THE RISER CHECK VALVE.
- AUTOMATIC AIR RELEASE VALVES SHALL BE FURNISHED AS NECESSARY TO VENT THE DRY PIPE SPRINKLER SYSTEM. THE VALVES SHALL BE MADE SEPARABLE FROM THE SYSTEM WITH APPROPRIATELY SIZED GATE VALVES.
- THE CONTRACTOR SHALL THOROUGHLY TEST, DISINFECT, AND FLUSH THE PIPING SYSTEM ACCORDING TO APPLICABLE CODES AND STANDARDS.
- ANY DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONNECTIONS REQUIRED FOR INSTALLATION.
- REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL BUILDING INFORMATION SUCH AS ATTIC SPACES, CONSTRUCTION MATERIALS, SPECIAL USE SPACES, BUILDING SECTIONS, ETC.
- SPRINKLER HEADS:
  - SPRINKLER HEADS FOR LIGHT HAZARD CLASSIFICATION SHALL BE QUICK RESPONSE TYPE PER NFPA 13. ALL OTHER CLASSIFICATIONS SHALL BE STANDARD RESPONSE TYPE.
  - GENERAL: ALL HEADS SHALL BE FACTORY MUTUAL APPROVED FOR APPLICATION AND INSTALLATION. WET OR DRY TYPE AS REQUIRED. CEILING ESCUTCHEONS MAY BE PLASTIC OR METAL 2 PIECE TYPE
  - EXPOSED HEADS IN CEILING: SEMI-RECESSED TYPE WITH SATIN CHROME-PLATED ESCUTCHEON OR CUP. WHEREVER HEADS ARE ADJACENT TO SURFACE-MOUNTED LIGHTS OR OBSTRUCTIONS, USE EXTENDED PENDENT HEAD WITH SHALLOW FRICTION ADJUSTABLE ESCUTCHEON WITH SATIN CHROME-PLATED FINISH. COORDINATE EXTENDED PENDENT HEAD USE WITH ARCHITECT PRIOR TO PURCHASE OR INSTALLATION.
- EXPOSED HEADS IN SOLID CEILINGS: SEMI-RECESSED TYPE WITH SHALLOW FRICTION ADJUSTABLE ESCUTCHEON WITH SATIN CHROME-PLATED FINISH.
- EXPOSED HEADS IN FINISHED METAL CEILING AREAS: SEMI-RECESSED TYPE WITH SATIN BRASS-PLATED ESCUTCHEON CUP, OF COLOR MATCH METAL CEILING.
- CONCEALED HEADS AND THOSE AREAS WITHOUT CEILINGS: UPRIGHT OR PENDANT TYPE WITH ROUGH BRASS FINISH.
- SPRINKLER HEADS IN ALL AREAS SHALL OPEN AT 160°-165°F, EXCEPT THAT HEADS IN BAKERY, DELI, ELECTRICAL TRANSFORMER ROOMS, AND PHONE/EMS ROOMS SHALL BE RATED AT 212°F.
- HEADS IN FREEZER/COOLER BOXES SHALL BE DRY PENDANT TYPE, AND SHALL BE OF COLOR TO MATCH CEILING.
- PENDANT HEADS ON DRY SPRINKLER SYSTEM SHALL BE DRY PENDANT TYPE AND SHALL BE OF COLOR TO MATCH CEILING.
- LEGEND:

→ UPRIGHT

● PENDENT

⦿ DRY PENDENT
- RECORD DESIGN DRAWINGS SHOWING ALL EQUIPMENT, COMPONENTS, PIPING AND CONTROLS SHALL BE PREPARED TO THE SAME SCALE AS THESE DRAWINGS. DRAWINGS SHALL BE ON MYLAR AND BE DRAWN IN AUTOCAD. DISK COPIES SHALL BE PROVIDED TO THE OWNER AND ARCHITECT/ENGINEER.
- DESIGN FOR SEISMIC DESIGN CATEGORY AND SEISMIC USE GROUP, IN ACCORDANCE WITH THE LATEST ADOPTED EDITIONS OF THE IBC, UBC, ASHRAE, AND SMACNA.
- CONTRACTOR SHALL LOCATE P.I.V., RISERS, INCOMING SERVICE, ZONE VALVES AND FEED AND BRANCH MAINS IN LOCATIONS SHOWN ON THESE DRAWINGS.
- THE WORKING DRAWINGS ARE DIAGRAMMATIC. BECAUSE OF THE SMALL SCALE OF THE DRAWINGS, THEY DO NOT SHOW EVERY OFFSET, BEND OR ELBOW NECESSARY FOR THE COMPLETE INSTALLATION IN THE SPACE PROVIDED. ALL LOCATIONS FOR FIRE PROTECTION ITEMS SHALL BE CHECKED AND COORDINATED WITH THE ARCHITECTURAL, MECHANICAL, STRUCTURAL, AND ELECTRICAL DRAWINGS.
- THE FIRE PROTECTION CONTRACTOR DOES NOT HAVE PRIORITY ON PIPE ROUTING. ALL PIPING TO BE FULLY COORDINATED WITH ALL HVAC, PLUMBING, ELECTRICAL, AND ARCHITECTURAL REQUIREMENTS AND TRADES. RESOLVE POTENTIAL CONFLICTS BEFORE PROCEEDING WITH INSTALLATION. IN ALL CASES, GRADED PIPE RUNS TAKE FIRST PRIORITY ON ROUTING. GENERALLY, DUCTWORK TAKES SECOND PRIORITY.
- UPON COMPLETION OF THE WORK, REMOVE ALL SURPLUS MATERIALS AND RUBBISH. MAKE ALL REQUIRED PATCHING AND REPAIRS OF OTHER TRADES' WORK DAMAGED BY THIS CONTRACTOR, AND LEAVE THE PREMISES IN A CLEAN, ORDERLY CONDITION.
- THE CONTRACTOR SHALL GUARANTEE THE ENTIRE FIRE PROTECTION SYSTEM FOR A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.
- ALL ALLOWABLE SPRINKLER SYSTEM COMPONENTS SHALL BE PRIMED AND PAINTED RED, SYSTEM COMPONENTS WHICH MAY BE INACCESSIBLE AFTER INSTALLATION SHALL BE PAINTED BEFORE INSTALLATION.
- IN AREAS WITH LAY-IN CEILINGS. LOCATE HEADS IN THE CENTER OF THE CEILING TILE. PROVIDE ALL NECESSARY ELBOWS IN BRANCH LINES, TO ACHIEVE THIS.

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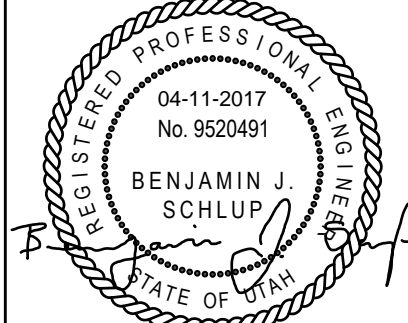


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Brighton  
Recovery  
Campus  
4905, 4911, 4915,  
4925, 4931, & 4953  
South 900 East  
Salt Lake County,  
Utah

date

April 11, 2017

revisions

PERMIT SET--December 28, 2016  
Δ ADDENDUM #1--January 04, 2017  
Δ ADDENDUM #3--January 11, 2017  
Δ ADDENDUM #4--January 17, 2017  
Δ ADDENDUM #5--January 20, 2017  
Δ ADDENDUM #7--February 24, 2017  
Δ ADDENDUM #8 -- March 20, 2017  
Δ ADDENDUM #9 -- April 11, 2017

data

project no:

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PLUMBING  
EQUIPMENT  
SPECIFICATIONS  
sheet

P02

BUILDING 'C'



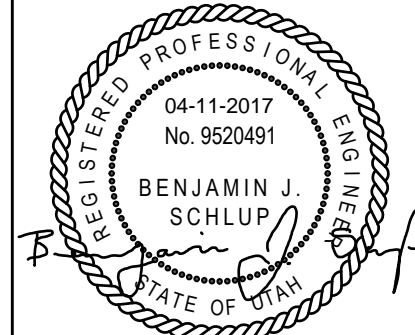


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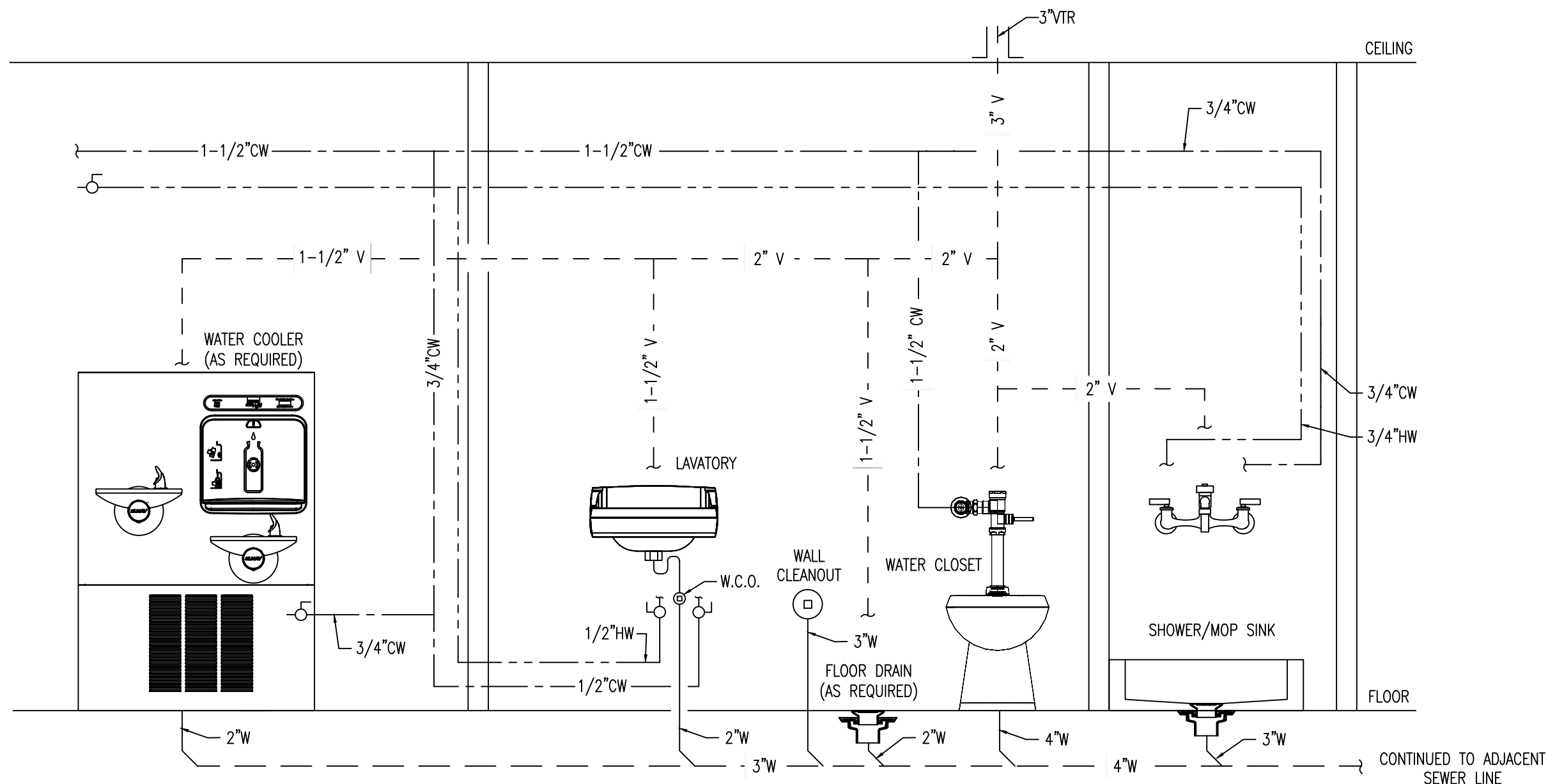
PLUMBING  
SCHEDULES &  
DETAILS  
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P11

BUILDING 'C'

PLUMBING FIXTURE SCHEDULE (COORDINATE MOUNTING HEIGHTS WITH ARCH. PLANS)

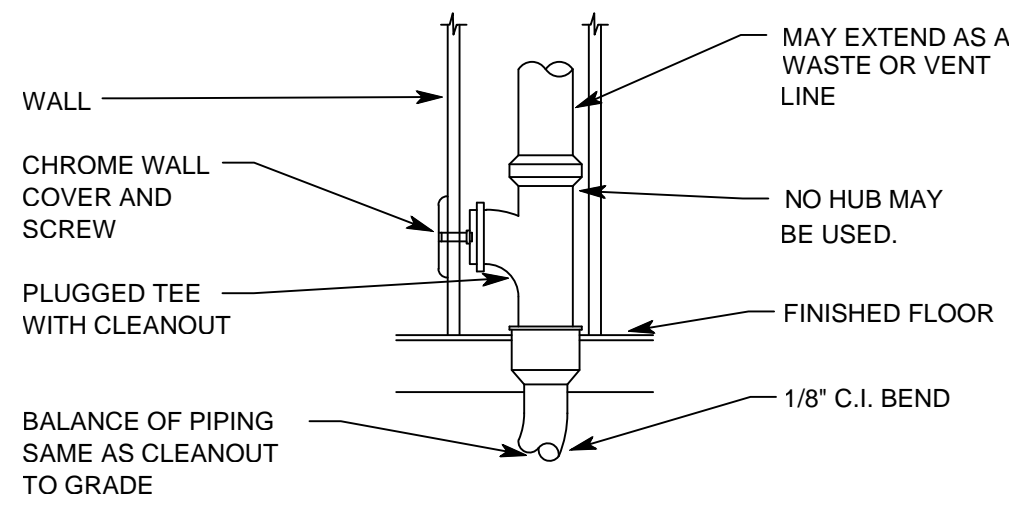
SYMBOL	FIXTURE	MANUFACTURER AND MODEL NO.	COLD WATER	HOT WATER	WASTE	VENT	ACCESSORIES AND REMARKS
FD-1 FD-2	FLOOR DRAINS	SEE P02 (SPEC SECTION 221316)	-	-	2" OR 4"	1-1/2" OR 3"	REFERENCE SHEET P02. FLOOR DRAINS IN FINISHED SPACES TO BE FD-1 (2"). ALL WATER ENTRY DRAINS TO BE FD-2 (4"). INSTALL PROVENT TRAP GUARD OR EQUAL IN EACH DRAIN TYPE.
FIRE & DOMESTIC WATER ENTRIES DOUBLE CHECK & BACKFLOW DEVICES			SEE P02 (SPEC SECTION 221316)	SEE REMARKS	-	-	REFERENCE SHEET P02. MAKE/MODELS FOR FIRE/WATER ENTRY BACKFLOW PREVENTER AND DOUBLE CHECK DETECTOR ASSEMBLIES INDICATED. 4" FIRE ENTRY LINE WHERE INDICATED. BUILDINGS C & D TO INCORPORATE A 1-1/2" WATER SERVICE. BUILDINGS A, B, E, F TO HAVE 2" DOMESTIC WATER SERVICE. LOCATE FIRE CONTROL PANEL AT EACH FIRE ENTRY. <u>ELECTRICAL:</u> PROVIDE LINE VOLTAGE POWER (115V CIRCUITS) TO FIRE ENTRY FLOW SWITCH & AIR COMPRESSOR
SH-1	SHOWER (ADA) (FLOOR MOUNTED)	SEE ARCHITECTURAL	1/2"	1/2"	2"	1-1/2"	REFERENCE ARCHITECTURAL SHEET A6.1A. SPECIFICATIONS FOR SHOWER INSERT, DRAIN, SHOWERHEAD, VALVES, & ASSOCIATED ACCESSORIES ARE INDICATED.
GWH-1	GAS WATER HEATER (FLOOR MOUNTED)	BRADFORD WHITE EF-100T-300E-3N(A)	1-1/2"	1-1/2"	-	-	COMMERCIAL ULTRA HIGH EFFICIENCY GAS WATER HEATER. 92% THERMAL EFFICIENCY. DIRECT SPARK IGNITION. 300 MBH INPUT. 3/4" GAS CONNECTION. 100 GALLON CAPACITY. 335 GPH RECOVERY @ 100°F. DISCHARGE T&P VALVE INTO MOP SINK OR FLOOR DRAIN. PROVIDE 4.4 GALLON EXPANSION TANK (AMTROL EX-30 OR EQUAL). PROVIDE SEISMIC WATER HEATER STRAPS. DIMENSIONS: 77-5/8" H X 28-1/4" DIA. 900 LB SHIPPING WEIGHT. PROVIDE 4" (PVC, CPVC, OR ABS) VERTICAL VENTING. TERMINATE THROUGH ROOF WITH CONCENTRIC VENT KIT PER MANUFACTURER'S RECOMMENDATIONS. <u>ELECTRICAL:</u> 115V AC REQUIRED.
GWH-2	GAS WATER HEATER (FLOOR MOUNTED)	BRADFORD WHITE EF-100T-250E-3N(A)	1-1/2"	1-1/2"	-	-	COMMERCIAL ULTRA HIGH EFFICIENCY GAS WATER HEATER. 97% THERMAL EFFICIENCY. DIRECT SPARK IGNITION. 250 MBH INPUT. 3/4" GAS CONNECTION. 100 GALLON CAPACITY. 294 GPH RECOVERY @ 100°F. DISCHARGE T&P VALVE INTO MOP SINK OR FLOOR DRAIN. PROVIDE 4.4 GALLON EXPANSION TANK (AMTROL EX-30 OR EQUAL). PROVIDE SEISMIC WATER HEATER STRAPS. DIMENSIONS: 77-5/8" H X 28-1/4" DIA. 900 LB SHIPPING WEIGHT. PROVIDE 4" (PVC, CPVC, OR ABS) VERTICAL VENTING. TERMINATE THROUGH ROOF WITH CONCENTRIC VENT KIT PER MANUFACTURER'S RECOMMENDATIONS. <u>ELECTRICAL:</u> 115V AC REQUIRED.
GWH-3	GAS WATER HEATER (FLOOR MOUNTED)	BRADFORD WHITE LG2PDV50H603N	3/4"	3/4"	-	-	LIGHT DUTY COMMERCIAL POWER DIRECT VENT GAS WATER HEATER. 60 MBH INPUT. 1/2" GAS CONNECTION. 48 GALLON CAPACITY. 58 GPH RECOVERY @ 100°F. DISCHARGE T&P VALVE INTO MOP SINK OR FLOOR DRAIN. PROVIDE 2.1 GALLON EXPANSION TANK (WATTS PLT-5 OR EQUAL). PROVIDE SEISMIC WATER HEATER STRAPS. DIMENSIONS: 67" H X 22" DIA. 205 LB SHIPPING WEIGHT. PROVIDE 3" (PVC, CPVC, OR ABS) VERTICAL VENTING. TERMINATE THROUGH ROOF WITH CONCENTRIC VENT KIT PER MANUFACTURER'S RECOMMENDATIONS. <u>ELECTRICAL:</u> 110 VAC REQUIRED FOR POWER VENTING (3.1 AMPERES)
GWH-4	GAS WATER HEATER (FLOOR MOUNTED)	BRADFORD WHITE EF-60T-199E-3N(A)	1-1/2"	1-1/2"	-	-	COMMERCIAL ULTRA HIGH EFFICIENCY GAS WATER HEATER. 92% THERMAL EFFICIENCY. DIRECT SPARK IGNITION. 199 MBH INPUT. 3/4" GAS CONNECTION. 60 GALLON CAPACITY. 223 GPH RECOVERY @ 100°F. DISCHARGE T&P VALVE INTO MOP SINK OR FLOOR DRAIN. PROVIDE 4.4 GALLON EXPANSION TANK (AMTROL EX-30 OR EQUAL). PROVIDE SEISMIC WATER HEATER STRAPS. DIMENSIONS: 67" H X 22" DIA. 205 LB SHIPPING WEIGHT. PROVIDE 3" (PVC, CPVC, OR ABS) VERTICAL VENTING. TERMINATE THROUGH ROOF WITH CONCENTRIC VENT KIT PER MANUFACTURER'S RECOMMENDATIONS. <u>ELECTRICAL:</u> 115V AC REQUIRED.
HWCP-1	HOT WATER CIRCULATION PUMP	GRUNDFOS UP10-16BN5/TLC	-	1/2"	-	-	RECIRCULATION PUMP WITH MANUAL TIMER TO ALLOW FOR OPERATION DURING BUSINESS HOURS. INTEGRAL CHECK VALVE. <u>ELECTRICAL:</u> 115V PLUG IN TYPE. (6 FT LINE CORD)
HWCP-2	HOT WATER CIRCULATION PUMP	GRUNDFOS UP25-64SF	-	1/2"	-	-	RECIRCULATION PUMP. INTEGRAL CHECK VALVE. 5 GPM @ 15 FT HEAD, INTEGRAL CHECK VALVE. <u>ELECTRICAL:</u> 115V PLUG IN TYPE. (6 FT LINE CORD) 1/12 HP, 1.7 AMPS
MSB-1	MOP SINK BASIN	FLORESTONE MSR-2424	3/4"	3/4"	3"	1-1/2"	MOLDED MOP RECEPTOR. 24X24, 10" DEPTH. 18 GAUGE SS DRAIN GRID (#430). KOHLER K-8928. SERVICE SINK FAUCET, 3" THREADED THREADED SPOUT FOR HOSE CONNECTION, RUBBER HOSE WITH WALL HOOK. LEVER HANDLES
FS-1	FLOOR SINK	ZURN FD2375 (OR APPROVED EQUAL)	-	-	3"	1-1/2"	ENAMELED CAST IRON, ACID RESISTANT, DOME STRAINER, FULL GRATE
WM-1 WM-2	WATER METER (SUB-METERING)	BADGER RECORDALL MODEL M120 & M170 (OR APPROVED EQUAL)	-	1-1/2" 2"	-	-	LEAD FREE BRONZE ALLOW DISC METER (MATCH BUILDING WATER ENTRY SIZE 1-1/2" OR 2"), COMPLIES WITH AWWA STANDARD C700. 150 PSI MAX OPERATING PRESSURE.
BFP-1	BACKFLOW PREVENTER	WATTS MODEL SD-2 (OR APPROVED EQUAL)	1/2"	-	-	-	BACKFLOW PREVENTER FOR CARBONATED BEVERAGE MACHINES. DUAL CHECK DESIGN FOR PROTECTION OF WATER SUPPLY FROM CARBON DIOXIDE GAS AND CARBONATED WATER. ANSISNF STD 18 CERTIFIED, ASSE 1032 APPROVED DUAL CHECK VALVE, 316 STAINLESS STEEL BODY. MAX PRESSURE: 200 PSI, MAX TEMP: 110°F. PROVIDE RECOMMENDED STRAINER.
GD-1	FOOD WASTE DISPOSER	INSINKERATOR EVOLUTION	-	-	1-1/2"	-	ANTI-VIBRATION MOUNT, 34.6 OZ. CAPACITY, 12-1/4" HEIGHT. <u>ELECTRICAL:</u> 120 V, 3/4 HP, 8.1 AMPS
KS-1	KITCHEN SINK & FAUCET:	KOHLER K-3996-4 KOHLER FORTE K-10445	1/2"	1/2"	1-1/2"	1-1/2"	33X22X6 DUAL BOWL TOP-MOUNT ADA SINK, 4 HOLE, 18 GAUGE SS, 4" FAUCET CENTERS, 18 GAUGE SS, FAUCET: PULL-OUT SPRAY, 1.8 GPM, LEVER HANDLES, (ADA), 7-3/4" SPOUT REACH, 4 HOLES.
UR-1 UR-2	URINAL (ADA)	SLOAN SU-1006 & ROYAL 181	1"	-	1-1/2"	1-1/2"	TOP SPUD WALL HUNG, STANDARD WASHDOWN URINAL, VITREOUS CHINA 1.5 GPF MANUAL FLUSHOMETER WITH WATER HAMMER ARRESTOR.
WC-1 WC-2	WATER CLOSET, FLOOR MOUNT (ADA)	SLOAN WETS-2450.1301 & ROYAL 113-1.28	1-1/2"	-	4"	2"	VITREOUS CHINA, ELONGATED BOWL, 1-1/2" TOP SPUD, COMMERCIAL TOILET SEAT, & BOLT CAP ACCESSORY 1.28 GPF MANUAL FLUSHOMETER. PROVIDE WITH WATER HAMMER ARRESTOR.
L-1	LAVATORY (ADA) FAUCET:	SLOAN SS-3001 & KOHLER K-16027-4	1/2"	1/2"	1-1/2"	1-1/2"	19.5"X16.5" VITREOUS CHINA UNDERMOUNTED WITH OVERFLOW. SINGLE HOLE BATHROOM FAUCET (ADA) LESS POP-UP TAIL PIECE, 1.2 GPM, 4-3/8" REACH. PROVIDE BDT VARIATION BELOW DECK THERMOSTATIC MIXING VALVE (SET WATER TEMP TO 110°F) PROVIDE UNDERCOUNTER PIPING INSULATION KIT.
L-2	LAVATORY (ADA) FAUCET:	SLOAN SS-3101 & KOHLER K-16027-4	1/2"	1/2"	2"	1-1/2"	20 3/4"X18 1/4" VITREOUS CHINA WALL MOUNTED LAVATORY, SINGLE HOLE. SINGLE HOLE BATHROOM FAUCET (ADA) LESS POP-UP TAIL PIECE, 1.2 GPM, 4-3/8" REACH. PROVIDE BDT VARIATION BELOW DECK THERMOSTATIC MIXING VALVE (SET WATER TEMP TO 110°F) PROVIDE UNDERCOUNTER PIPING INSULATION KIT.
S-1	SINK FAUCET:	KOHLER VAULT K-5286 UNDER-MOUNT KITCHEN SINK	1/2"	1/2"	1-1/2"	1-1/2"	24"X18-1/4" 16-GAUGE STAINLESS STEEL, SINGLE SQUARED BOWL, 9-INCH DEPTH FAUCET: KOHLER CORALAIS KITCHEN SINK FAUCET MODEL K-15888-K WRISTBLADE LEVER HANDLED FAUCET (ADA), 9" GOOSENECK SWING SPOUT. 1.8 GPM
S-2	SINK (ADA) FAUCET:	KOHLER VAULT K-3349-2 TOP MOUNT SINK	1/2"	1/2"	1-1/2"	1-1/2"	15"X15" 19-GAUGE STAINLESS STEEL, SINGLE BOWL, 2 FAUCET HOLES, 7-9/16-INCH DEPTH FAUCET: KOHLER CORALAIS KITCHEN SINK FAUCET MODEL K-15888-K WRISTBLADE LEVER HANDLED FAUCET (ADA), 9" GOOSENECK SWING SPOUT. 1.8 GPM
DF-1	DRINKING FOUNTAIN	ELKAY ECDFPW314C	1/2"	-	2"	1-1/2"	ADA HEIGHT DRINKING FOUNTAIN, WALL MOUNT, FULLY EXPOSED. 304 STAINLESS STEEL WITH SATIN FINISH.
EW-1	ELECTRIC WATER COOLER	ELKAY LZWS-LRPBM28K	1/2"	-	2"	1-1/2"	DUAL HEIGHT WATER COOLER WITH FILTER WITH INTEGRAL SENSOR ACTIVATED 1.1 GPM BOTTLE FILLING STATION. STAINLESS STEEL, 8 GPH. RECIPROCATING TYPE COOLING SYSTEM. ELECTRICAL: 115V, 370 WATTS, 5.0 FLA (INSTALLATION REQUIRES 12" WALL DEPTH)
NOTES: 1. ALL FIXTURE FINISHES TO BE REVIEWED BY ARCHITECT PRIOR TO ORDERING. 2. PROVIDE WATER HAMMER ARRESTORS @ ALL ICE MACHINES, WASHING MACHINES, & DISHWASHERS.							



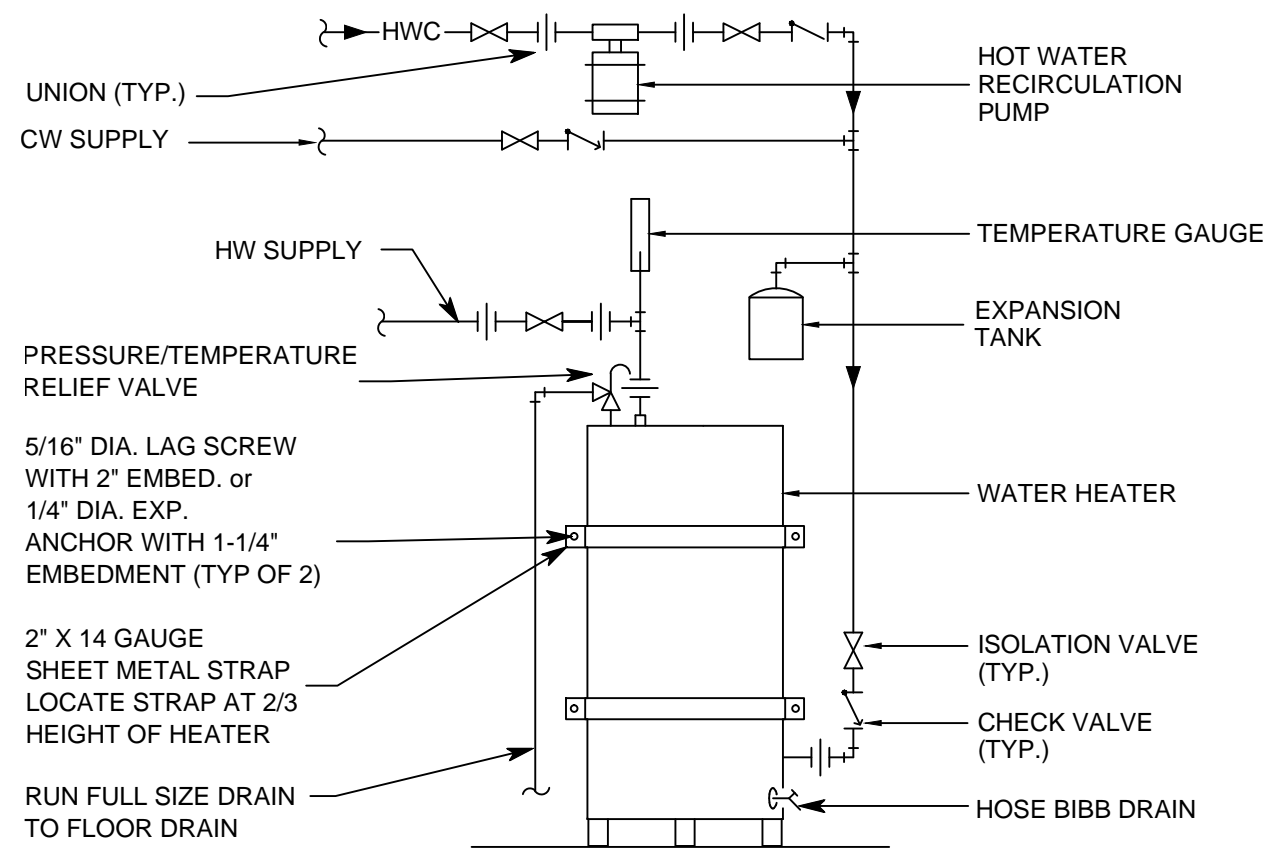
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PLUMBING SCHEMATIC

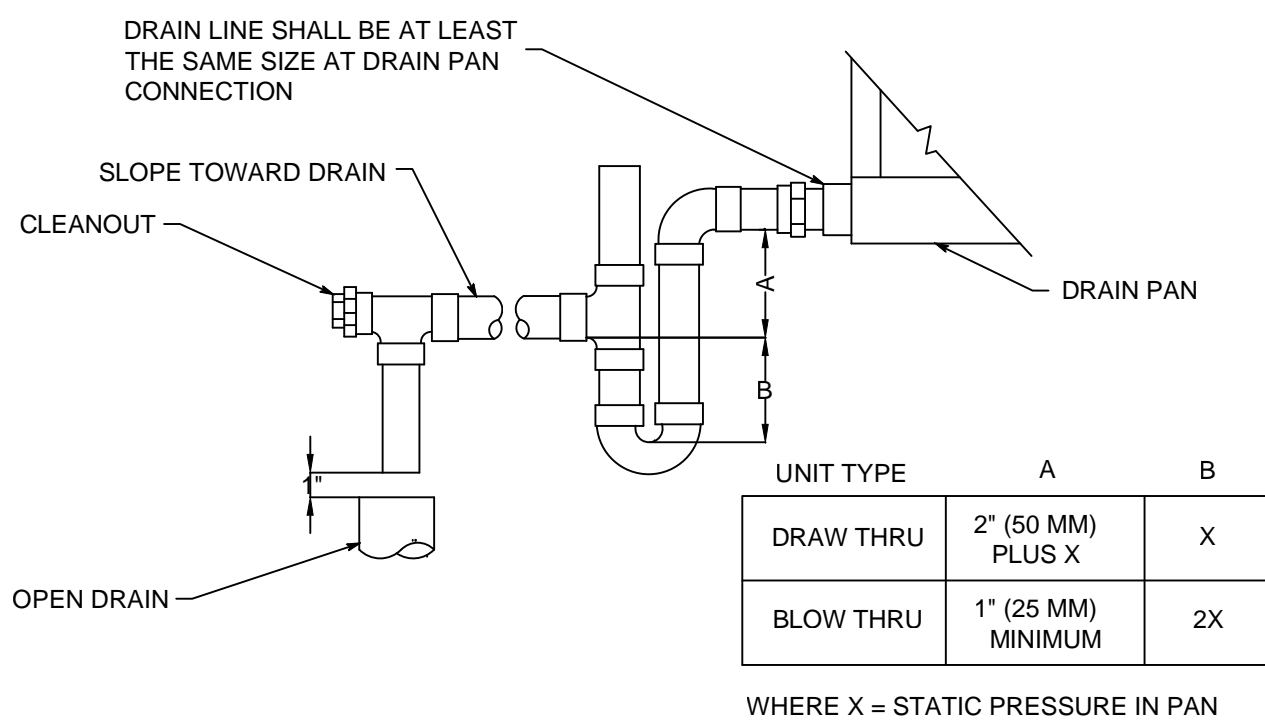
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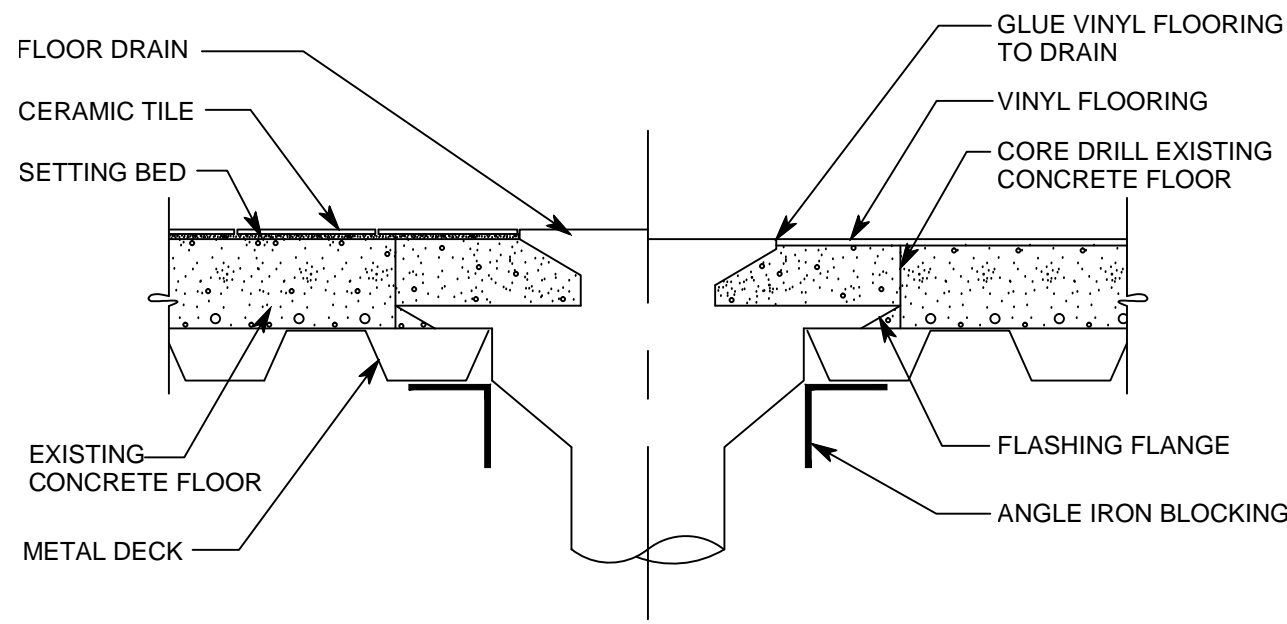
7 WALL CLEAN OUT  
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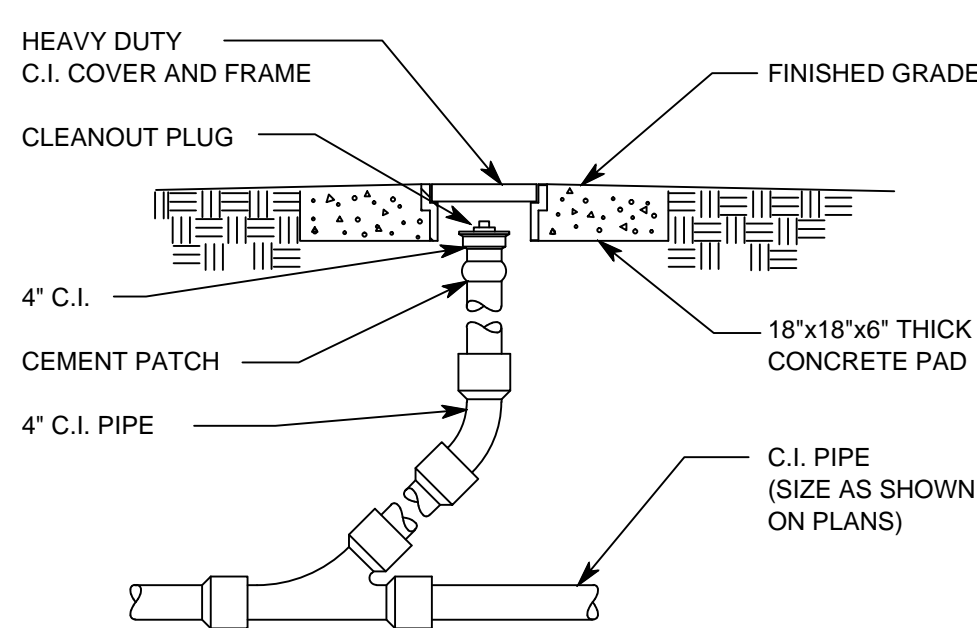
8 WATER HEATER DETAIL  
SCALE: NTS



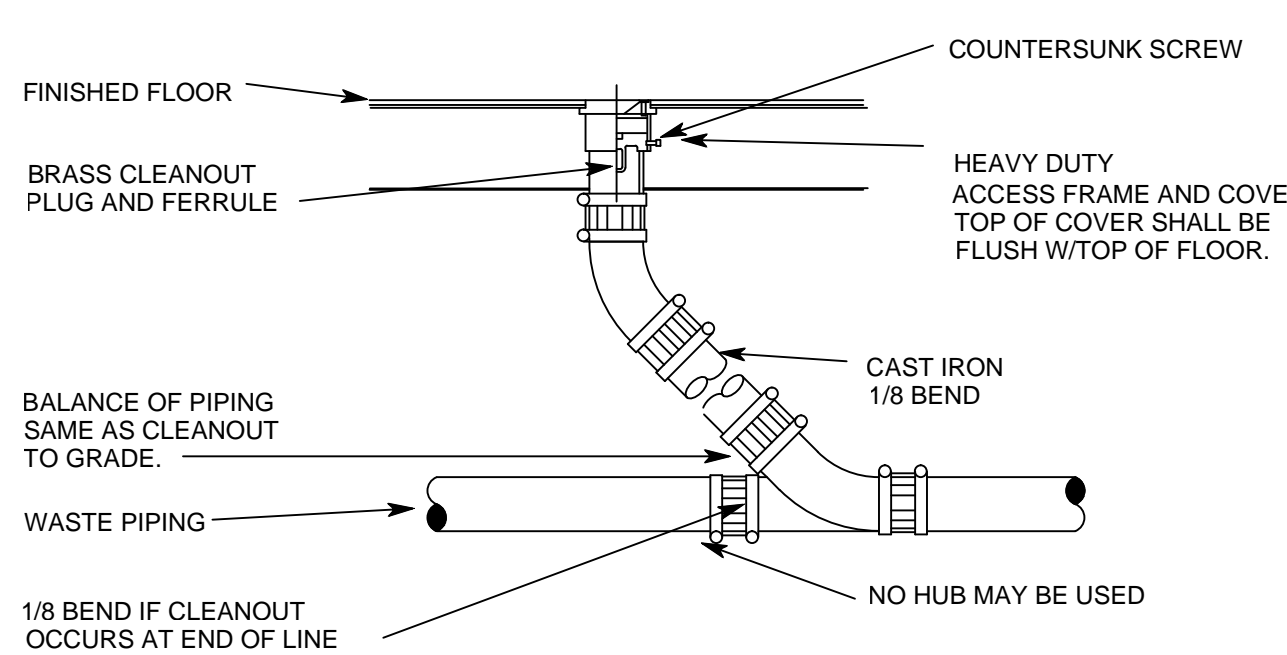
9 CONDENSATE DRAIN DETAIL  
SCALE: NTS



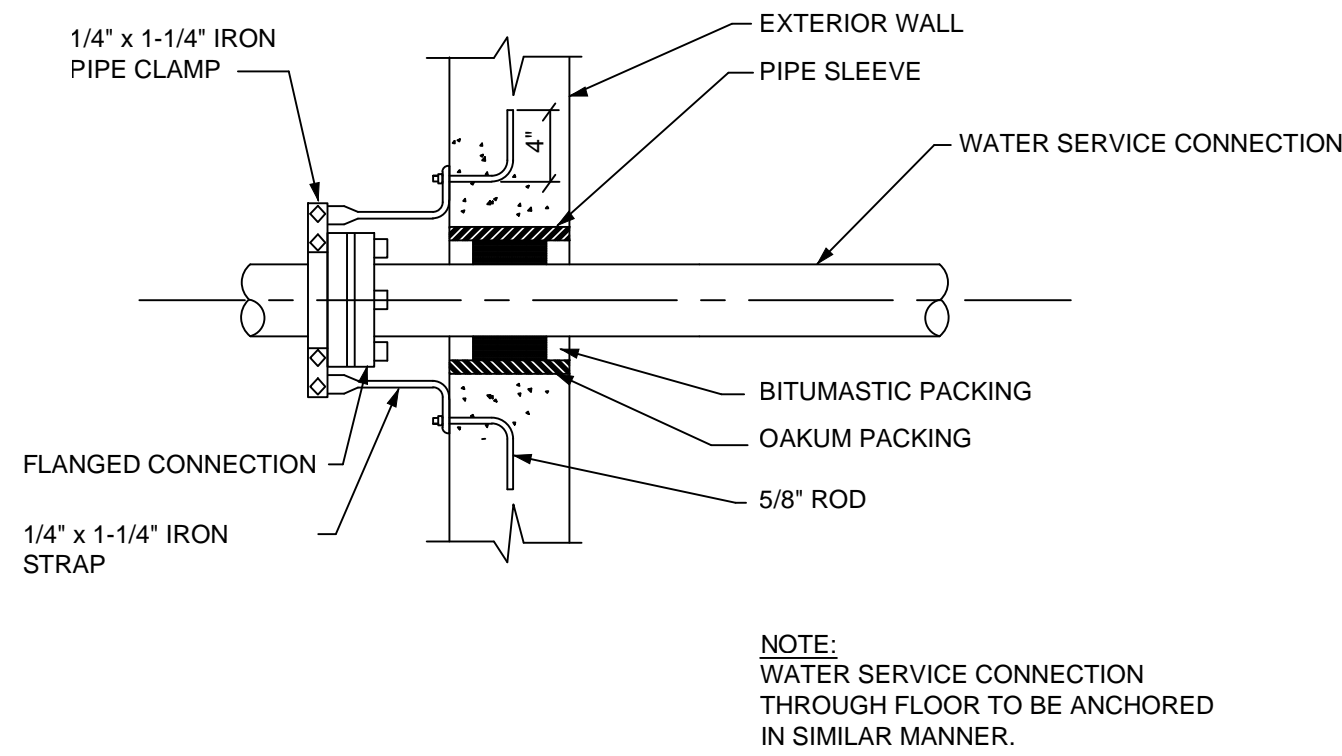
4 FLOOR DRAIN DETAIL  
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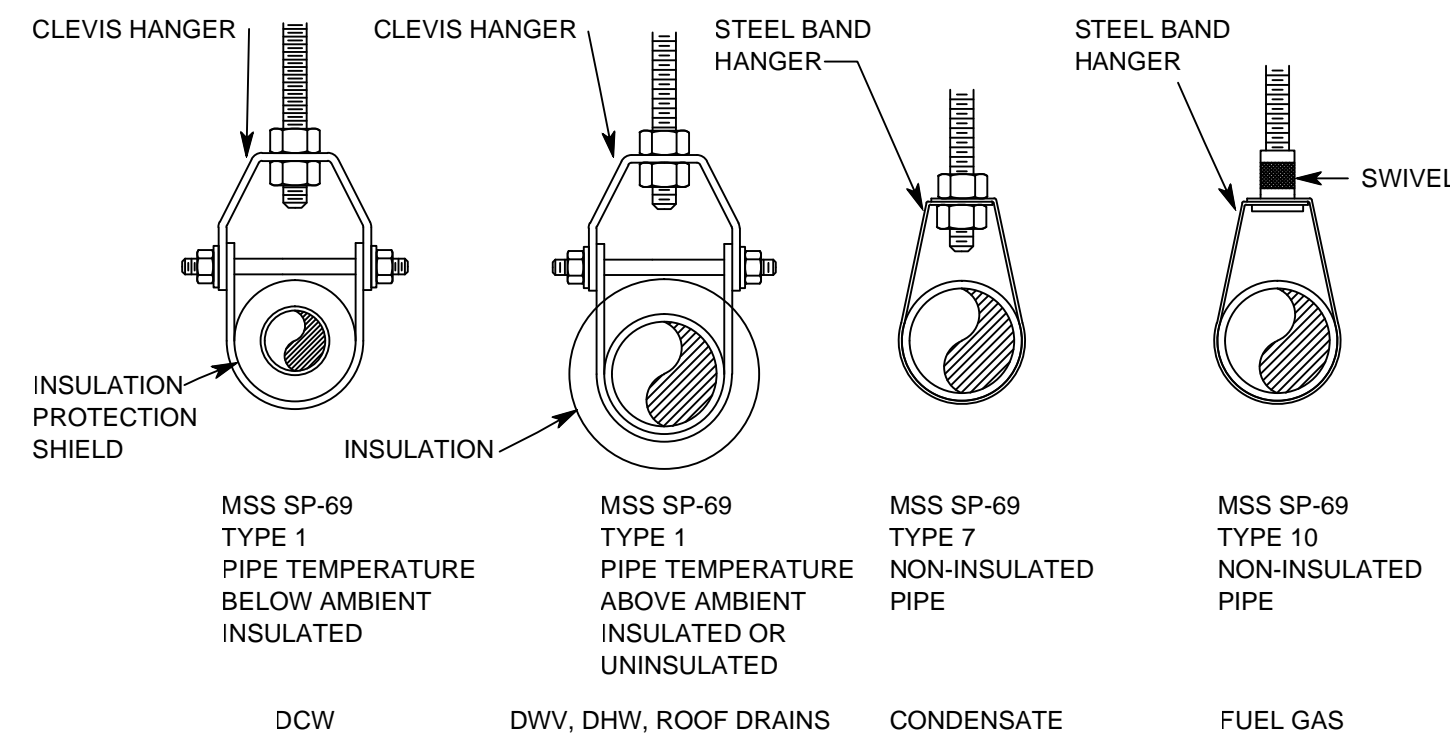
5 CLEANOUT TO GRADE  
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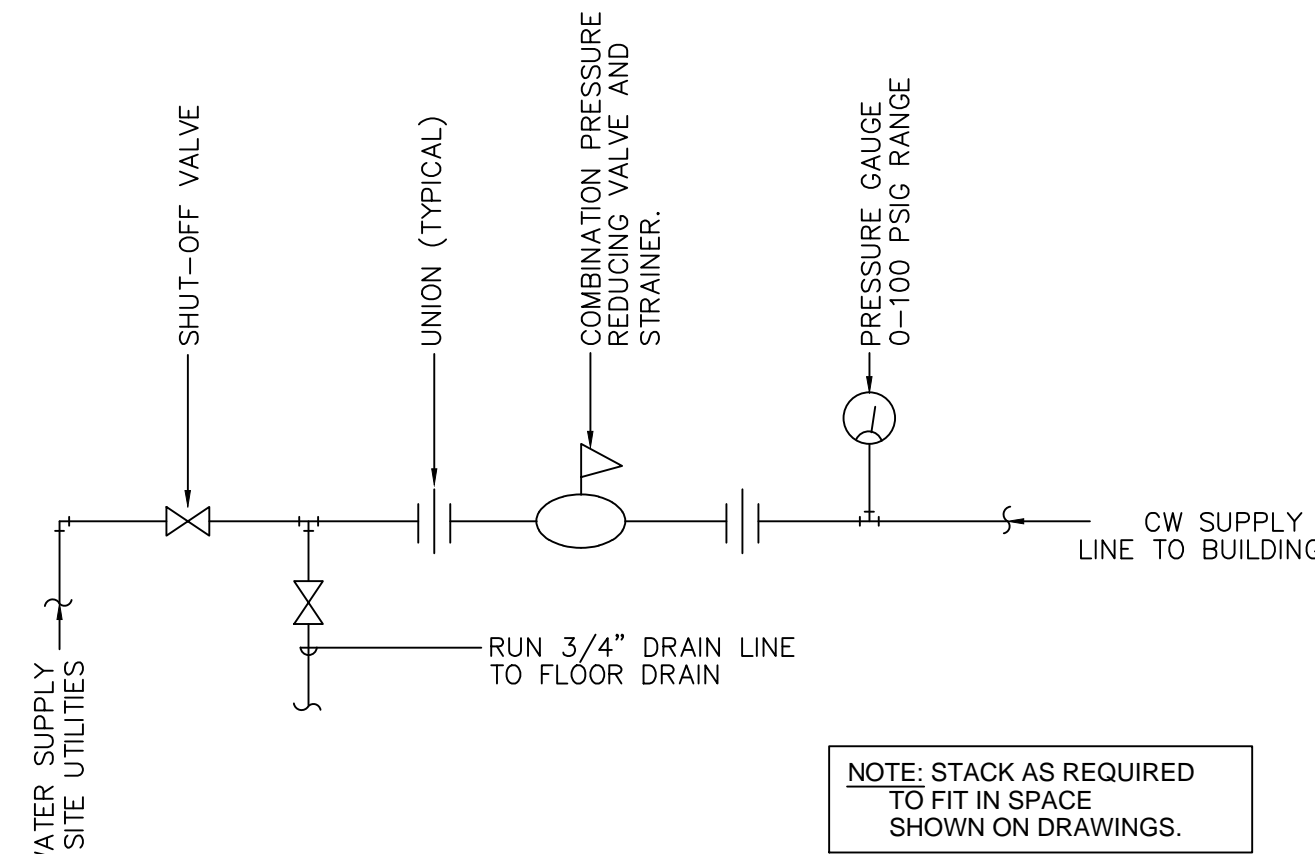
6 FLOOR CLEANOUT  
SCALE: NTS



1 COLD WATER SERVICE ANCHORING  
SCALE: NTS



2 PIPE HANGER  
SCALE: NTS



3 WATER ENTRY DETAIL  
SCALE: NTS

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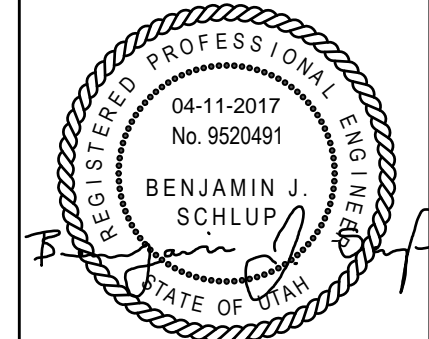


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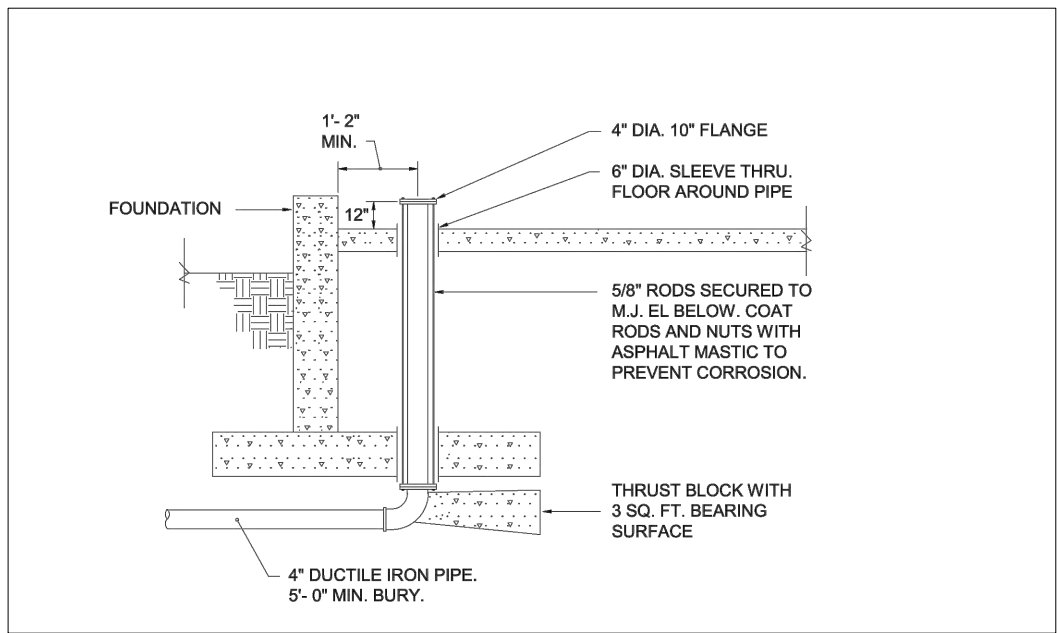
PLUMBING  
DETAILS

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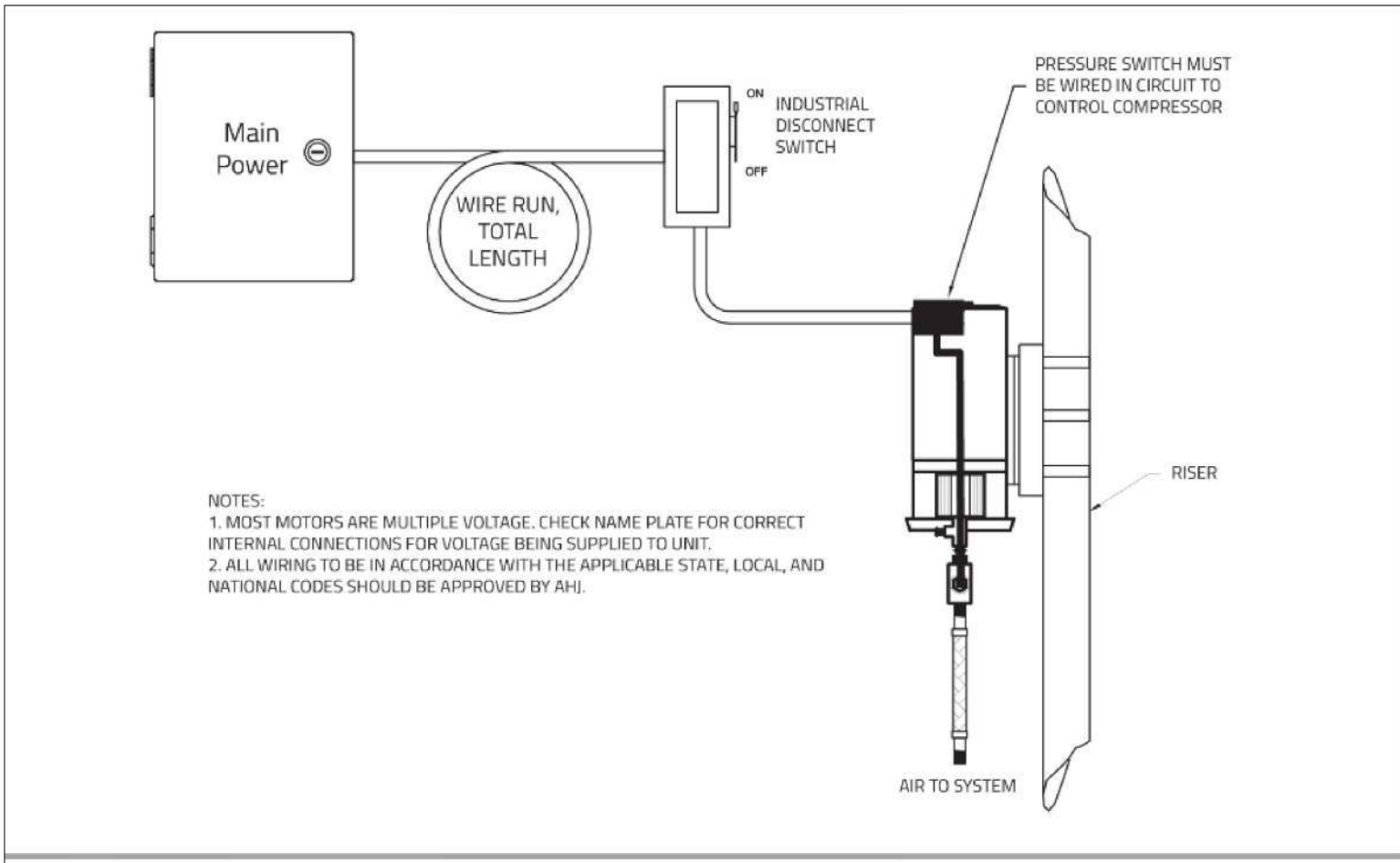
P12

BUILDING 'C'

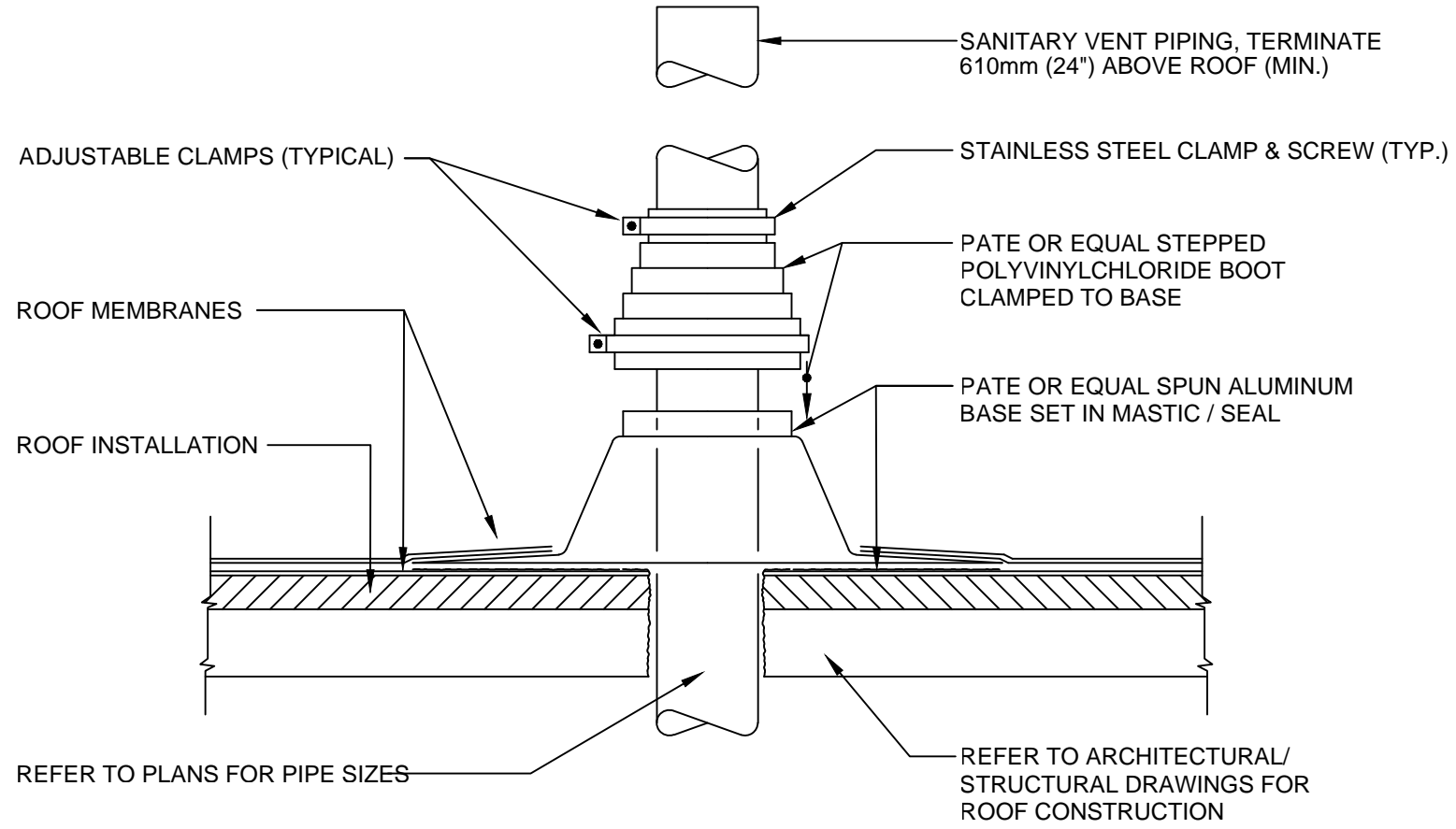




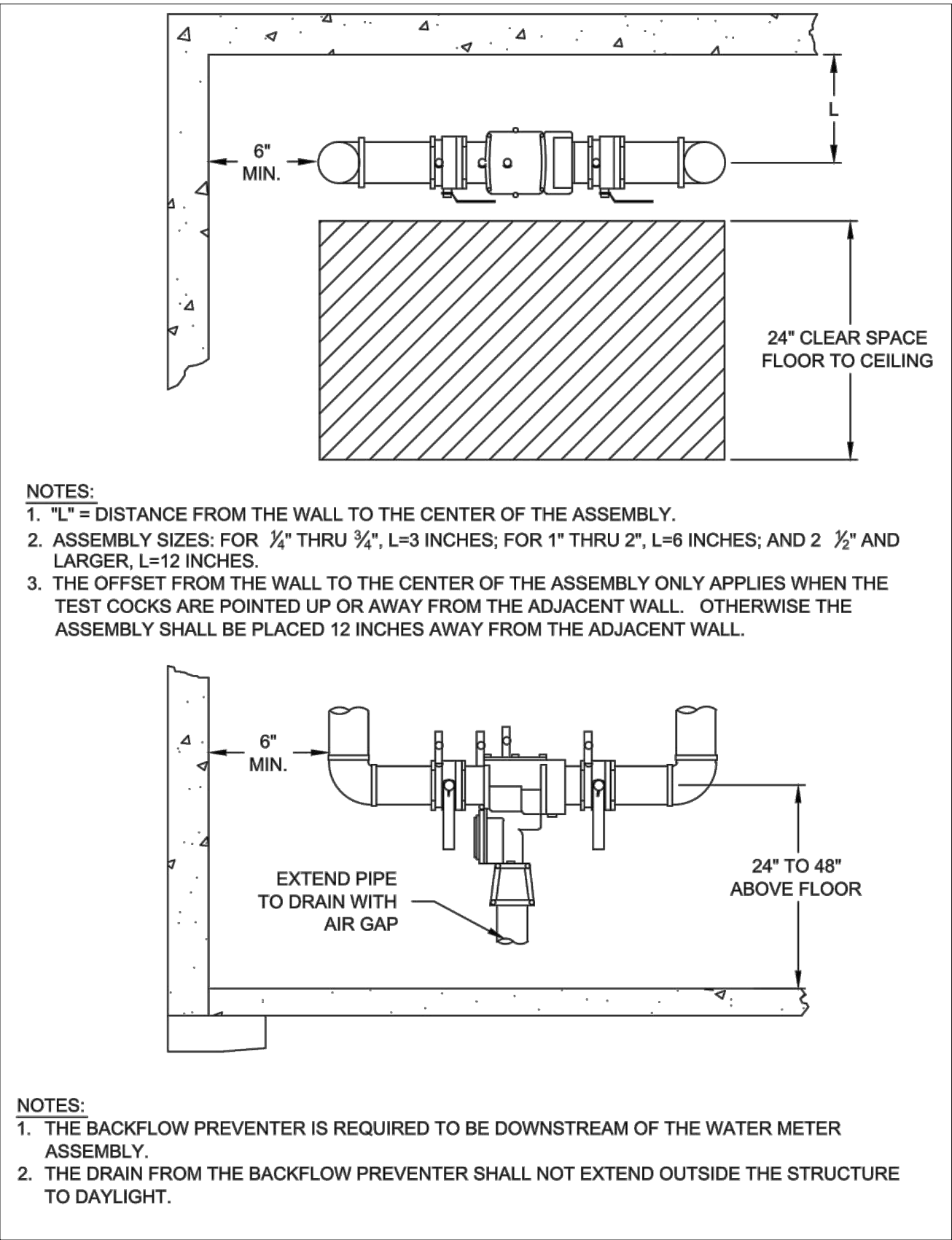
5 FIRE SPRINKLER ENTRY DETAIL  
SCALE: NOT TO SCALE



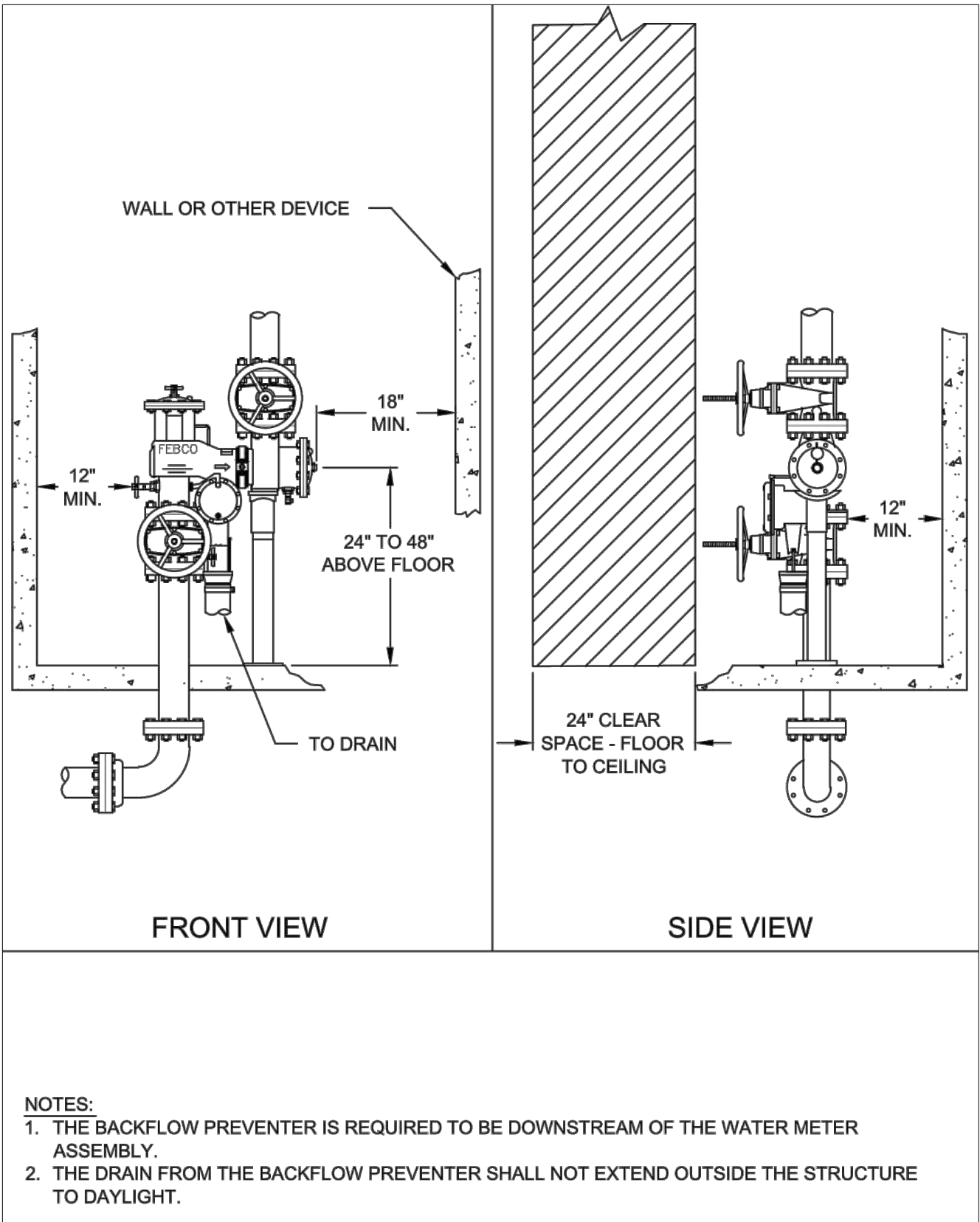
4 DRY PIPE FIRE SPRINKLER AIR COMPRESSOR DETAIL  
SCALE: NOT TO SCALE



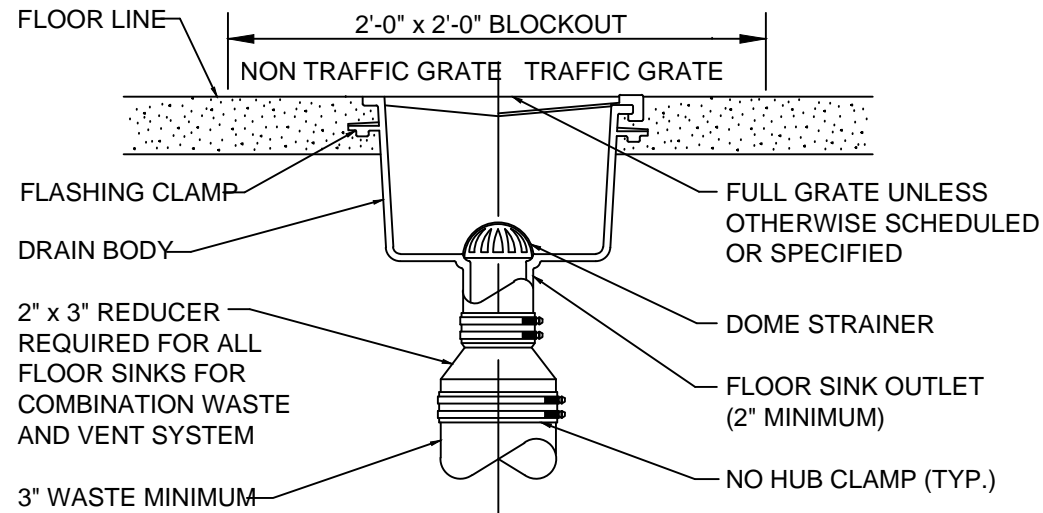
1 VENT THRU ROOF DETAIL  
SCALE: NTS



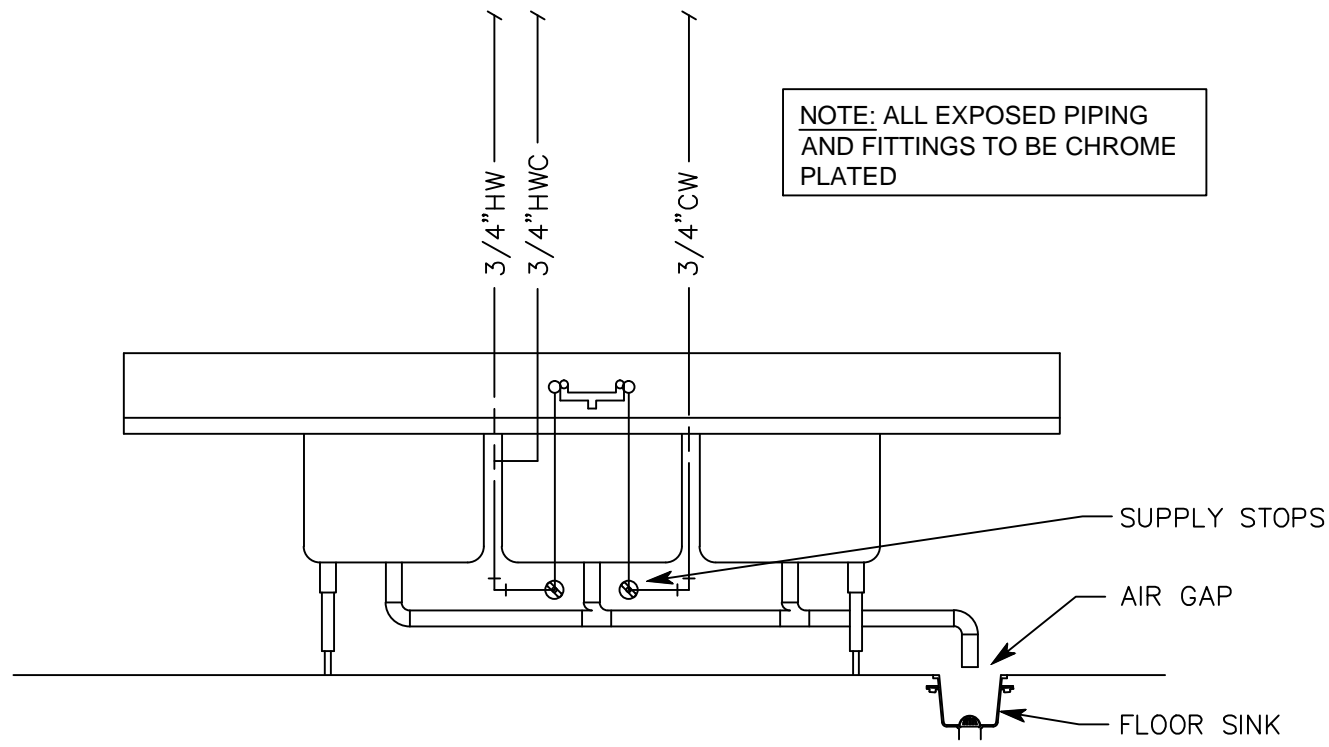
DOMESTIC REDUCED PRESSURE BACKFLOW PREVENTER



FIRE VERTICAL BACKFLOW PREVENTER



2 FLOOR SINK DETAIL  
SCALE: NTS



3 3-COMPARTMENT SINK DETAIL  
SCALE: NTS  
NOTE: PROVIDE HOT WATER CIRCULATION LINE AS NOTED ON PLAN VIEW. DISHWASHER TO DRAIN INTO FLOOR SINK BELOW 3-COMP SINK.

6 BACKFLOW PREVENTION DETAILS  
SCALE: NOT TO SCALE

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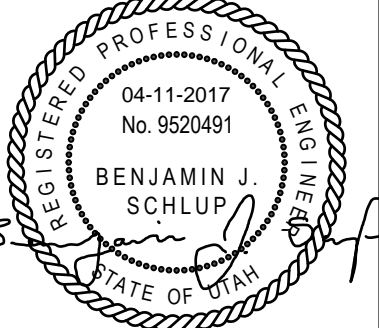


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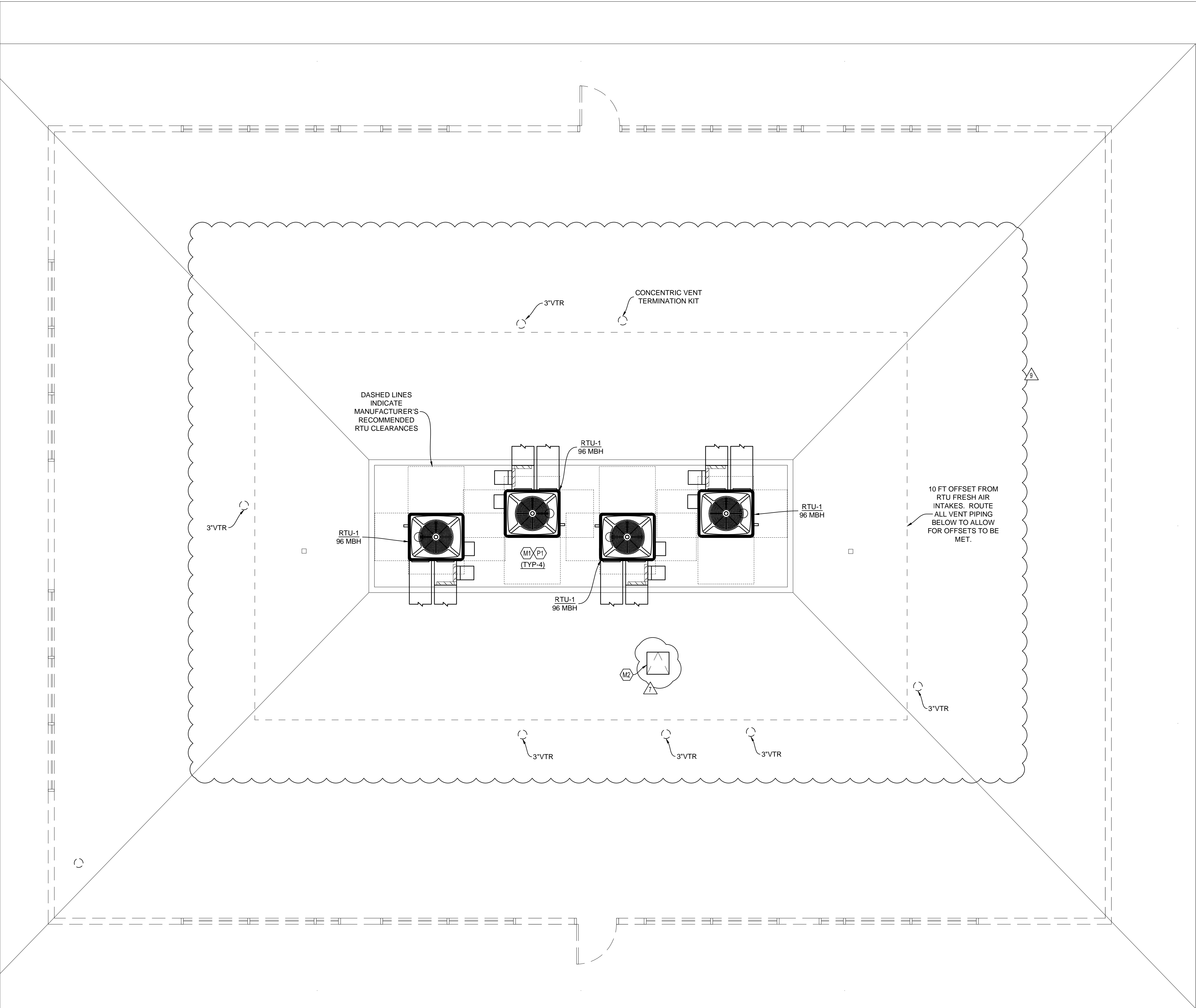
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PLUMBING  
DETAILS

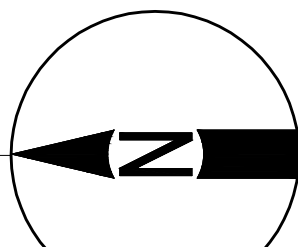
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P13

BUILDING 'C'



MECH/PLUMB ROOF PLAN-BLDG. 'C'  
SCALE: 1/4" = 1'-0"



□□□□ <b>D</b> □□□□ <b>S</b>	
MECHANICAL	
M1	LOCATION OF NEW ROOFTOP UNIT. COORDINATION FINAL LOCATION WITH EXISTING STRUCTURE. PROVIDE FLEXIBLE CONNECTION ON SUPPLY AND RETURN DUCTWORK TO MINIMIZE VIBRATION. PROVIDE EQUIPMENT CURB WITH RTU.
M2	LOCATION OF ROOF ACCESS HATCH. HORIZONTAL ACCESS PATH TO SIDEWALL OF EXISTING EQUIPMENT WELL WITHIN ATTIC SPACE TO BE PROVIDED WHERE MAIN LEVEL CEILING ACCESS PANEL IS NOT LOCATED DIRECTLY BELOW EQUIPMENT WELL. REFERENCE ARCHITECTURAL PLANS FOR INSTALLATION DETAILS AND DIMENSIONS.
PLUMBING	
P1	ROUTE NEW GAS LINE TO UNDERSIDE OF ROOFTOP UNIT. PROVIDE GAS PRESSURE REGULATOR AND ISOLATION VALVE PER MANUFACTURER'S RECOMMENDATIONS.

- A**□□□□**S**
- PROVIDE NECESSARY EQUIPMENT CURBS/PLATFORMS FOR ALL EXTERIOR MECHANICAL EQUIPMENT.
  - EXISTING PRIMARY AND OVERFLOW ROOF DRAINS TO REMAIN. COORDINATE LOCATIONS OF ROOFTOP UNITS ACCORDINGLY. REPLACE DAMAGED ROOF DRAINS AS REQUIRED.
  - PROVIDE NECESSARY CLEARANCES TO ALLOW FOR SERVICE TO ALL ROOFTOP EQUIPMENT. COORDINATE RTU LOCATIONS WITH ROOF ACCESS HATCHES.
  - ALL GAS PIPING SIZED PER TABLE 402.4(2) 2015 IFGC. GAS PRESSURE DOWNSTREAM OF METER IS LESS THAN 2 PSI.
  - EXISTING VENT-THRU-ROOF LOCATIONS TO BE REUSED WHERE POSSIBLE. PROVIDE NEW VERTICAL VENT EXTENSIONS AS REQUIRED.
  - ROUTE CONDENSATE LINES FROM RTUS TO NEARBY EXISTING ROOF DRAIN. PROVIDE FULL SIZE DRAIN LINE AND TRAP PER MANUFACTURER'S RECOMMENDATIONS.
  - PROVIDE 10 FEET SEPARATION DISTANCE BETWEEN ALL RTU OUTSIDE AIR INTAKE LOCATIONS AND PLUMBING VENT TERMINATIONS.

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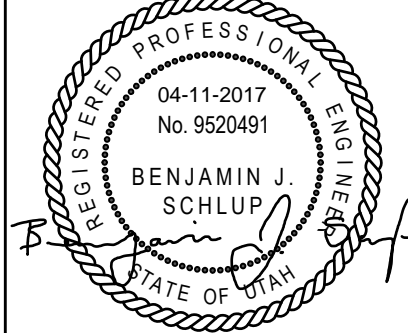


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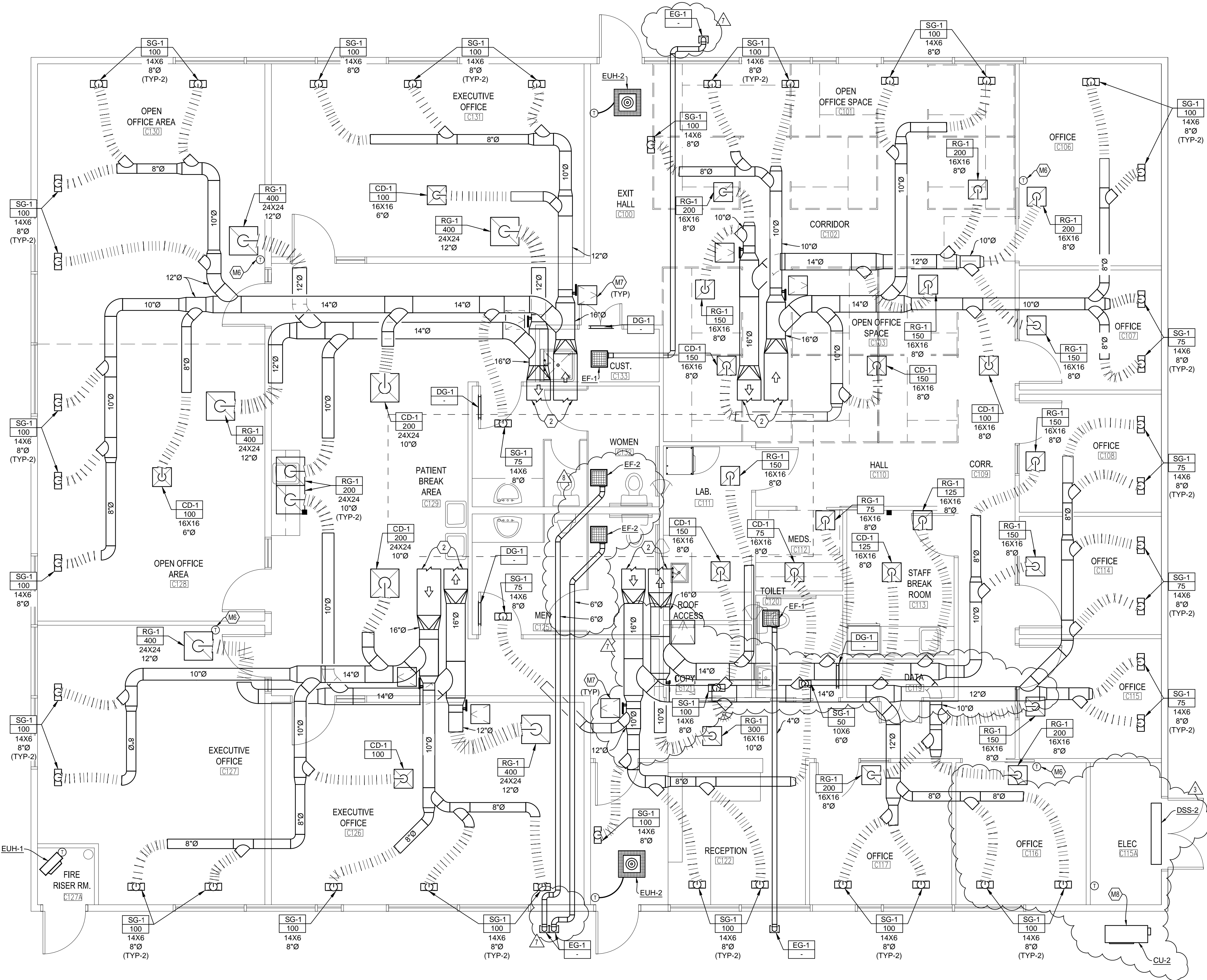
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MECH/PLUMB  
ROOF PLAN  
BUILDING 'C'  
sheet

MP1C  
BUILDING 'C'





MECHANICAL PLAN-BLDG. 'C'  
SCALE: 1/4" = 1'-0"

□ □ □ □ <b>D</b> □ □ □ □ <b>S</b>	
(M1)	INSTALL EXHAUST FAN AT THIS LOCATION. CONTINUE EXHAUST DUCT TO TERMINATE AT UNDERSIDE OF BUILDING OVERHANG AS INDICATED. COORDINATE LOCATION WITH OVERHEAD PLUMBING.
(M2)	SEE ROOF PLAN FOR CONTINUATION OF SUPPLY AND RETURN AIR DUCTWORK.
(M3)	LOCATION OF RECESSED DRYER VENT BOX. CONTINUE 4" DRYER DUCT TO TERMINATE AT UNDERSIDE OF BUILDING OVERHANG AS INDICATED.
(M4)	RE-CIRCULATING KITCHEN HOOD.
(M5)	PROVIDE TERMINATION KIT FOR DRYER EXHAUST AT THIS LOCATION.
(M6)	LOCATION FOR DIGITAL THERMOSTAT WITHIN LOCKING ENCLOSURE.
(M7)	ACCESS PANEL TO ALLOW FOR ADJUSTMENT TO ABOVE CEILING BALANCING DAMPER.
(M8)	LOCATE OUTDOOR CONDENSING UNIT AS REQUIRED. PROVIDE CONCRETE EQUIPMENT PAD AS NECESSARY. SEE EQUIPMENT SCHEDULE FOR NECESSARY ACCESSORIES. CONCEAL ALL REFRIGERANT PIPING.

- | A  |  | S |  |
|--|--|---|--|
| <ol style="list-style-type: none"><li>1. PROVIDE BALANCING DAMPERS ON ALL GRILLES, REGISTERS, &amp; DIFFUSERS CONNECTED TO A ROOFTOP UNIT. ALLOW FOR ADJUSTMENT BY REMOVAL OF EXHAUST GRILLES OR BY PROVIDING ACCESS PANELS. (TYPICAL)</li><li>2. ROUTE SUPPLY AND RETURN AIR DUCTWORK THROUGH STRUCTURE AS REQUIRED. PROVIDE NECESSARY TRANSITIONS TO ALLOW FOR CLEAN PATH THE TERMINAL AIR DEVICES.</li><li>3. PROVIDE WATER TIGHT SEAL ON ALL DUCTWORK AS IT PENETRATE EXTERIOR ROOFING/WALL ASSEMBLIES.</li><li>4. PROVIDE (R-12 MIN.) INSULATION ON ALL ABOVE CEILING DUCTWORK ROUTED IN UNCONDITIONED SPACE.</li><li>5. COORDINATE LOCATIONS OF CEILING GRILLES, REGISTERS, AND DIFFUSERS WITH OVERHEAD PLUMBING PIPING ROUTING.</li><li>6. VENTILATION PROVIDED BY RTU ECONOMIZER SET TO 20% MIN. OSA</li><li>7. ENVIRONMENTAL FANS SHALL NOT TERMINATE CLOSER THAN 3 FEET ADJACENT TO BUILDING OPENINGS.</li><li>8. PROVIDE FIRE-RATED DAMPERS AT ALL CEILING DIFFUSERS AND GRILLES TO MAINTAIN FIRE-RATED ASSEMBLY.</li></ol> |  |   |  |

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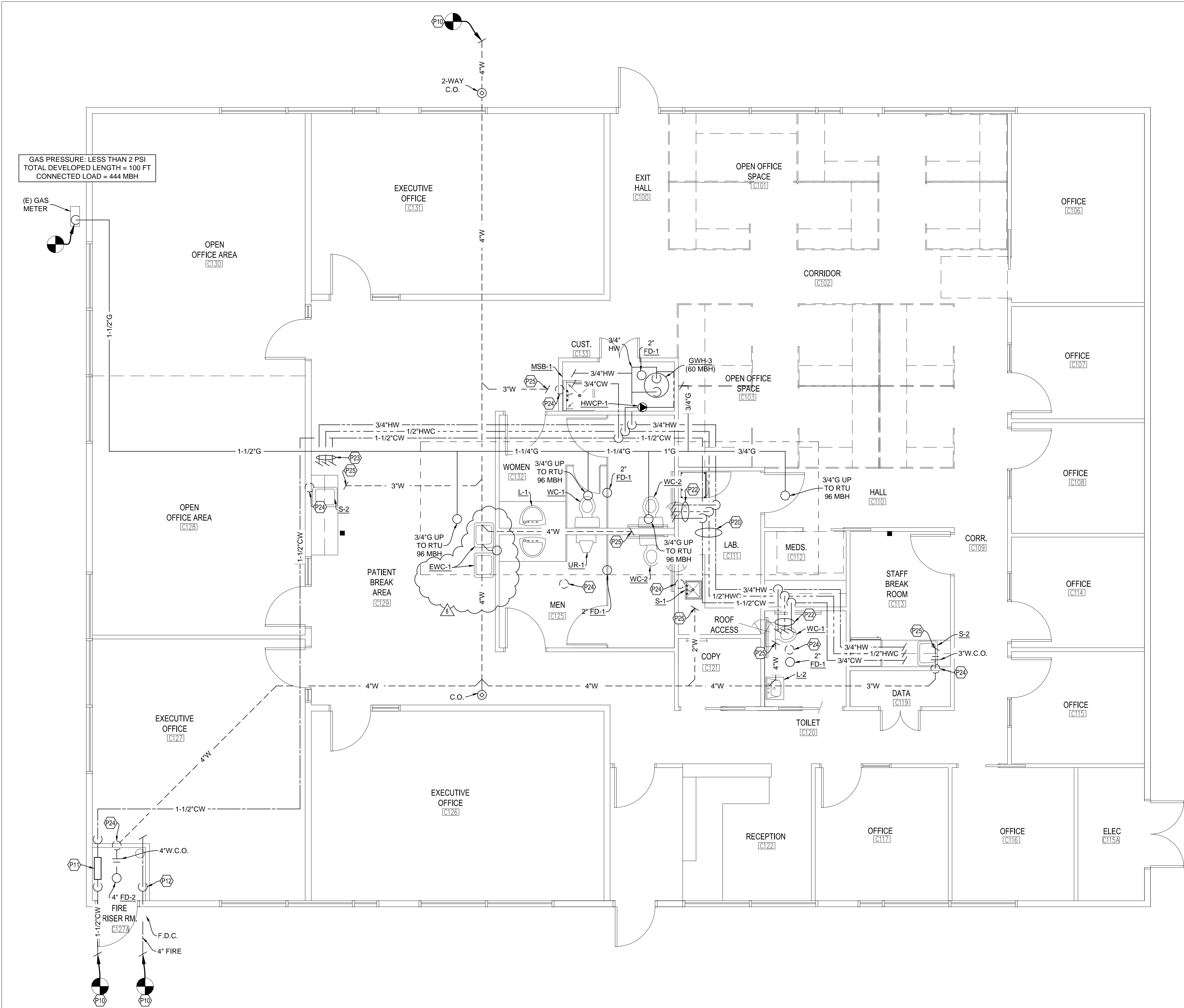
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MECHANICAL  
PLAN  
BUILDING 'C'  
sheet

M1C  
BUILDING 'C'



PLUMBING PLAN-BLDG. 'C'  
SCALE: 1/4" = 1'-0"

D S	
P1	PROVIDE AIR ADMITTANCE VALVE WITHIN CABINETS AT THIS LOCATION. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
P2	LOCATION OF HOT WATER CIRCULATION PUMP. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE CIRCUIT SETTERS AT FIXTURES AS REQUIRED TO ALLOW FOR HOT WATER CIRCULATION.
P3	NEW WATER HEATER. DIRECT T&P VALVE INTO FLOOR DRAIN. CONTINUE TO NEW FIXTURES AND PROVIDE ISOLATION VALVES AT EACH FIXTURE. PROVIDE GAS LINE ISOLATION VALVE AND SEISMIC BRACING. PROVIDE FLUE AND INTAKE PIPING PER SCHEDULE AND TERMINATE THROUGH ROOF WITH CONCENTRIC VENT KIT.
P4	NEW URINAL. TIE INTO NEW WASTE. VENT, AND DOMESTIC COLD WATER PIPING. SEE PLUMBING SCHEDULE FOR FIXTURE PIPING SIZES.
P5	NEW SINK. TIE INTO NEW WASTE. VENT, AND DOMESTIC HOT/COLD WATER PIPING. SEE PLUMBING SCHEDULE FOR FIXTURE PIPING SIZES.
P6	NEW KITCHEN SINK. TIE INTO NEW WASTE. VENT, AND DOMESTIC HOT/COLD WATER PIPING. SEE PLUMBING SCHEDULE FOR FIXTURE PIPING SIZES. PROVIDE RECESSED WALL BOX FOR REFRIGERATOR COLD WATER CONNECTION. PROVIDE HOT WATER CONNECTION TO SERVE DISHWASHER.
P7	LOCATION OF NEW WATER CLOSET. PROVIDE WATER, WASTE, & VENT CONNECTION. SEE PLUMBING SCHEDULE FOR FIXTURE PIPING SIZES.
P8	LOCATION OF NEW LAVATORY. PROVIDE WATER, WASTE, & VENT CONNECTION. SEE PLUMBING SCHEDULE FOR FIXTURE PIPING SIZES.
P9	LOCATION OF NEW FLOOR DRAIN. PROVIDE WASTE & VENT CONNECTION. SEE PLUMBING SCHEDULE FOR FIXTURE PIPING SIZES.
P10	SEE CIVIL PLANS FOR CONTINUATION.
P11	PROVIDE COLD WATER ENTRY WITH BACKFLOW PREVENTER. REFERENCE SHEET P02 FOR DEVICE MAKE/MODEL.
P12	PROVIDE 4" FIRE ENTRY DOUBLE CHECK DETECTOR ASSEMBLY. REFERENCE SHEET P02 FOR DEVICE MAKE/MODEL. PROVIDE POWER (115V) FOR RISER MOUNTED COMPRESSOR & PRESSURE SWITCH. REFERENCE SHEET P13 FOR DETAILS. INSTALL COMPRESSOR ABOVE HEIGHT OF DOOR HEADER TO KEEP OUT OF TRAVEL PATH.
P13	PROVIDE 3" VENT THROUGH ROOF.
P14	PROVIDE WALL CLEANOUT AT THIS LOCATION.
P15	PROVIDE GAS LINE WITH VENTLESS REGULATOR AND ISOLATION VALVE. CONNECT TO UNDERSIDE OF NEW RTU. NO ROOF PENETRATION REQUIRED WITH RTU MODEL SPECIFIED.
P16	PROVIDE GAS LINE TO FLUELESS DECORATIVE FIREPLACE (20 MBH). INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
P17	PROVIDE EMERGENCY FUEL SHUTOFF SWITCH NEAR KITCHEN HOOD. SWITCH TO CLOSE GAS LINE SOLENOID VALVE ASSOCIATED WITH ALL GAS-FIRED APPLIANCES IN KITCHEN.
P18	ROUTE 1/2" CW, HW, & HWC LINES BELOW FLOOR TO ISLAND KITCHEN SINK AT THIS LOCATION. EXTEND 1/2" HW LINE TO ADJACENT DISHWASHER.
P19	ROUTE CW LINE TO REFRIGERATOR WATER CONNECTION. PROVIDED RECESSED WALL BOX WITH ISOLATION VALVE.
P20	PROVIDE PIPING TRANSITIONS UNDER STRUCTURAL BEAM AS REQUIRED. (TYPICAL)
P21	ROUTE CW, HW, & HWC LINES TO CLOTHES WASHER WALL BOX. PROVIDE INTEGRAL ISOLATION VALVES AND WATER HAMMER ARRESTOR.
P22	ROUTE 1-1/2" CW, 3/4" HW, & 1/2" HWC LINES TO BATHROOM GROUP. PROVIDE HOT AND COLD WATER ISOLATION VALVES AT LAVATORIES.
P23	ROUTE 3/4" CW, 3/4" HW, & 1/2" HWC LINES TO MOP SINK/SINK.
P24	COMBINE VENT PIPING FROM BATHROOM FIXTURE AND TERMINATE THROUGH ROOF AT THIS LOCATION. MULTIPLE BATHROOMS GROUPS CAN BE GROUPED TO MINIMIZE ROOFING PENETRATIONS IF NEEDED. ALL VENT THROUGH ROOF PENETRATIONS TO BE 3" MINIMUM.
P25	CONTINUE WASTE LINE TO ADJACENT FIXTURE GROUPS. REFERENCE PLUMBING FIXTURE SCHEDULE FOR INDIVIDUAL FIXTURE WASTE LINE SIZES.

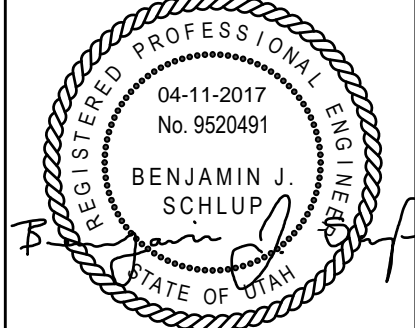
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consultant:



project:

Tenant Finish  
for New  
Brighton  
Recovery  
Campus  
4905, 4911, 4915,  
4925, 4931, & 4953  
South 900 East  
Salt Lake County,  
Utah

date

April 11, 2017

revisions

PERMIT SET-December 28, 2016  
ADDENDUM #1-January 04, 2017  
ADDENDUM #3-January 11, 2017  
ADDENDUM #4-January 17, 2017  
ADDENDUM #5-January 20, 2017  
ADDENDUM #7-February 24, 2017  
ADDENDUM #8 - March 20, 2017  
ADDENDUM #9 - April 11, 2017

data

project no:  
drawn by:  
checked by:

title  
PLUMBING  
PLAN  
BUILDING 'C'  
sheet

P1C  
BUILDING 'C'





## RESIDENTIAL ENERGY EFFICIENCY

In the column entitled MASS WALL R-VALUE a new footnote j is added as follows: "j. Log walls complying with the ICC400 and with a minimum average wall thickness of 5" or greater shall be permitted in Zones 5-8 when overall window glazing is .31 U-factor or lower, minimum heating equipment efficiency is 90 AFUE (gas) or 84 AFUE (oil), and all other requirements are met."

shall not include an *R*-value for other building materials or air films. Where insulated siding is used for the purpose of complying with the continuous insulation requirements of Table R402.1.2, the manufacturer's labeled *R*-value for insulated siding shall be reduced by *R*-0.6.

**R402.1.4 U-factor alternative.** An assembly with a *U*-factor equal to or less than that specified in Table R402.1.4 shall be permitted as an alternative to the *R*-value in Table R402.1.2.

**R402.1.5 Total UA alternative.** If the total *building thermal envelope* UA (sum of *U*-factor times assembly area) is less than or equal to the total UA resulting from using the *U*-factors in Table R402.1.4 (multiplied by the same

assembly area as in the proposed building), the building shall be considered in compliance with Table R402.1.2. The UA calculation shall be done using a method consistent with the ASHRAE *Handbook of Fundamentals* and shall include the thermal bridging effects of framing materials. The SHGC requirements shall be met in addition to UA compliance.

**R402.2 Specific insulation requirements (Prescriptive).** In addition to the requirements of Section R402.1, insulation shall meet the specific requirements of Sections R402.2.1 through R402.2.13.

**R402.2.1 Ceilings with attic spaces.** Where Section R402.1.2 would require R-38 insulation in the ceiling,

TABLE R402.1.2  
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT<sup>a</sup>

CLIMATE ZONE	FENESTRATION U-FACTOR <sup>a</sup>	SKYLIGHT <sup>b</sup> U-FACTOR	GLAZED FENESTRATION SHGC <sup>b,c</sup>	CEILING R-VALUE	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE <sup>e</sup>	FLOOR R-VALUE	BASEMENT <sup>f</sup> WALL R-VALUE	SLAB <sup>d</sup> R-VALUE & DEPTH	CRAWL SPACE <sup>g</sup> WALL R-VALUE
1	NR	0.75	0.25	30	13	3/4	13	0	0	0
2	0.40	0.65	0.25	38	13	4/6	13	0	0	0
3	0.35	0.55	0.25	38	20 or 13+5 <sup>h</sup>	8/13	19	5/13 <sup>c</sup>	0	5/13
4 except Marine	0.35	0.55	0.40	49	20 or 13+5 <sup>h</sup>	8/13	19	10/13	10, 2 ft	10/13
5 and Marine 4	0.32	0.55	NR	49	20 or 13+5 <sup>h</sup>	13/17	30 <sup>g</sup>	15/19	10, 2 ft	15/19
6	0.32	0.55	NR	49	20+5 or 13+10 <sup>h</sup>	15/20	30 <sup>g</sup>	15/19	10, 4 ft	15/19
7 and 8	0.32	0.55	NR	49	20+5 or 13+10 <sup>h</sup>	19/21	38 <sup>g</sup>	15/19	10, 4 ft	15/19

For SI: 1 foot = 304.8 mm.

- R*-values are minimums. *U*-factors and SHGC are maximums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the installed *R*-value of the insulation shall not be less than the *R*-value specified in the table.
- The fenestration *U*-factor column excludes skylights. The SHGC column applies to all glazed fenestration. Exception: Skylights may be excluded from glazed fenestration SHGC requirements in climate zones 1 through 3 where the SHGC for such skylights does not exceed 0.30.
- "15/19" means R-15 continuous insulation on the interior or exterior of the home or R-19 cavity insulation at the interior of the basement wall. "15/19" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the home. "10/13" means R-10 continuous insulation on the interior or exterior of the home or R-13 cavity insulation at the interior of the basement wall.
- R-5 shall be added to the required slab edge *R*-values for heated slabs. Insulation depth shall be the depth of the footing or 2 feet, whichever is less in Climate Zones 1 through 3 for heated slabs.
- There are no SHGC requirements in the Marine Zone.
- Basement wall insulation is not required in warm-humid locations as defined by Figure R301.1 and Table R301.1.
- Insulation sufficient to fill the framing cavity, R-19 minimum.
- The first value is cavity insulation, the second value is continuous insulation, so "13+5" means R-13 cavity insulation plus R-5 continuous insulation.
- The second *R*-value applies when more than half the insulation is on the interior of the mass wall.

TABLE R402.1.4  
EQUIVALENT U-FACTORS<sup>a</sup>

CLIMATE ZONE	FENESTRATION U-FACTOR	SKYLIGHT U-FACTOR	CEILING U-FACTOR	FRAME WALL U-FACTOR	MASS WALL U-FACTOR <sup>b</sup>	FLOOR U-FACTOR	BASEMENT WALL U-FACTOR	CRAWL SPACE WALL U-FACTOR
1	0.50	0.75	0.035	0.084	0.197	0.064	0.360	0.477
2	0.40	0.65	0.030	0.084	0.165	0.064	0.360	0.477
3	0.35	0.55	0.030	0.060	0.098	0.047	0.091 <sup>c</sup>	0.136
4 except Marine	0.35	0.55	0.026	0.060	0.098	0.047	0.059	0.065
5 and Marine 4	0.32	0.55	0.026	0.060	0.082	0.033	0.050	0.055
6	0.32	0.55	0.026	0.045	0.060	0.033	0.050	0.055
7 and 8	0.32	0.55	0.026	0.045	0.057	0.028	0.050	0.055

- Nonfenestration *U*-factors shall be obtained from measurement, calculation or an approved source.
- When more than half the insulation is on the interior, the mass wall *U*-factors shall be a maximum of 0.17 in Climate Zone 1, 0.14 in Climate Zone 2, 0.12 in Climate Zone 3, 0.087 in Climate Zone 4 except Marine, 0.065 in Climate Zone 5 and Marine 4, and 0.057 in Climate Zones 6 through 8.
- Basement wall *U*-factor of 0.360 in warm-humid locations as defined by Figure R301.1 and Table R301.1.



## Review Comments #2

**Project:** Brighton Recovery Campus-Building C  
**Project No:** 20160686

**From:** Jason Worthen  
**Date:** April 12, 2017

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## BUILDING C RESPONSES

E5. Sheet EP601: Please address the following:

C. Per NEC 250.32 a separate grounding electrode is required to be provided for each of the buildings supplied by the feeders from building A. Please clarify how this grounding electrode is to be provided. Where no grounding electrode is available please provide grounding electrode per NEC 250.50.

I. Please specify the size of the grounding electrode conductor to be provided to the grounding electrode per NEC 250.32(E) and NEC 250.66.

Response: Updated one-line diagram to show grounding electrodes and grounding electrode conductors for each building.

## BUILDING C DRAWINGS

### EP601 (see attached sheet)

1. Changed one-line diagram to show the grounding electrode conductors for Building A as new.
2. Added grounding electrodes and grounding electrode conductors for the panels in buildings B, C, D, E and F.



SYMBOL LEGEND	
SYMBOL	DESCRIPTION
	DETAIL INDICATOR: A5 INDICATES DETAIL NUMBER, E-501 INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN.
	ELEVATION OR SECTION INDICATOR, EXTERIOR: A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
	ROOM IDENTIFIER WITH ROOM NAME AND NUMBER.
	KEYNOTE INDICATOR.
	REVISION INDICATOR.
	EQUIPMENT INDICATOR.
	BREAK, STRAIGHT: TO BREAK PARTS OF DRAWING.
	BREAK, ROUND.
WIRING METHODS	
	WIRING.
	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS. USE #12 CONDUCTORS, EXCEPT #10 CONDUCTORS SHALL BE INSTALLED IF DISTANCES EXCEED THOSE SPECIFIED IN THE ELECTRICAL SPECIFICATIONS.
	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS. NUMBER IN BOX REFERS TO THE CONDUCTOR AND CONDUIT SCHEDULE. FOR BRANCH WIRING USE #12 CONDUCTORS, EXCEPT #10 CONDUCTORS SHALL BE INSTALLED IF DISTANCES EXCEED THOSE SPECIFIED IN THE ELECTRICAL SPECIFICATIONS.
	WIRING AND/OR RACEWAY: THIN LINE. WHERE "X" = : CATV = CABLE TELEVISION NC = NURSE CALL CCTV = CLOSED CIRCUIT P = POWER TELEVISION RC = RIGID CONDUIT FA = FIRE ALARM S = SOUND FO = FIBER OPTICS T = TELEPHONE I = INTERCOM TV = TELEVISION  OTHERS AS NOTED IN OTHER SCHEDULES. RACEWAYS AND WIRING SHALL BE SIZED AS SHOWN AND/OR SPECIFIED.
	CONDUIT STUB. DIMENSION RECORD DRAWINGS AND MARK.
	CONDUCTOR & CONDUIT ("CC") SCHEDULE INDICATOR. REFER TO ONE-LINE DIAGRAM.
	JUNCTION BOX.
	CABLE TRAY ABOVE ACCESSIBLE CEILING.
	LADDER RACK.
WIRING DEVICES	
	RECEPTACLE, SINGLE: NEMA 5-20R.
	RECEPTACLE, DUPLEX: NEMA 5-20R.
	RECEPTACLE, DUPLEX, ABOVE COUNTER: NEMA 5-20R.
	RECEPTACLE, DUPLEX, CEILING: NEMA 5-20R.
	RECEPTACLE, DUPLEX, DEDICATED CIRCUIT: NEMA 5-20R.
	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, DRINKING FOUNTAIN: CONCEAL WATER COOLER RECEPTACLE BEHIND WATER COOLER. SEE MECHANICAL/PLUMBING SHOP DRAWINGS FOR INSTALLATION REQUIREMENTS.
	RECEPTACLE, DUPLEX, SWITCHED: NEMA 5-20R.
	RECEPTACLE, DUPLEX, WEATHERPROOF: NEMA 5-20R.
	RECEPTACLE, DUPLEX ON EMERGENCY POWER: NEMA 5-20R.
	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER: NEMA 5-20R.
	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, WEATHERPROOF: NEMA 5-20R.
	RECEPTACLE, QLADRAPLEX: NEMA 5-20R.
	RECEPTACLE, QLADRAPLEX ON EMERGENCY POWER: NEMA 5-20R.
	RECEPTACLE, QLADRAPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER: NEMA 5-20R.
	RECEPTACLE, SPECIAL PURPOSE. PROVIDE RECEPTACLE TO MATCH EQUIPMENT PLUG.
	RECEPTACLE, DRYER: NEMA 14-30R.
	RECEPTACLE, RANGE: NEMA 10-50R.
	MULTI-OUTLET ASSEMBLY: NEMA 5-20R.
	SWITCH, DIMMER.
	SWITCH, SINGLE POLE ("X" INDICATES FIXTURES CONTROLLED).
	SWITCH, THREE-WAY ("X" INDICATES FIXTURES CONTROLLED).
	POWER POLE. REFER TO KEYED NOTE AND WIRING DEVICES SPECIFICATIONS FOR CONFIGURATION AND DEVICES.

SYMBOL LEGEND	
SYMBOL	DESCRIPTION
ELECTRICAL POWER AND DISTRIBUTION	
	CIRCUIT BREAKER, MOLDED CASE (ONE-LINE DIAGRAM).
	TRANSFORMER (ONE-LINE DIAGRAM).
	PANELBOARD (ONE-LINE DIAGRAM).
	PANELBOARD WITH MAIN LUGS ONLY. BUS SIZE AND PHASE AS SHOWN (ONE-LINE DIAGRAM).
	TRANSITION CABINET (ONE-LINE DIAGRAM).
	CT CABINET PER UTILITY'S REQUIREMENTS (ONE-LINE DIAGRAM).
	SERVICE ENTRANCE SURGE PROTECTION (ONE-LINE DIAGRAM).
	METER.
	DISCONNECT SWITCH, FUSED.
	DISCONNECT SWITCH, UNFUSED.
	STARTER, COMBINATION WITH DISCONNECT SWITCH.
	STARTER OR MOTOR CONTROLLER.
	PANELBOARD CABINET, FLUSH MOUNTED.
	PANELBOARD CABINET, SURFACE MOUNTED, 1 SECTION.
	PANELBOARD CABINET, SURFACE MOUNTED, 2 SECTION.
	DISTRIBUTION PANEL OR SWITCHBOARD.
	LIGHTING RELAY, CONTACTOR PANEL, OR DIMMING ENCLOSURE.
	TRANSFORMER: NUMBER INDICATES KVA.
	MECHANICAL EQUIPMENT CONNECTION.
LIGHTING (REFER TO FIXTURE SCHEDULE FOR SYMBOLS)	
	FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED.
	FIXTURE IDENTIFICATION, EMERGENCY WITH BATTERY PACK, CONNECTED TO GENERATOR AS INDICATED: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED.
	EGRESS DIRECTION ARROW.
	NIGHT LIGHT, DO NOT SWITCH.
LIGHTING CONTROL	
	OCCUPANCY SENSOR, DUAL TECHNOLOGY, OMNI-DIRECTIONAL, CEILING.
	OCCUPANCY SENSOR, DUAL TECHNOLOGY, WALL.
	OCCUPANCY SENSOR, DUAL TECHNOLOGY, DIRECTIONAL.
	VACANCY SENSOR, DUAL TECHNOLOGY.
STRUCTURED CABLING	
	TELEPHONE, WALL MOUNTED ("X" INDICATES QUANTITY OF CABLES).
	TELEPHONE, WALL MOUNTED: PAY PHONE.
	TELEPHONE, WALL MOUNTED: WALL PHONE.
	TWO-WAY EMERGENCY COMMUNICATION DEVICE PER IBC, WALL MOUNTED IN RECESSED BOX.
	OUTLET, DATA COMMUNICATION ("X" INDICATES QUANTITY OF CABLES).
	OUTLET, BUILDING STANDARD COMBINATION TELEPHONE/ DATA COMMUNICATION.
	TELEPHONE TERMINAL BOARD, FIRE TREATED PLYWOOD PAINTED.
	LAN RACK, FLOOR STANDING.
	DATA CABLE, CATEGORY 5 (ONE-LINE DIAGRAM).
	VOICE CABLE, CATEGORY 3 (ONE-LINE DIAGRAM).
	DATA CONNECTION: WIRELESS ACCESS POINT (WAP). REQUIRES (2) DATA DROPS PER DEVICE.
	DATA CONNECTION: WIRELESS ACCESS POINT (WAP). REQUIRES (2) DATA DROPS PER DEVICE.

SYMBOL LEGEND	
SYMBOL	DESCRIPTION
FIRE ALARM	
	FIRE SYSTEM ANNUNCIATOR.
	FIRE ALARM CONTROL PANEL, SEMI-RECESSED.
	FIRE ALARM NOTIFICATION POWER SUPPLY.
	CONTROL MODULE.
	MONITOR MODULE.
	FIRE ALARM MANUAL PULL STATION.
	MAGNETIC DOOR HOLDER.
	DETECTOR, SMOKE.
	DETECTOR, SMOKE, RESIDENTIAL, CONNECTED TO FIRE ALARM INITIATING LOOP, EMITS LOW-FREQUENCY ALARM.
	DETECTOR, SMOKE, DUCT WITH HOUSING AND SAMPLING TUBE.
	DETECTOR, HEAT.
	STROBE.
	ALARM, HORN/SPEAKER, WEATHERPROOF.
	ALARM, HORN/STROBE, ONE ASSEMBLY.
	DETECTOR, FLOW SWITCH: FLOW SWITCHES SHALL BE PROVIDED AND INSTALLED WITH FIRE SPRINKLER SYSTEM AND SHALL BE CONNECTED TO LOCATIONS SHOWN ON THE FIRE SPRINKLER SHOP DRAWINGS.
	DETECTOR, TAMPER SWITCH WITH VALVE: TAMPER SWITCHES SHALL BE PROVIDED AND INSTALLED WITH FIRE SPRINKLER SYSTEM AND SHALL BE CONNECTED TO LOCATIONS SHOWN ON THE FIRE SPRINKLER SHOP DRAWINGS.
	SMOKE DAMPER.
	FIRE AND SMOKE DAMPER.
	DETECTOR, CARBON MONOXIDE.
TECHNOLOGY SYSTEMS	
	SPEAKER, CEILING MOUNTED.
	EQUIPMENT CABINET.
	MEDIA CONNECTION PLATE.
	AUDIO/VISUAL OUTLET.
	TRANSIENT VOLTAGE SURGE SUPPRESSER, AC LINE CONDITIONER.
NURSE CALL	
	JUNCTION BOX.
	CORRIDOR LIGHT.
	BATHROOM PULL CORD STATION.
	DUTY STATION.
	EMERGENCY ASSISTANCE CALL STATION.
	EMERGENCY ASSISTANCE CODE BLUE CALL STATION.
	PATIENT STATION.
	STAFF STATION.
	TOUCH SCREEN NURSE CALL MASTER STATION.
	ZONE LIGHT CONTROLLER.
	NURSE CALL AREA CONTROL UNIT & POWER SUPPLIES.
CCTV	
	CCTV CABLE, POWER.
	CCTV CABLE, VIDEO SIGNAL.
	CCTV HEADEND EQUIPMENT.
	CCTV MONITOR.
	CCTV CAMERA/ENCLOSURE WITH LENS, TYPICAL. SEE SCHEDULE.
	CCTV CAMERA WITH PAN, TILT AND ZOOM.
	PANNING CAMERA TRANSVERSE ANGLE.

SYMBOL LEGEND	
SYMBOL	DESCRIPTION
SECURITY	
	SECURITY CABLE. SEE EQUIPMENT SCHEDULE FOR CABLE TYPE.
	ACCESS CONTROL HEADEND EQUIPMENT.
	SECURITY CONTROL PANEL.
	INTRUSION DETECTION HEADEND EQUIPMENT.
	CARD ACCESS DOOR TYPE #1 OR AS NOTED. SEE SCHEDULE.
	CARD READER.
TV DISTRIBUTION	
	TV DISTRIBUTION CABLE, INDIVIDUAL DROPS.
	TV DISTRIBUTION CABLE, TRUNK.
	COMBINER.
	DIRECTIONAL COUPLER.
	DISTRIBUTION AMPLIFIER (ONE-LINE DIAGRAM).
	SPLITTER (ONE-LINE DIAGRAM).
	TV OUTLET.
	SATELLITE ANTENNA.
	TV ANTENNA (ONE-LINE DIAGRAM).
	TERMINATOR, 75 OHM (TV DISTRIBUTION).
DEFINITIONS	
NOTE: ALL DEFINITIONS MAY NOT BE USED.	
INDICATED: THE TERM "INDICATED" REFERS TO GRAPHIC REPRESENTATIONS, NOTES, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN", "NOTED", "SCHEDULED", AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED.	
DIRECTED: TERMS SUCH AS "DIRECTED", "REQUESTED", "AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES.	
APPROVED: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS.	
FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."	
INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."	
PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."	
INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.	
TECHNOLOGY SYSTEMS: THE TERM "TECHNOLOGY SYSTEMS" IS USED TO DESCRIBE ALL LOW VOLTAGE SYSTEMS GENERALLY REFERRED TO AS "SPECIAL SYSTEMS". THESE SYSTEMS INCLUDE BUT ARE NOT NECESSARILY LIMITED TO ALL SYSTEMS WHICH UTILIZE VOLTAGES OF LESS THAN 71 VOLTS SUCH AS SOUND SYSTEMS, VIDEO SYSTEMS, TV SYSTEMS, SECURITY SYSTEMS, VOICE AND DATA CABLING SYSTEMS, ETC...	

## GENERAL ELECTRICAL NOTES

- CLARIFICATION METHODS: AT THE TIME OF BIDDING, BIDDERS SHALL FAMILIARIZE THEMSELVES WITH THE DRAWINGS AND SPECIFICATIONS. ANY QUESTIONS, MISUNDERSTANDINGS, CONFLICTS, DELETIONS, DISCONTINUED PRODUCTS, CATALOG NUMBER DISCREPANCIES, DISCREPANCIES BETWEEN THE EQUIPMENT SUPPLIED AND THE INTENT OR FUNCTION OF THE EQUIPMENT, ETC, SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER IN WRITING FOR CLARIFICATION PRIOR TO ISSUANCE OF THE FINAL ADDENDUM AND BIDDING OF THE PROJECT. WHERE DISCREPANCIES OR MULTIPLE INTERPRETATIONS OCCUR, THE MOST STRINGENT (WHICH IS GENERALLY RECOGNIZED AS THE MOST COSTLY) THAT MEETS THE INTENT OF THE DOCUMENTS SHALL BE ENFORCED.
- OWNER FURNISHED ITEMS: THE OWNER WILL FURNISH MATERIAL AND EQUIPMENT AS INDICATED IN THE CONTRACT DOCUMENTS TO BE INCORPORATED INTO THE WORK. THESE ITEMS ARE ASSIGNED TO THE INSTALLER AND COSTS FOR RECEIVING, HANDLING, STORAGE, IF REQUIRED, AND INSTALLATION ARE INCLUDED IN THE CONTRACT SUM.
  - THE INSTALLER'S RESPONSIBILITIES ARE THE SAME AS IF THE INSTALLER FURNISHED THE MATERIALS OR EQUIPMENT.
  - THE OWNER WILL ARRANGE AND PAY FOR DELIVERY OF OWNER FURNISHED ITEMS FREIGHT ON BOARD JOB SITE AND THE INSTALLER WILL INSPECT DELIVERIES FOR DAMAGE. IF OWNER FURNISHED ITEMS ARE DAMAGED, DEFECTIVE OR MISSING, DOCUMENT DAMAGED ITEMS WITH THE TRANSPORT COMPANY AND THE OWNER WILL ARRANGE FOR REPLACEMENT. THE OWNER WILL ALSO ARRANGE FOR MANUFACTURER'S FIELD SERVICES, AND THE DELIVERY OF MANUFACTURER'S WARRANTIES AND BONDS TO THE INSTALLER.
  - THE INSTALLER IS RESPONSIBLE FOR DESIGNATING THE DELIVERY DATES OF OWNER FURNISHED ITEMS AND FOR RECEIVING, UNLOADING AND HANDLING OWNER FURNISHED ITEMS AT THE SITE. THE INSTALLER IS RESPONSIBLE FOR PROTECTING OWNER FURNISHED ITEMS FROM DAMAGE, INCLUDING DAMAGE FROM EXPOSURE TO THE ELEMENTS, AND TO REPAIR OR REPLACE ITEMS DAMAGED AS A RESULT OF HIS OPERATIONS.
- EXPOSED STRUCTURE AREAS (EXCLUDING MECHANICAL, ELECTRICAL, AND COMMUNICATION SPACES): INSTALL RACEWAYS BETWEEN DECK AND STRUCTURE WHEREVER POSSIBLE IN EXPOSED STRUCTURE CEILING AREAS. ROUTE RACEWAYS IN CONCEALED AREAS WHEREVER POSSIBLE. REFER ALL CONDITIONS WHERE RACEWAYS MUST BE INSTALLED WHICH CANNOT COMPLY WITH THESE REQUIREMENTS TO THE ARCHITECT.
- SUBMITTALS: PROVIDE ORIGINAL ELECTRONIC PDF FORMAT, BOUND, BOOKMARKED (EACH SECTION AND PRODUCT), AND HIGHLIGHTED. JOB NAME AND SUBCONTRACTOR SHALL BE ON THE FRONT COVER. PREPARE INDEX OF EQUIPMENT SUBMITTED IN EACH TAB.
- REFLECTED CEILING PLANS: COORDINATE THE LOCATION OF LIGHT FIXTURES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. REFER ALL DISCREPANCIES TO THE ARCHITECT AND ENGINEER.
- ALL WORK SHALL BE DONE ACCORDINGS TO THE CURRENT NATIONAL ELECTRIC CODE (NEC), IBC, NFPA, AND IFG. COMPLIANCE AND FINAL APPROVAL IS SUBJECT TO THE ON SITE FIELD INSPECTION OF THE A.H.J.

## ELECTRICAL SHEET INDEX

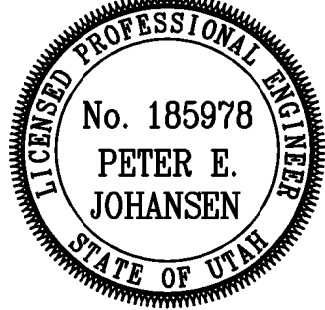
SHEET NO	SHEET TITLE
EE001	SYMBOL SCHEDULE, SHEET INDEX
ES101	ELECTRICAL SITE PLAN
EP11C	POWER PLAN - BUILDING 'C'
EP401	TYPICAL POWER PLANS
EP501	DETAILS
EP502	DETAILS
EP503	DETAILS
EP601	ONE LINE DIAGRAM
EP602	PANEL SCHEDULES
EP603	PANEL SCHEDULES
EL11C	LIGHTING PLAN - BUILDING 'C'
EL601	LIGHTING FIXTURE SCHEDULE
EY11C	AUXILIARY PLAN - BUILDING 'C'
EY601	AUXILIARY RISER DIAGRAMS
EY602	AUXILIARY RISER DIAGRAMS
EY603	AUXILIARY RISER DIAGRAMS
FA11C	FIRE ALARM PLAN - BUILDING 'C'
FA601	FIRE ALARM RISER DIAGRAM

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for New  
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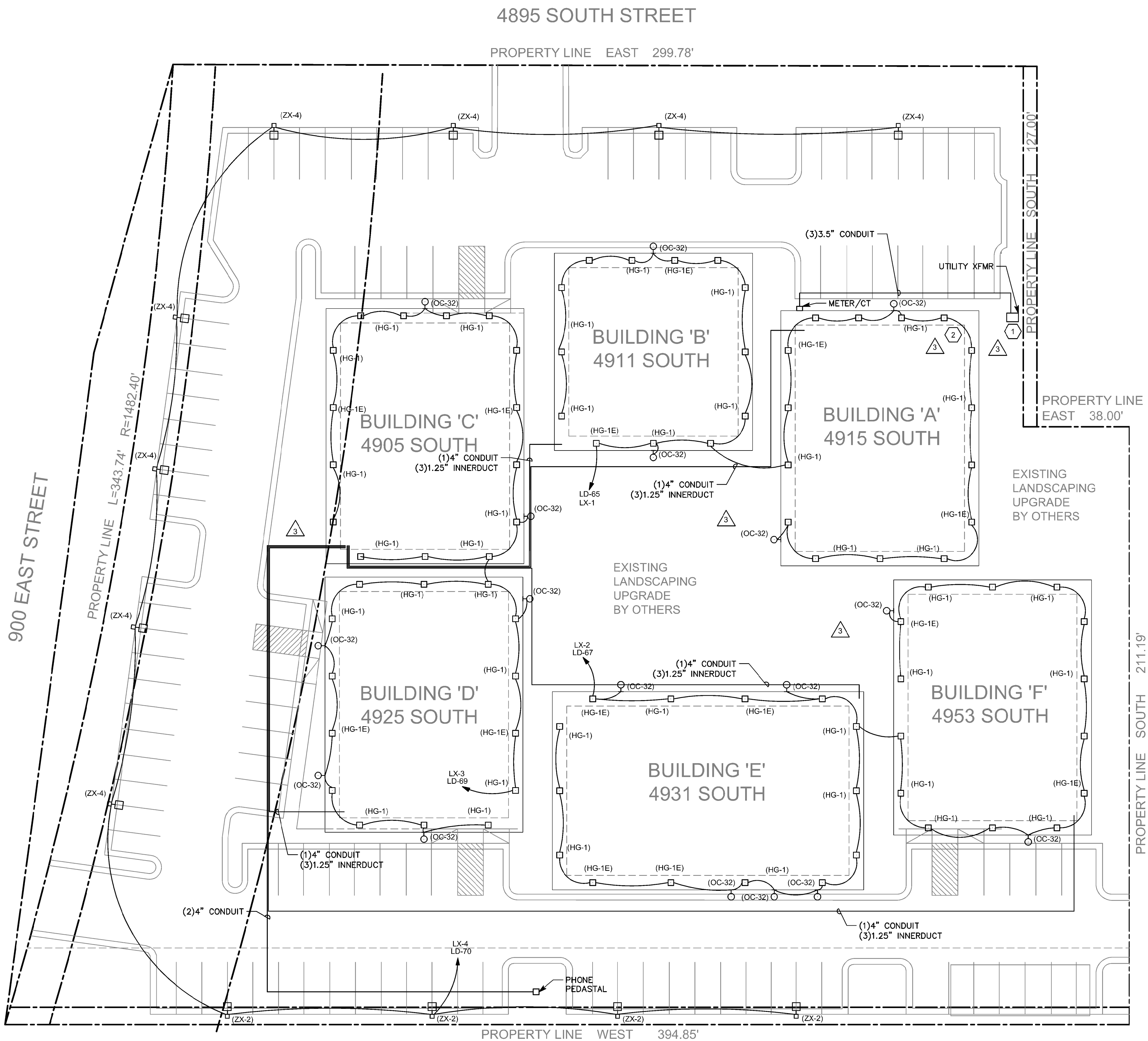
**title**  
SYMBOL  
SCHEDULE,  
SHEET INDEX  
sheet

EE001

File Name: P:\2016\20160686\Drawings\3Sheet\Building C\86ES101.dwg Last Plotted: 2017/03/31 @ 12:48 PM By: jrw

1 ELECTRICAL SITE PLAN

SCALE: 1" = 20'-0"



GENERAL SHEET NOTES

SHEET KEYNOTES

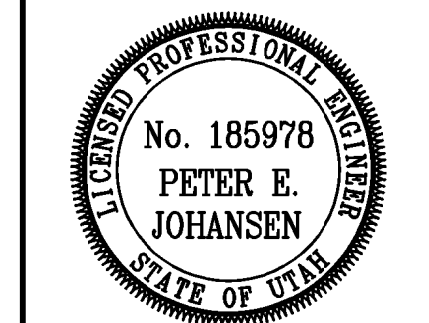
- EXISTING ROCKY MOUNTAIN TRANSFORMER. COORDINATE WITH ROCKY MOUNTAIN POWER TO DETERMINE IF THE EXISTING TRANSFORMER NEEDS TO BE REPLACED.
- THE EXISTING ELECTRICAL ROOM IS LOCATED IN NORTHEAST CORNER OF BUILDING A. ALL OF THE ELECTRICAL EQUIPMENT IN THIS ROOM IS TO BE DEMOLISHED, INCLUDING THE ELECTRICAL PANEL AND METER CENTER. REMOVE ALL ASSOCIATED WIRING BACK TO THE UTILITY TRANSFORMER.

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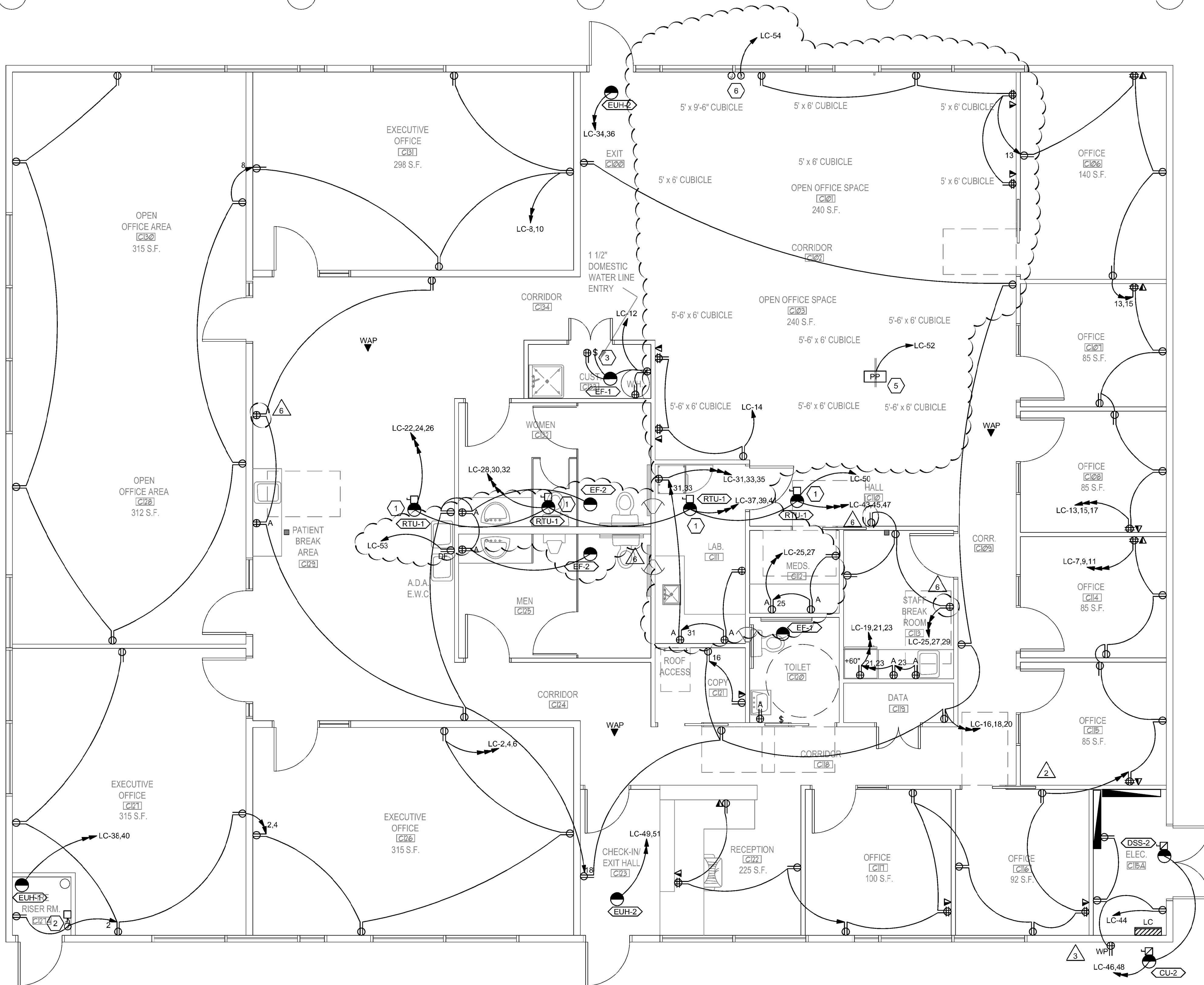
ELECTRICAL SITE  
PLAN

sheet

ES101

BUILDING 'C' 4905 South 900 East PARCEL #22081850080000





## GENERAL SHEET NOTES

1.

## SHEET KEYNOTES

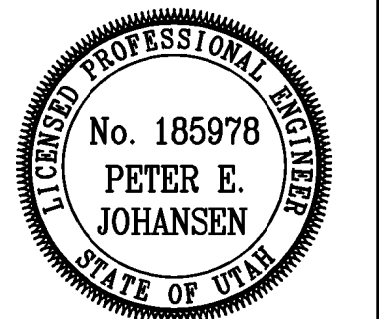
1. RTU LOCATED ON ROOF. PROVIDE 208/3 DEDICATED CIRCUIT FOR EACH RTU AND A 120/1 CIRCUIT FOR ALL CONVENIENCE OUTLETS INTEGRAL WITH RTU.
2. PROVIDE DEDICATED 120V CIRCUIT AND A 30/3P DISCONNECT FOR FIRE ENTRY FLOW SWITCH AND AIR COMPRESSOR.
3. PROVIDE A 20A/1P SWITCH TO CONTROL CUSTODIAN EXHAUST FAN.
4. PROVIDE SYSTEMS FURNITURE POWER CONNECTION WHIP WITH INDICATED NUMBER OF CIRCUITS AND FURNITURE DATA CONNECTION WHIP WITH NUMBER OF DATA DROPS SHOWN ON THE PLANS. DATA INSTALLER WILL MAKE ALL DATA CABLING TERMINATIONS IN SYSTEMS FURNITURE. PROVIDE TWO 1.5" CONDUITS FOR DATA CABLING.
5. PROVIDE POWER POLE TO SYSTEMS FURNITURE WITH TWO RACEWAYS. ONE FOR POWER AND ONE FOR DATA. PROVIDE THE INDICATED CIRCUITS AND NUMBER OF DATA DROPS. DATA INSTALLER WILL MAKE ALL DATA CABLING TERMINATIONS IN SYSTEMS FURNITURE.

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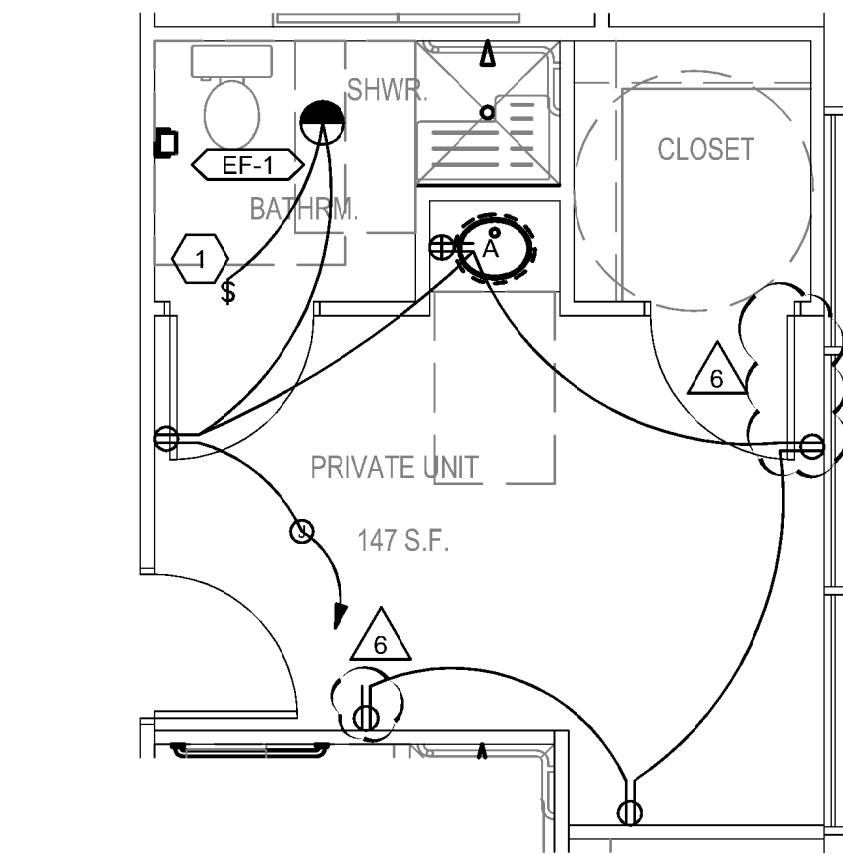
POWER PLAN -  
BUILDING 'C'

sheet

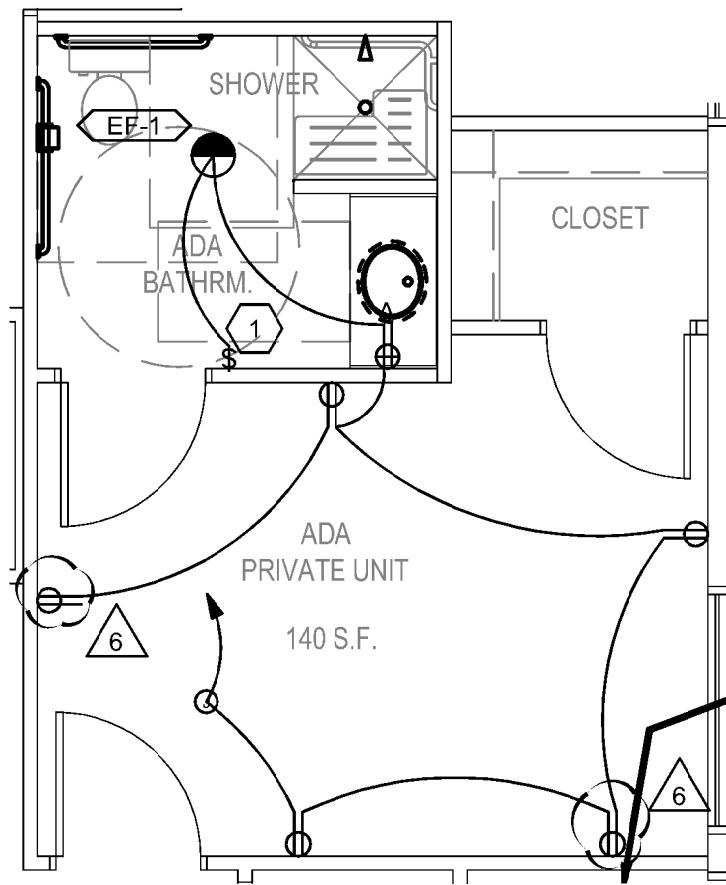
EP1 | 1C

1 POWER PLAN - BUILDING 'C'

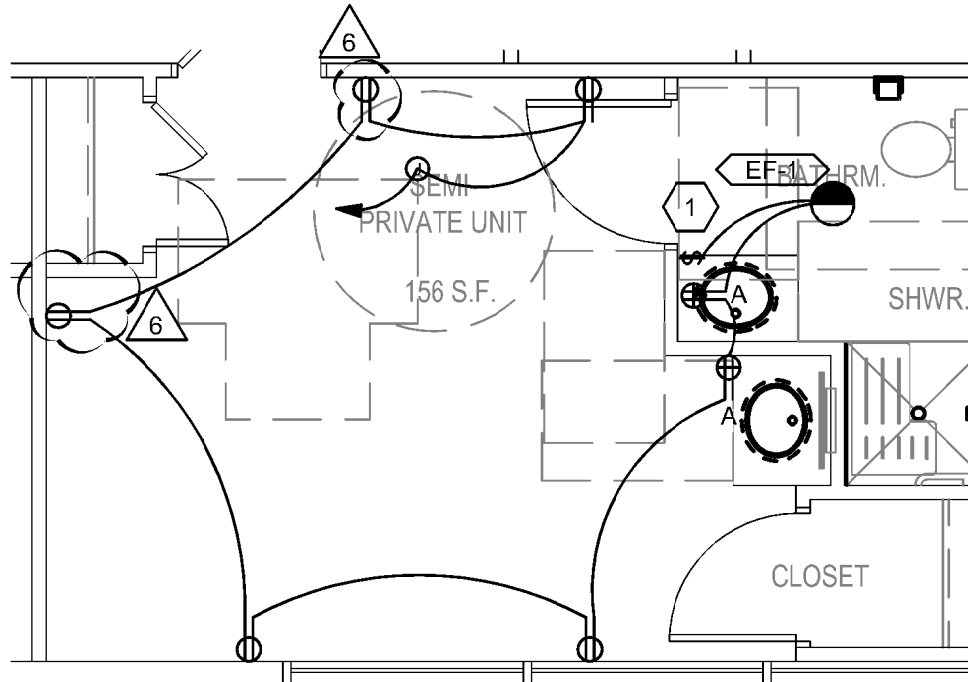
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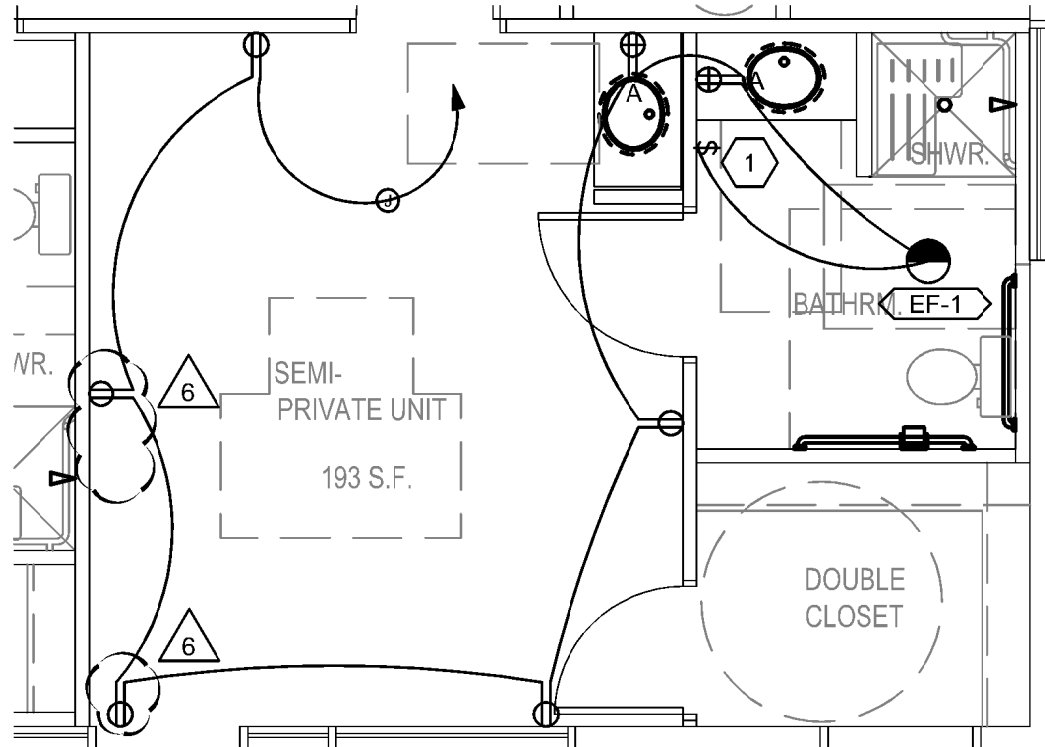
1 TYPICAL PRIVATE UNIT POWER PLAN  
SCALE: 1/4"=1'-0"



2 TYPICAL ADA PRIVATE UNIT POWER PLAN  
SCALE: 1/4"=1'-0"



3 TYPICAL SEMI-PRIVATE UNIT POWER PLAN  
SCALE: 1/4"=1'-0"



4 TYPICAL ADA SEMI-PRIVATE UNIT POWER PLAN  
SCALE: 1/4"=1'-0"

## GENERAL SHEET NOTES

- ALL BRANCH CIRCUITS FEEDING 15 AMP OR 20 AMP RECEPTACLES SHALL BE PROTECTED BY AN ARC FAULT CIRCUIT INTERRUPTER (ACFI) TYPE CIRCUIT BREAKER.
- ALL RECEPTACLES SHALL BE TAMPER RESISTANT.

## SHEET KEYNOTES

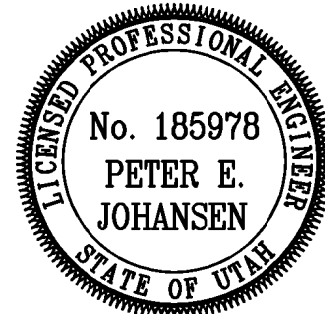
- PROVIDE A 20A/1P SWITCH TO CONTROL BATHROOM EXHAUST FAN.

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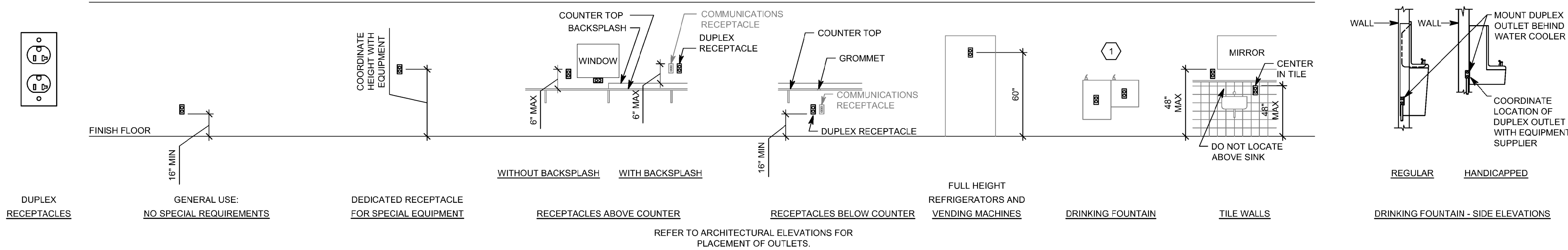
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TYPICAL POWER PLANS

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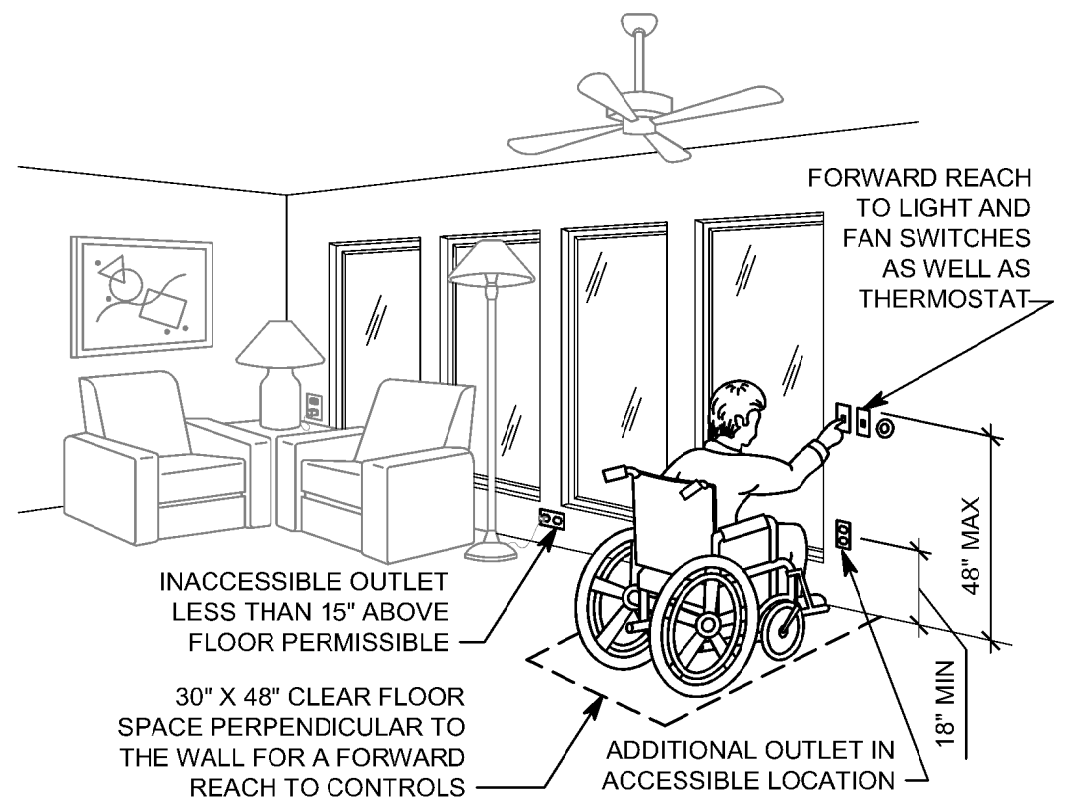
EP401





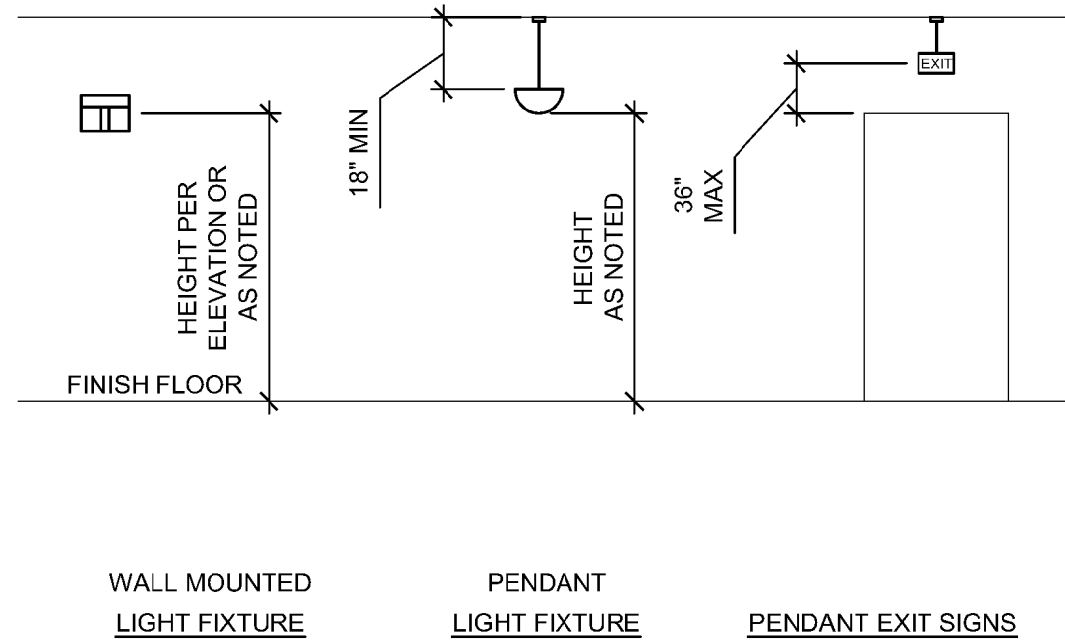
## 7 RECEPTACLE MOUNTING DETAILS

NTS



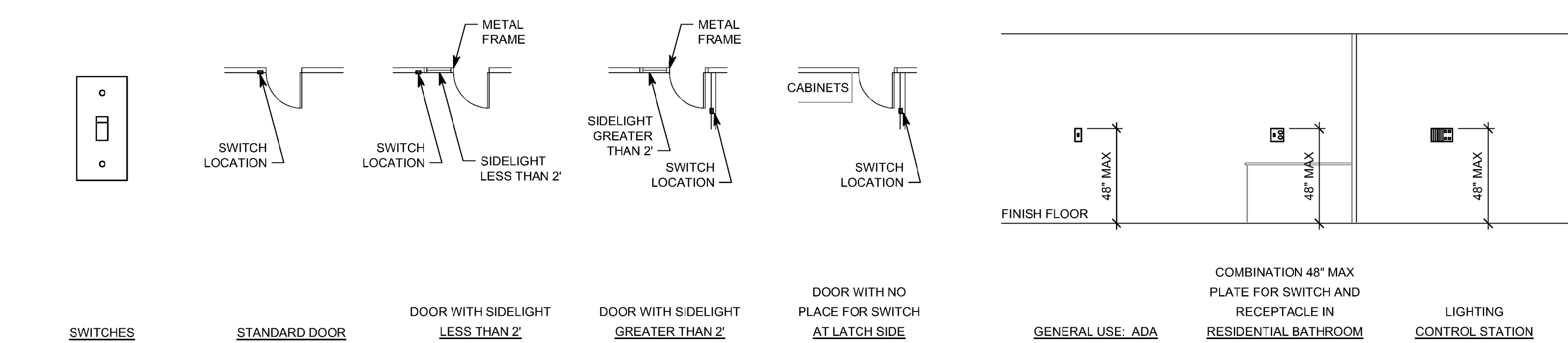
## 5 ADA DETAIL

NTS



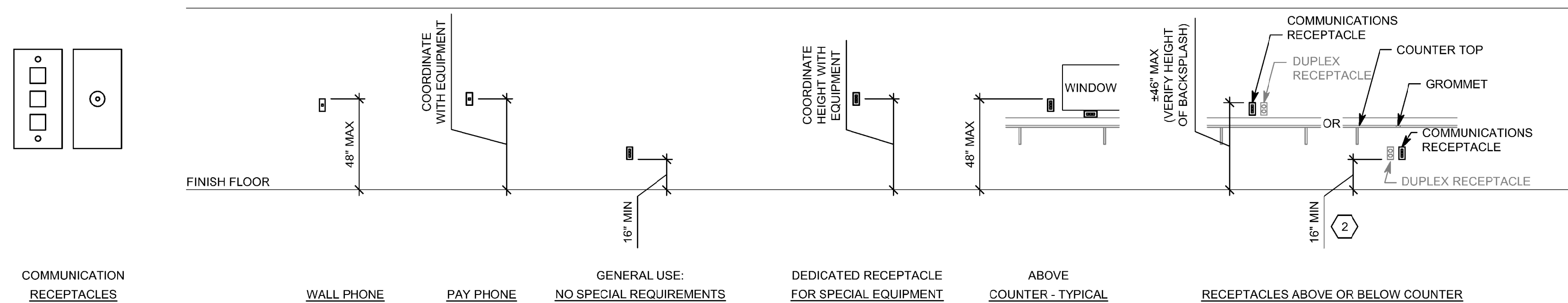
## 2 LIGHTING MOUNTING DETAILS

NTS



## 6 SWITCH MOUNTING DETAILS

NTS



## 3 COMMUNICATION MOUNTING DETAILS

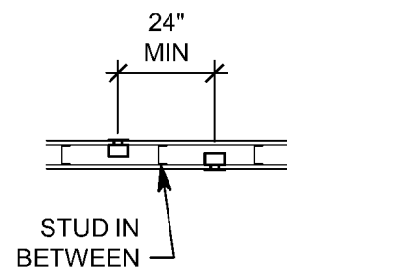
NTS

## GENERAL SHEET NOTES

1. DETERMINE MOUNTING HEIGHTS OF ELECTRICAL AND ELECTRONIC EQUIPMENT IN THE FOLLOWING ORDER OF PRIORITY:
  - 1 - ELEVATIONS (ARCHITECTURAL, ELECTRICAL, MECHANICAL, ETC).
  - 2 - EQUIPMENT SHOP DRAWINGS.
  - 3 - FIELD INSTRUCTIONS.
2. LOCATE RECEPTACLES SERVING THE SAME TYPE OF USE AT A UNIFORM HEIGHT UNLESS DIRECTED OTHERWISE.
3. MECHANICAL, ELECTRICAL, AND COMMUNICATION ROOMS: COORDINATE LOCATION OF LIGHTING AND POWER RECEPTACLES WITH EQUIPMENT, PIPING, AND DUCTWORK. DO NOT INSTALL RECEPTACLES BEHIND EQUIPMENT OR WHERE OTHERWISE INACCESSIBLE. POSITION LIGHTING REGARDLESS OF WHERE SHOWN ON DRAWING TO PROVIDE PROPER ILLUMINATION.
4. MOUNT RECEPTACLE BOXES FOR SWITCHES AND RECEPTACLES WITH LONG AXIS OF THE DEVICE VERTICAL UNLESS OTHERWISE INDICATED.
5. SET BOXES WITH PLASTER RINGS FLUSH WITH FINISHED SURFACE.
6. LOCATE BOX COVERS OR DEVICE PLATES SO THEY WILL NOT SPAN DIFFERENT TYPES OF BUILDING FINISHES EITHER VERTICALLY OR HORIZONTALLY.
7. VERIFY ALL DOOR CONDITIONS ON ARCHITECTURAL DRAWINGS PRIOR TO INSTALLING SWITCHES.
8. LOCATE WIRING DEVICES WHICH ARE ADJACENT AND ARE COMPATIBLE VOLTAGES IN ONE PLATE.

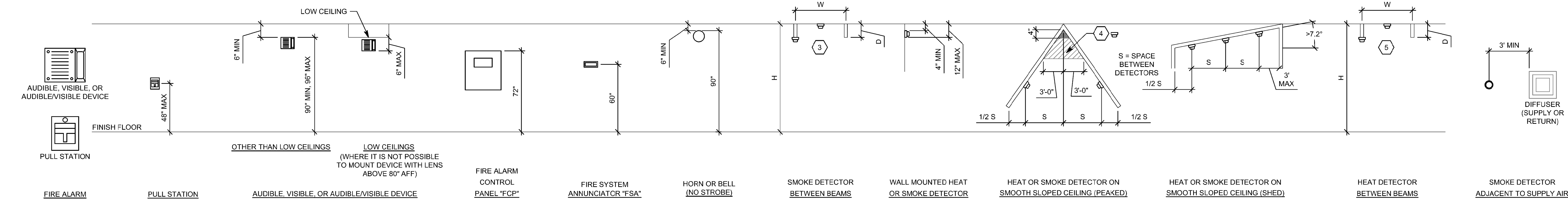
## SHEET KEYNOTES

1. LOCATE RECEPTACLES BEHIND DRINKING FOUNTAINS.
2. REFER TO ARCHITECTURAL ELEVATIONS FOR PLACEMENT OF OUTLETS.
3. LOCATE AT BOTTOM OF BEAMS IF D < 1H AND W < 4H OR AT CEILING FOR LEVEL CEILINGS. FOR PAN-TYPE CEILINGS, CORRIDORS, SMALL ROOMS, SLOPED/BEAMED CEILINGS, AND OTHER CONDITIONS, REFER TO NFPA 72.
4. LOCATE DETECTOR ANYWHERE IN SHADED AREA BUT NOT IN TOP 4" OF PEAK.
5. LOCATE AT BOTTOM OF BEAMS IF D/H < 1 OR W/H < 4; OTHERWISE, LOCATE IN BEAM POCKET. FOR D > 4 REDUCE SPACING .33 PERPENDICULAR TO BEAMS.



## 4 BOX MOUNTING DETAILS

NTS



## 1 FIRE ALARM MOUNTING DETAILS

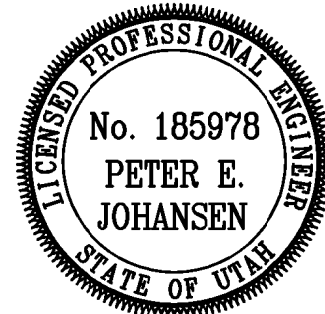
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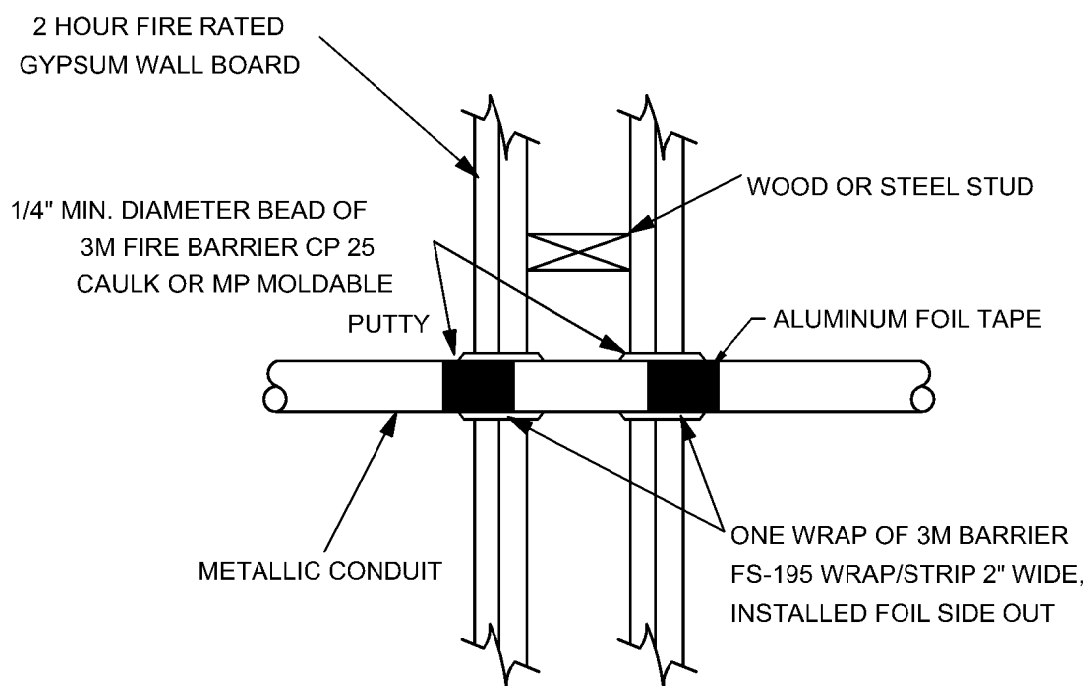
DETAILS

sheet

EP501

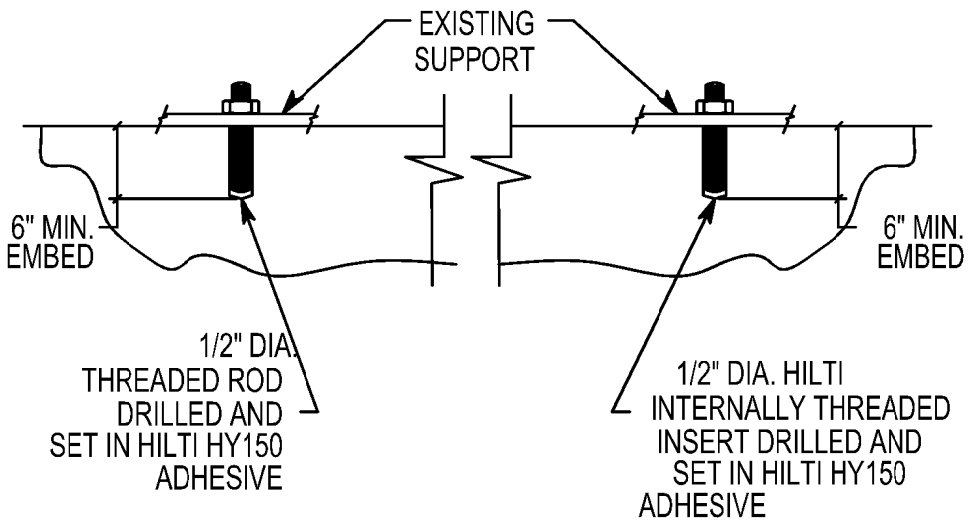
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#### 4 LIGHT WEIGHT CONCRETE ANCHORAGE



#### 1 FIRESTOP FOR METAL CONDUIT THRU GYPSUM WALL BOARD

NTS



#### OPTION 1

#### OPTION 2

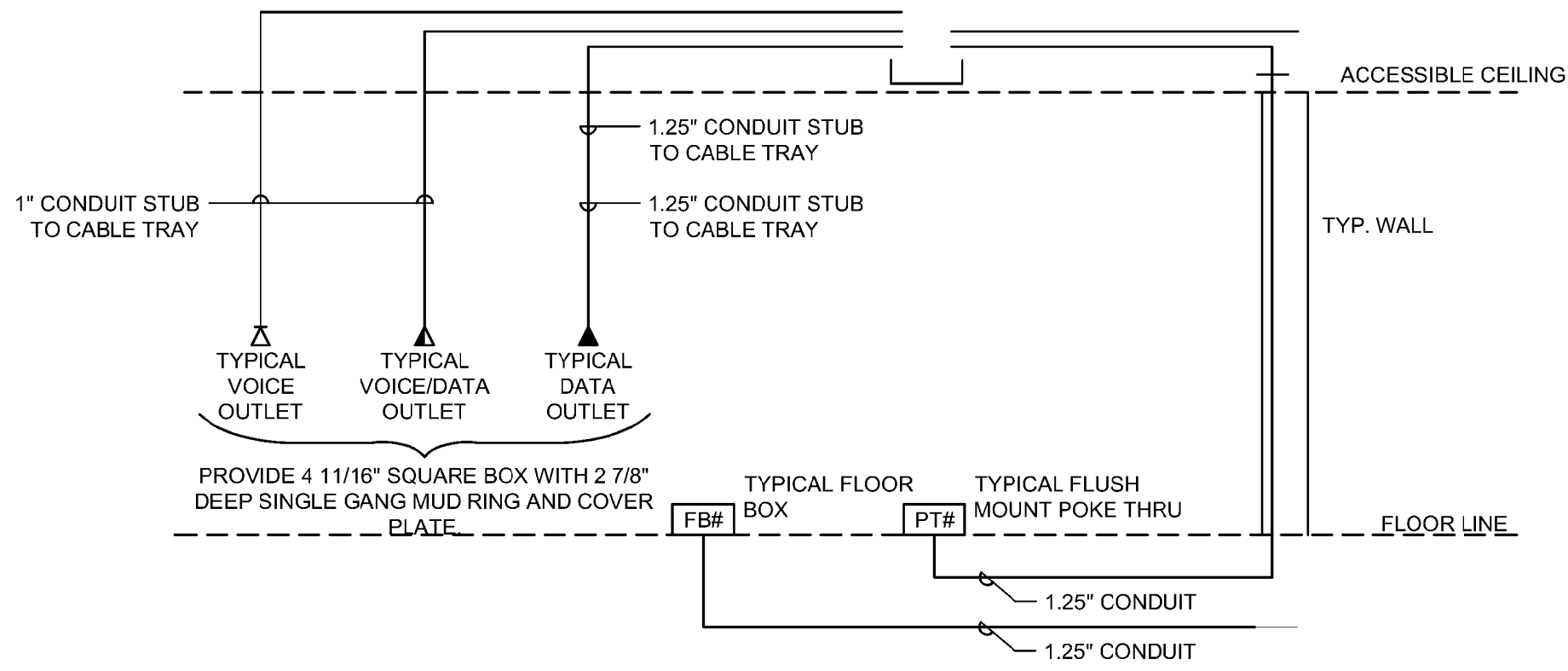
- NOTE:
1. BLOW ALL HOLES CLEAN W/OIL FREE COMPRESSED AIR.
  2. FOLLOW ALL MANUFACTURES RECOMMENDATIONS.

#### 2 TYPICAL ROUGH-IN REQUIREMENTS DETAIL

NTS

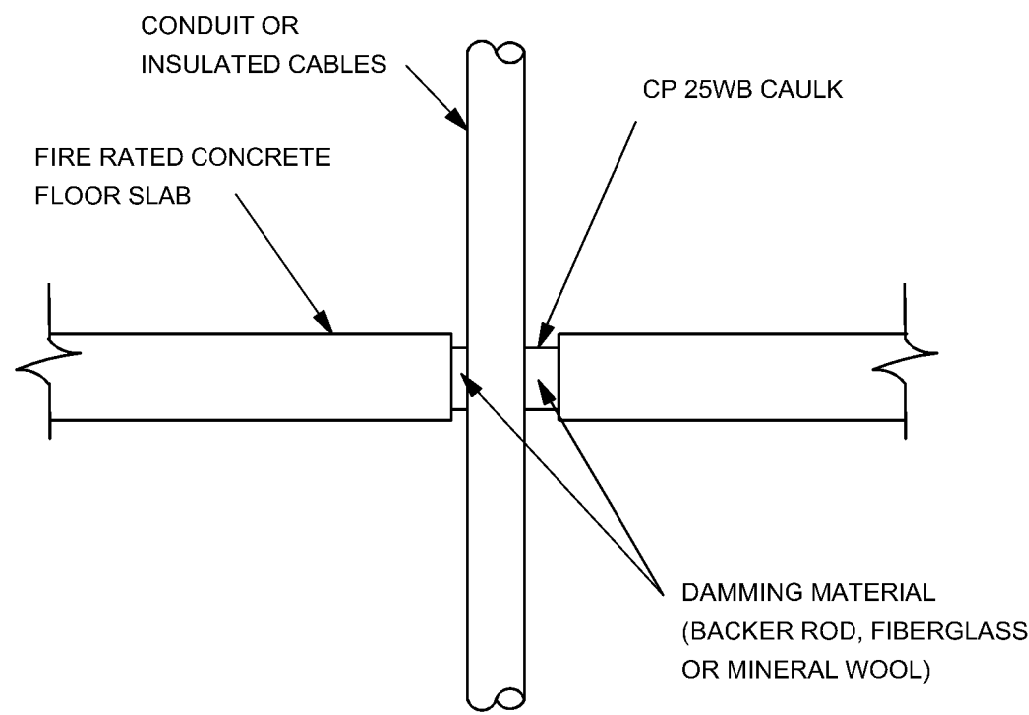
#### 5 VOICE/DATA RISER

NTS



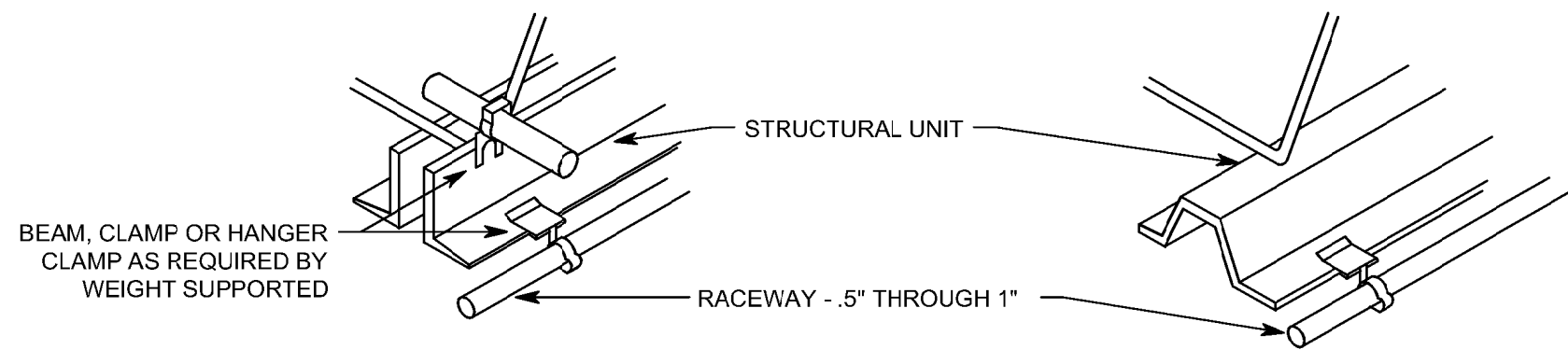
#### 7 TYPICAL FIRESTOP FOR CABLES/CONDUIT THROUGH CONCRETE FLOORING

NTS



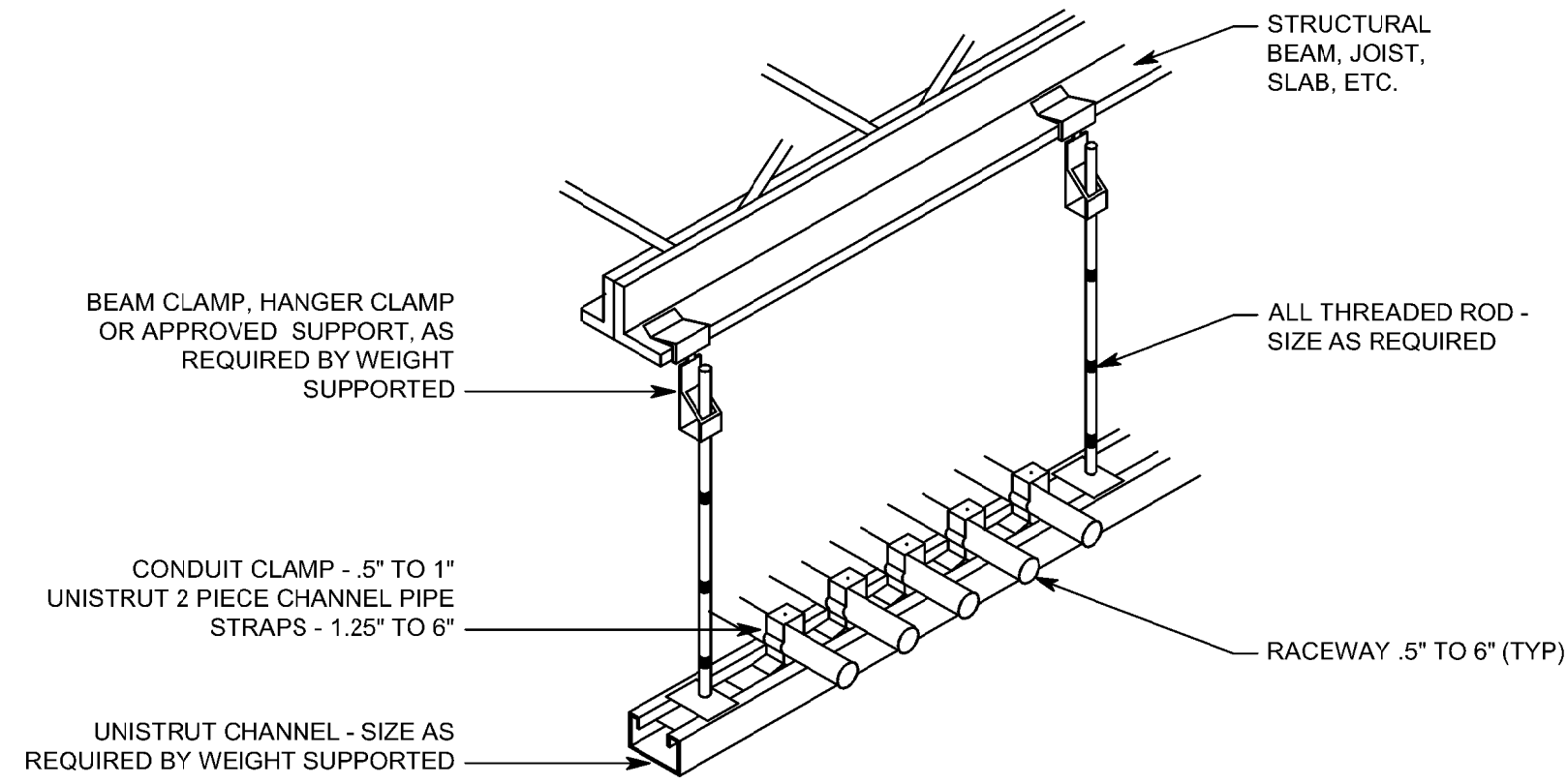
#### 3 TYPICAL RACEWAY SUPPORT METHODS DETAIL

NTS



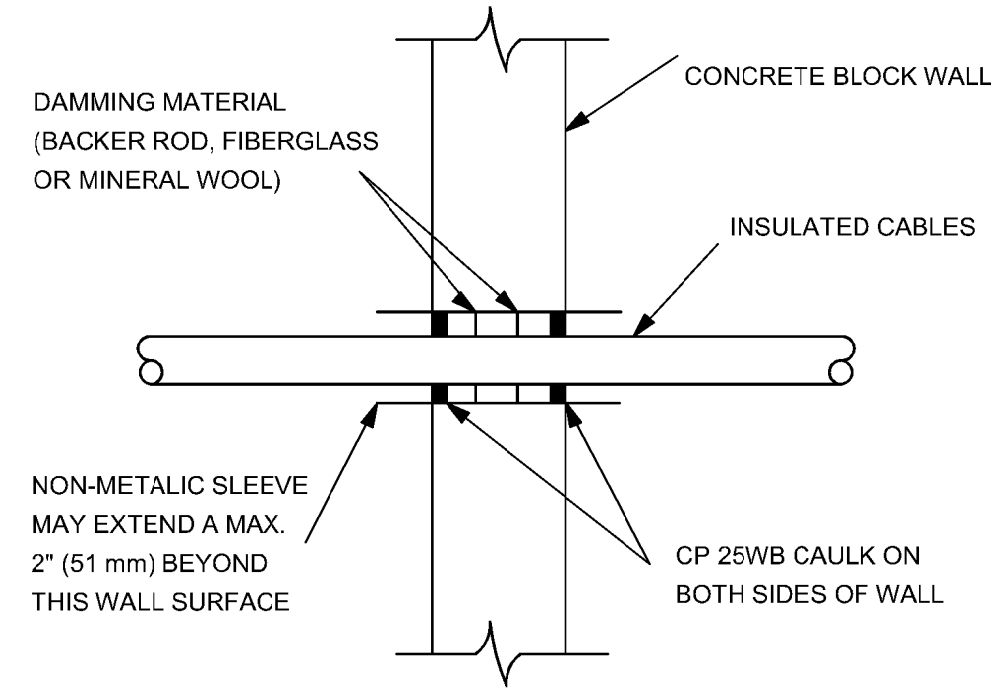
#### 6 TYPICAL CONDUIT RACK DETAIL

NTS



#### 8 TYPICAL FIRESTOP FOR CABLES/CONDUIT THROUGH CONCRETE WALLS

NTS



#### GENERAL NOTES

1. TYPICAL FOR WOOD AND METAL STUD ROUGH-IN.
2. PLASTER RINGS NOT SHOWN.
3. LOCATE ALL OUTLET BOXES IN ACCORDANCE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS AND WITH ALL APPLICABLE SHOP DRAWINGS.
4. IN ACCORDANCE WITH UBC 709-7 EXCEPTION 1, OUTLETS ON OPPOSITE SIDES OF WALLS OR PARTITIONS IN THE SAME STUD SPACE IN A RATED FIRE SEPARATION WALL MUST BE SEPARATED BY A MINIMUM OF 24" HORIZONTAL DISTANCE.
5. IN NON-RATED WALLS, OUTLETS ON OPPOSITE SIDES OF WALLS OR PARTITIONS MUST BE SEPARATED BY 16" FOR SOUND ATTENUATION.

BUILDING 'C' 4905 South 900 East PARCEL #22081850080000

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DETAILS

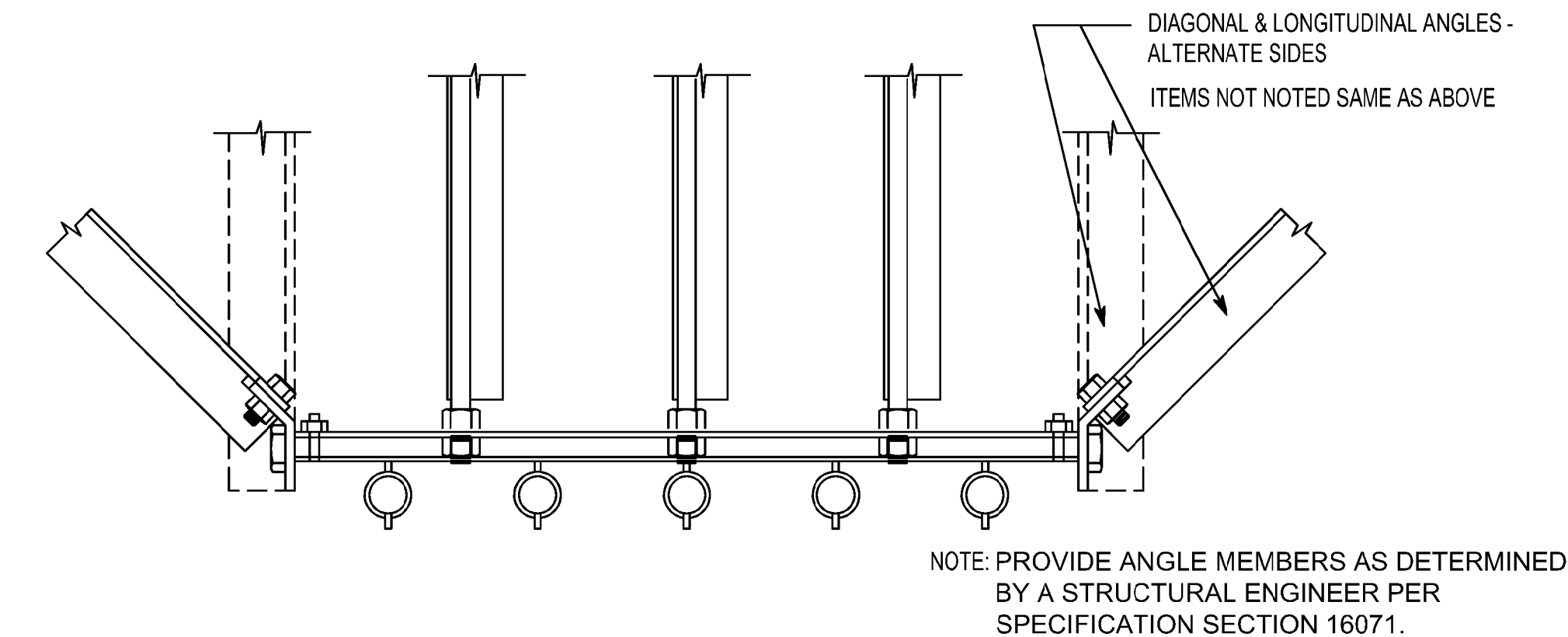
#### sheet

EP5.02

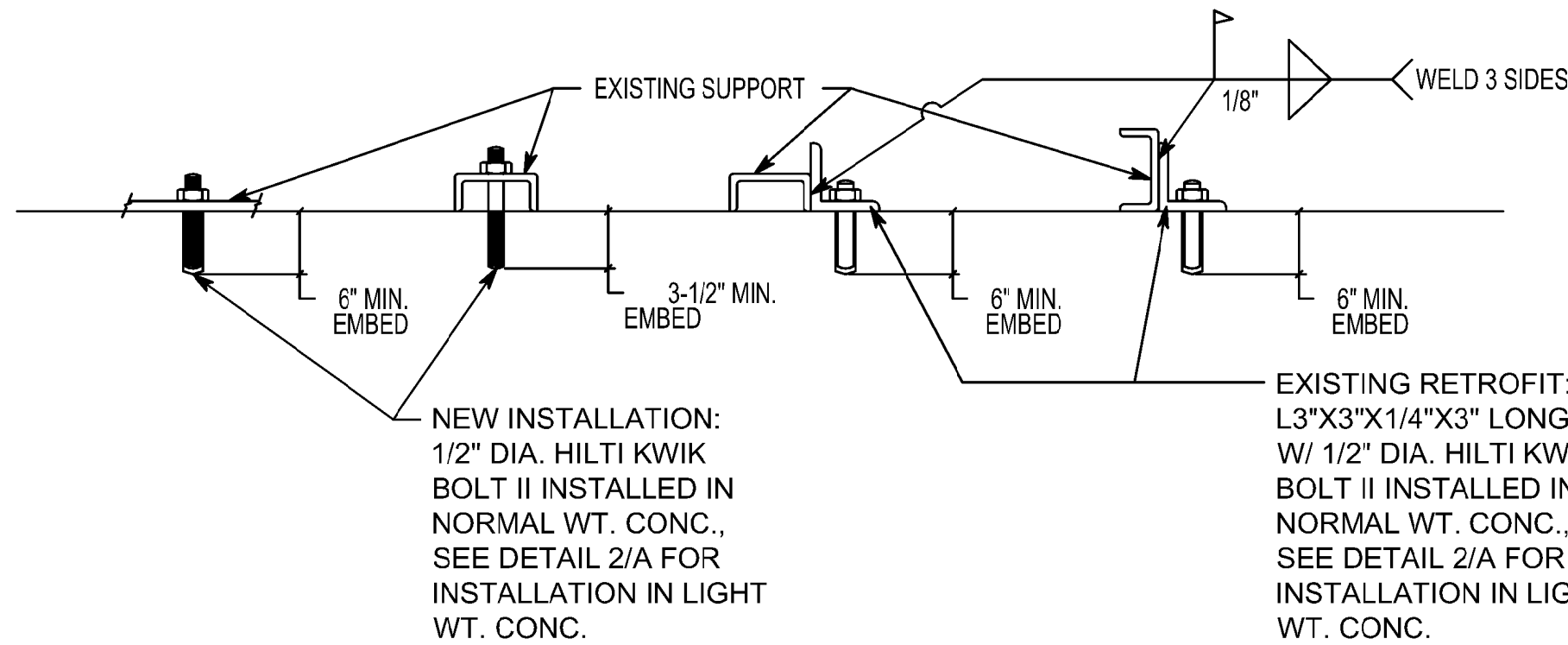


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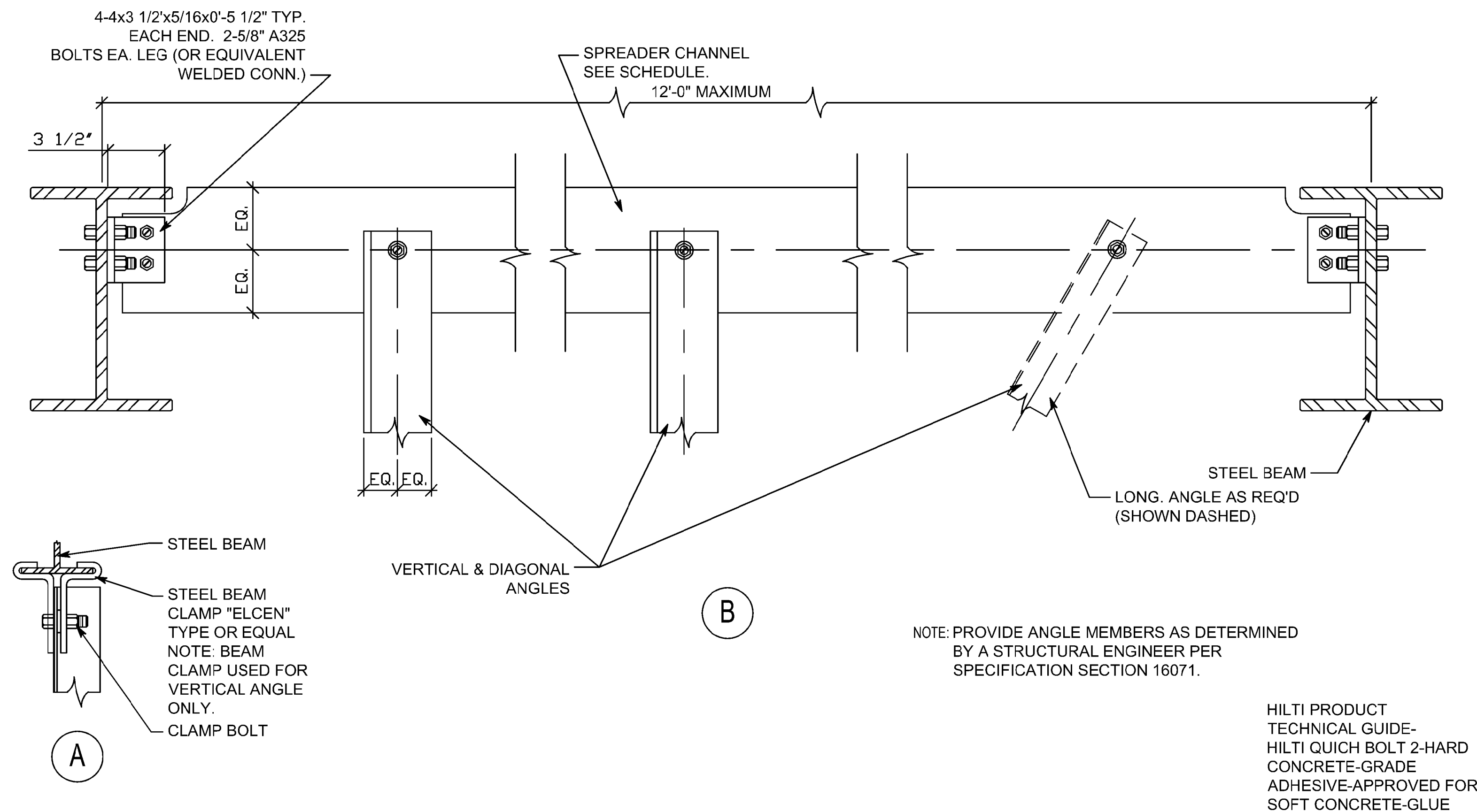
## 5 TYPICAL CONDUIT RACK BRACING



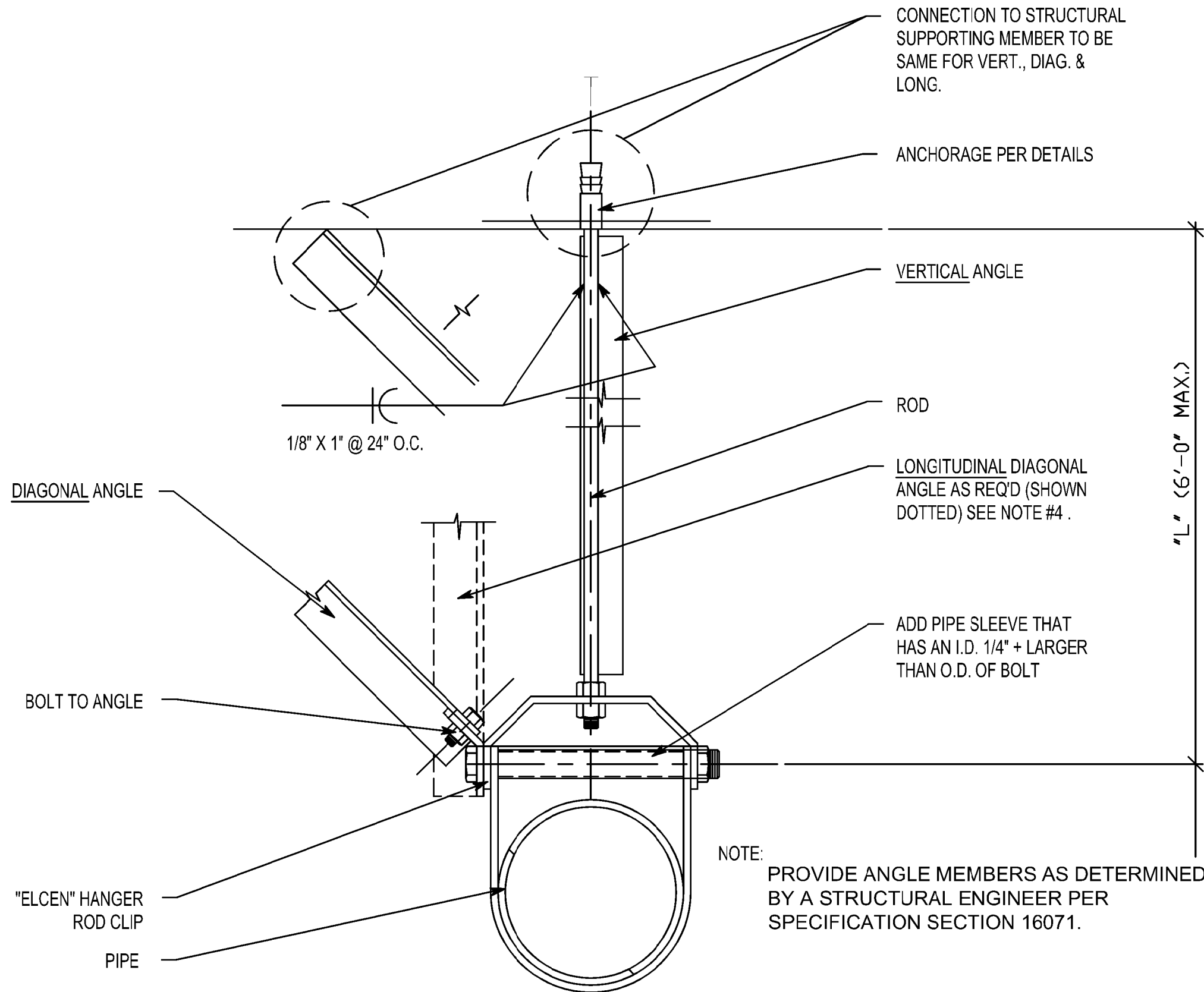
## 3 NORMAL WEIGHT CONCRETE ANCHORAGE



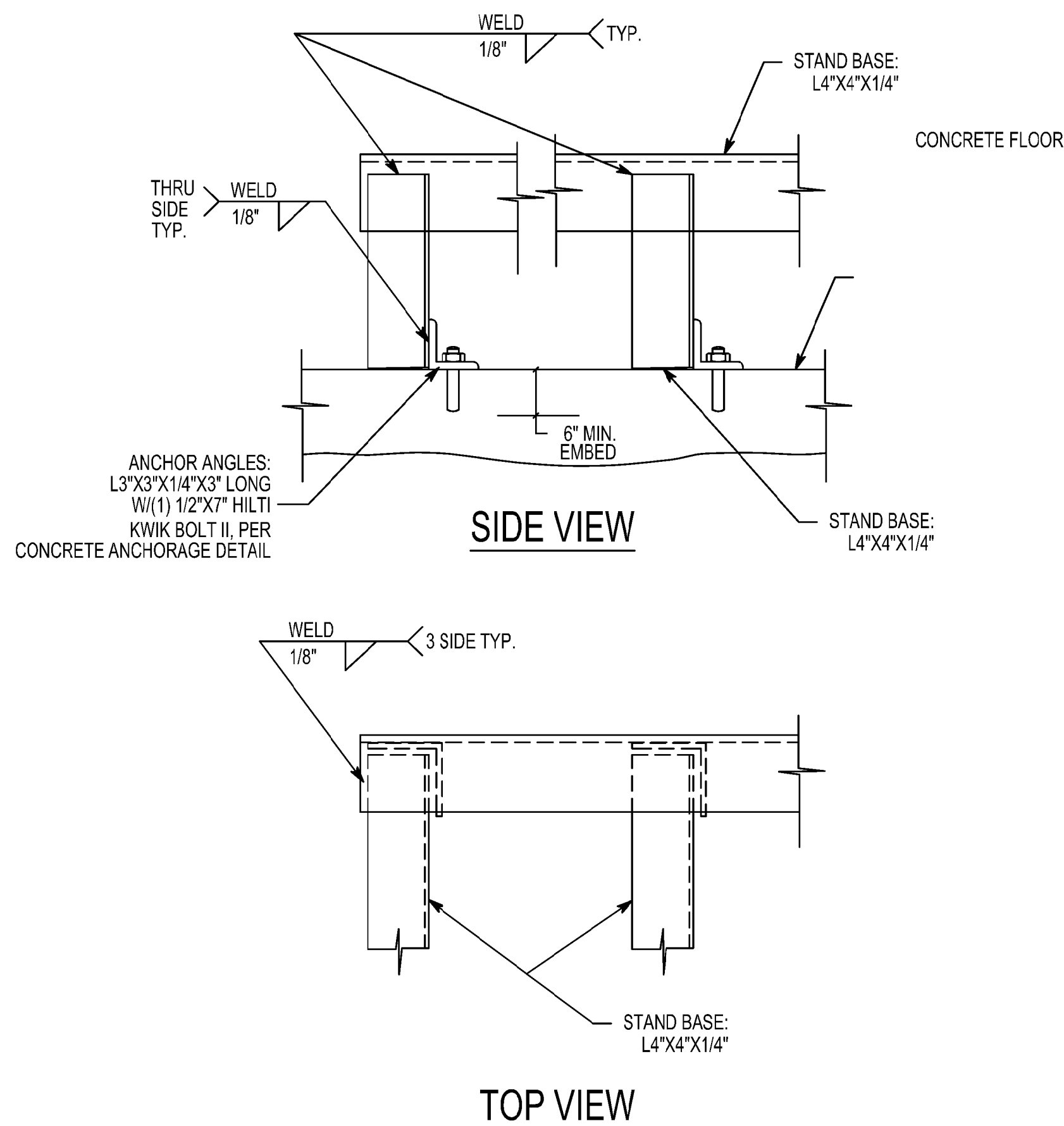
## 1 TYPICAL SINGLE CONDUIT BRACING



## 4 TYPICAL SINGLE CONDUIT BRACING



## 2 BASE STAND



### SEISMIC BRACING GENERAL NOTES

- BRACE ALL CONDUIT WITH 2 1/2" I.D. AND LARGER, AND ALL BUSWAY, CABLE TRAY AND CONDUIT RACKS.
- DETAILS SHOWN PROVIDE A LATERAL BRACING SYSTEM. A TYPICAL VERTICAL SUPPORT SYSTEM MUST ALSO BE USED. HOWEVER, WHERE BRACE OCCURS THE VERTICAL ANGLE SHOWN MAY REPLACE A TYPICAL VERTICAL SUPPORT.
- TRANSVERSE BRACING AT 30'-0" O.C. MAX.
- LONGITUDINAL BRACINGS AT 60'-0" O.C. MAX.
- TRANSVERSE BRACING FOR ONE CONDUIT OR BUSWAY SECTION MAY ALSO ACT AS LONGITUDINAL BRACING FOR THE CONDUIT OR BUSWAY SECTION CONNECTED PERPENDICULAR TO IT, IF THE BRACING IS INSTALLED WITHIN 24" OF THE ELBOW OR TEE AND SIMILAR SIZE.
- DO NOT USE BRANCH LINES TO BRACE MAIN LINES.
- PROVIDE FLEXIBILITY IN JOINTS WHERE PIPES PASS THROUGH BUILDING SEISMIC OR EXPANSION JOINTS, OR WHERE RIGIDLY SUPPORTED PIPES CONNECT TO EQUIPMENT WITH VIBRATION ISOLATORS.
- AT VERTICAL CONDUIT AND BUSWAY RISERS, WHEREVER POSSIBLE, SUPPORT OF WEIGHT OF THE RISER AT A POINT OR POINTS ABOVE THE CENTER OF GRAVITY OF THE RISER. PROVIDE LATERAL GUIDES AT THE TOP AND BOTTOM OF THE RISER, AND AT INTERMEDIATE POINTS NOT TO EXCEED 30'-0" ON CENTER.
- PROVIDE LARGE ENOUGH CONDUIT SLEEVES THROUGH WALLS OR FLOORS TO ALLOW FOR ANTICIPATED DIFFERENTIAL MOVEMENTS.
- DO NOT FASTEN ONE RIGID CONDUIT OR BUSWAY SYSTEM TO TWO DISSIMILAR PARTS OF A BUILDING THAT MAY RESPOND IN A DIFFERENT MODE DURING AN EARTHQUAKE: FOR EXAMPLE, A WALL AND A ROOF.
- REFER TO SPECIFICATIONS AND MANUFACTURER'S LITERATURE FOR ADDITIONAL REQUIREMENTS.

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### consultant:



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**Tenant Finish  
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4905, 4911, 4915, 4925,  
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East  
Salt Lake County, Utah

### date

January 04, 2017

### revisions

- PERMIT SET-December 28, 2016
- ADDENDUM #1-January 04, 2017
- ADDENDUM #2-January 06, 2017
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- ADDENDUM #5-January 19, 2017
- ADDENDUM #7-March 31, 2017

### data

project no:  
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**title**  
DETAILS

### sheet

EP503

FAULT CURRENT TABLE	
BUS	FAULT CURRENT
METER/CT	25,009 SCA
MDP	24,762 SCA
LA	23,147 SCA
LB	10,931 SCA
LC	7,729 SCA
LD	8,216 SCA
LE	7,572 SCA
LF	9,682 SCA

PROVIDE FULLY RATED CIRCUIT BREAKERS IN PANELBOARDS FOR THE FAULT CURRENT SHOWN. SERIES RATINGS WITH NEXT LEVEL UPSTREAM OVERCURRENT PROTECTIVE DEVICES ARE PERMITTED SUBJECT TO FACTORY UL DOCUMENTATION OF SERIES RATING SUBMITTED TO ENGINEER. IF DEVICE OR EQUIPMENT FAULT CURRENT RATING IS NOT SHOWN, ASSUME 100,000 AIC.

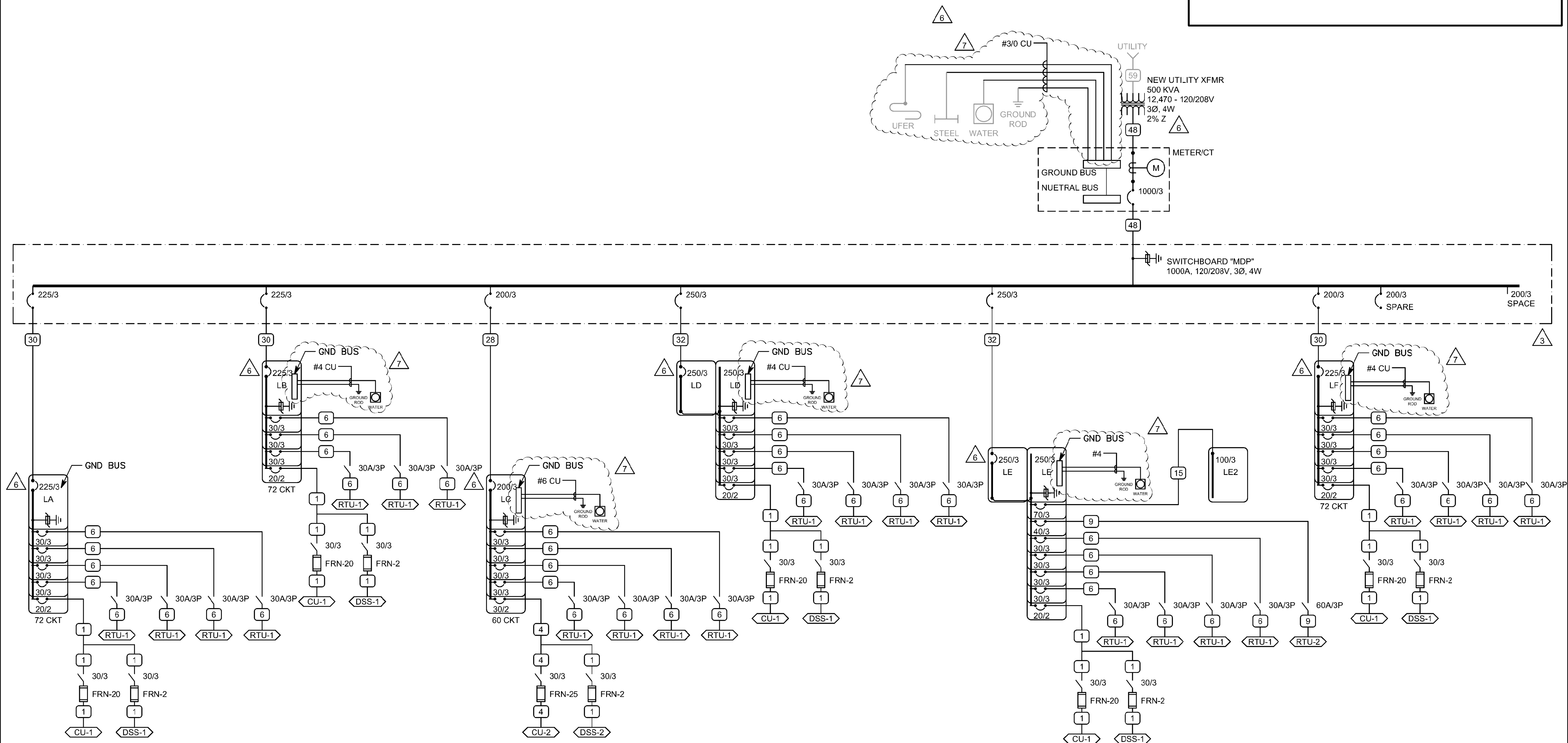
EQUIPMENT SCHEDULE																													
MARK	ITEM DESCRIPTION	LOAD DATA						WIRE AND CONDUIT SIZE	COND. AND CONDUIT SCHED.	FURN BY	OVERCURRENT PROTECTION		DISCONNECT		STARTER DATA										NOTES	MARK			
		HP	KW	MCA	FLA	VOLT	PH				DEVICE	LOCATION	FURN BY	DEVICE	LOCATION	FURN BY	DEVICE	LOCATION	SIZE	SPEED	CTRL VOLT	SELECTOR SWITCH	PUSH BUTTON	PILOT LAMP			NORMALLY OPEN CONTACTS	NORMALLY CLOSED CONTACTS	PHASE FAILURE RELAY
EUH-1	ELECTRIC UNIT HEATER WATER ENTRIES	3.3	20	15.86	208	1	60	2 #12, #12 GR 0.75" CND	1	E	20A2P CB	PANEL	E	THERMAL SWITCH	ADJ TO EQUIP	E													EUH-1
EUH-2	ELECTRIC UNIT HEATER EXIT DOORS	2.0	12	9.6	208	1	60	2 #12, #12 GR 0.75" CND	1	E	20A2P CB	PANEL	E	THERMAL SWITCH	ADJ TO EQUIP	E													EUH-2
EUH-3	ELECTRIC UNIT HEATER CUSTODIAN	1.5	9	7.2	208	1	60	2 #12, #12 GR 0.75" CND	1	E	20A2P CB	PANEL	E	THERMAL SWITCH	ADJ TO EQUIP	E													EUH-3
EF-1	EXHAUST FAN PRIVATE UNIT BATH-ROOMS	.06	.06		120	1	60	2 #12, #12 GR 0.75" CND	1	E	20A1P CB	PANEL	E	THERMAL SWITCH	ADJ TO EQUIP	E													AC-1
EF-2	EXHAUST FAN PRIVATE UNIT BATH-ROOMS	.01	.01		120	1	60	2 #12, #12 GR 0.75" CND	1	E	20A1P CB	PANEL	E	THERMAL SWITCH	ADJ TO EQUIP	E													AC-1
GEF-1	EXHAUST FAN	2	9.5	7.5	208	3	60	3 #12, #12 GR 0.75" CND	2	E	20A5P CB	PANEL	E	30A3P FRN-10	ADJ TO EQUIP	E	FVNR			HOA		R,G	2		2				GEF-1
RTU-1	ROOF TOP UNIT BUILDING ROOFS				191			4 #10, #10 GR 0.75" CND	6	E	30A2P CB	PANEL	E	30A3P	ADJ TO EQUIP	E											1		RTU-1
RTU-2	ROOF TOP UNIT BUILDING ROOFS				289			4 #8, #10 GR 1" CND	9	E	40A5P CB	PANEL	E	30A3P	ADJ TO EQUIP	E	FVNR			HOA		R,G	2		2		1		RTU-2
MAU-1	MAKE UP AIR UNIT	1.5	102	6.6	208	3	60	3 #12, #12 GR 0.75" CND	2	E	20A5P CB	PANEL	E	30A3P FRN-9	ADJ TO EQUIP	E	FVNR			HOA		R,G	2		2				MAU-1
DSS-1	SPLIT SYSTEM INDOOR UNIT				0.25		208	1	60	2 #12, #12 GR 0.75" CND	1	E	20A5P CB	PANEL	E	30A3P	ADJ TO EQUIP			FRN-2									DSS-1
CU-1	SPLIT SYSTEM OUTDOOR UNIT				16	12.8		208	1	60	2 #12, #12 GR 0.75" CND	1	E	20A5P CB	PANEL	E	30A3P	ADJ TO EQUIP			FRN-20								CU-1
DSS-2	SPLIT SYSTEM INDOOR UNIT				0.4		208	1	60	2 #12, #12 GR 0.75" CND	1	E	20A5P CB	PANEL	E	30A3P	ADJ TO EQUIP			FRN-2									DSS-2
CU-2	SPLIT SYSTEM OUTDOOR UNIT				20	16		208	1	60	2 #10, #10 GR 0.75" CND	4	E	30A5P CB	PANEL	E	30A3P	ADJ TO EQUIP			FRN-25								CU-2

1 120V convenience outlet integral to unit.


EQUIPMENT SCHEDULE KEY	
E	DIVISION 26
Q	FURNISHED WITH THE EQUIPMENT
*	COORDINATE WITH THE DIVISION 23 TEMPERATURE CONTROL INSTALLER
**	AUTOMATIC CONTROL WIRING BY DIVISION 23


## GENERAL SHEET NOTES

1. ALL OVERCURRENT PROTECTIVE DEVICES SHALL HAVE THE SAME AIC RATING AS THE PANEL OR GEAR THEY ARE LOCATED WITHIN.
2. ALL ELECTRICAL EQUIPMENT SHALL BE FIELD MARKED WITH THE CALCULATED AVAILABLE FAULT CURRENT PER NEC 110.24(A).



## COPPER CONDUCTOR AND CONDUIT SCHEDULE


 SCHEDULE NUMBER  
 SUBSCRIPT (NOTE 5)

(E.G.)  <sub>IG</sub>

SYM	AMP	CONDUIT SIZE	CONDUCTOR(NOTE 1)			IG/HH	SBJ	NOTES
			QTY	SIZE	G			
1	20	.75	2	12	12	12	8	2
2	20	.75	3	12	12	12	8	2,3
3	20	.75	4	12	12	12	8	2,3
4	30	.75	2	10	10	10	8	2
5	30	.75	3	10	10	10	8	2
6	30	.75	4	10	10	10	8	2
7	40	1	2	8	10	8	6	2
8	40	1	3	8	10	8	6	2
9	40	1	4	8	10	8	6	2
10	55	1	2	6	10	8	4	2
11	55	1	3	6	10	8	4	2
12	55	1.25	4	6	10	8	4	2
13	70	1	2	4	8	4	2	2
14	70	1.25	3	4	8	4	2	2
15	70	1.25	4	4	8	4	2	2
16	85	1.25	2	3	8	3	2	2
17	85	1.25	3	3	8	3	2	2
18	85	1.25	4	3	8	3	2	2
19	95	1.25	3	2	8	2	2	2
20	95	1.50	4	2	8	2	2	2
21	130	1.50	3	1	6	2	2	2
22	130	1.50	4	1	6	2	2	2
23	150	2	3	1/0	6	2	1/0	2
24	150	2	4	1/0	6	2	1/0	2
25	175	2	3	2/0	6	2	2/0	2
26	175	2	4	2/0	6	2	2/0	2
27	200	2	3	3/0	6	2	2/0	2
28	200	2.50	4	3/0	6	2	2/0	2
29	230	2.50	3	4/0	4	2	2/0	2
30	230	2.50	4	4/0	4	2	2/0	2
31	255	2.50	3	250	4	1	2/0	2
32	255	2.50	4	250	4	1	2/0	2
33	310	3	3	350	3	1/0	3/0	2
34	310	3	4	350	3	1/0	3/0	2
35	380	3.50	3	500	3	3/0	3/0	2
36	380	4	4	500	3	3/0	3/0	2
37	400	2 EA 2	3	3/0	3	3/0	3/0	2
38	400	2 EA 2.50	4	3/0	3	3/0	3/0	2
39	510	2 EA 2.50	3	250	1	4/0	3/0	2
40	510	2 EA 3	4	250	1	4/0	3/0	2
41	620	2 EA 3	3	350	1/0	4/0	3/0	2,4
42	620	2 EA 3	4	350	1/0	4/0	3/0	2,4
43	760	2 EA 3.50	3	500	1/0	4/0	3/0	2,4
44	760	2 EA 4	4	500	1/0	4/0	3/0	2,4
45	855	3 EA 3	3	300	2/0	4/0	3/0	2,4
46	855	3 EA 3	4	300	2/0	4/0	3/0	2,4
47	1000	3 EA 3.50	3	400	2/0	4/0	3/0	4
48	1000	3 EA 3.50	4	400	2/0	4/0	3/0	4
49	1140	3 EA 4	3	500	3/0	4/0	3/0	4
50	1140	3 EA 4	4	500	3/0	4/0	3/0	4
51	1240	4 EA 3	3	350	3/0	4/0	3/0	4
52	1240	4 EA 3	4	350	3/0	4/0	3/0	4
53	1675	5 EA 4	4	400	4/0	4/0	4/0	4
54	2010	6 EA 4	4	400	250	250	250	4
55	2660	7 EA 4	4	500	350	350	350	4
56	3040	8 EA 4	4	500	500	500	500	4
57	4180	11 EA 4	4	500	500	500	500	4
58		5 EA 4						6
59		5						6
60		10 EA 4						6

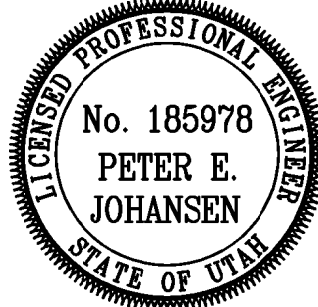
### CONDUCTOR AND CONDUIT SCHEDULE NOTES

1. CONDUCTORS SHOWN ARE SHOWN FOR EACH CONDUIT WITH MODIFICATIONS AS NOTED IN NOTE 5. ALL CONDUCTORS SHOWN ARE THWN UNLESS OTHERWISE NOTED.
2. PROVIDE EQUIPMENT GROUNDING CONDUCTORS PER TABLE 250-122 WHEN CIRCUIT BREAKERS ARE SIZED GREATER THAN AMPERE RATING SHOWN IN TABLE.
3. PROVIDE #10 NEUTRALS FOR MULTIWIRED BRANCH CIRCUITS SERVING COMPUTERS.
4. GROUND CONDUCTOR SHALL BE OMITTED BETWEEN THE UTILITY TRANSFORMER AND THE FIRST OVERCURRENT PROTECTIVE DEVICE.
5. SYMBOL SUBSCRIPTS:
  - "2N": INCLUDE TWO NEUTRAL CONDUCTORS, SIZED AS SCHEDULED FOR PHASED AND NEUTRAL CONDUCTORS.
  - "FG": FULL SIZE GROUND, SIZE EQUIPMENT GROUNDING CONDUCTOR TO BE THE SAME SIZE AS THE PHASE CONDUCTORS.
  - "HH": NEUTRAL CURRENTS EXIST DUE TO HIGH HARMONIC "NONLINEAR" LOADS. CURRENT CARRYING CONDUCTORS DERATED ACCORDINGLY. PROVIDE THE I/G/H SIZE FOR THE EQUIPMENT GROUNDING CONDUCTOR.
  - "IG": INCLUDE IG (INSULATED/ISOLATED GROUND CONDUCTOR) SCHEDULED ALONG WITH GROUND OF EQUIPMENT GROUND CONDUCTOR.
  - "SBJ": SUBSTITUTE "SBJ" CONDUCTOR FOR "G" CONDUCTOR SHOWN, WHICH IS SIZED FOR THE SYSTEM BONDING JUMPER OF THE SEPARATELY DERIVED SYSTEM.
6. RACEWAY ONLY. CONDUCTORS PROVIDED BY UTILITY.

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ADDENDUM #3-January 11, 2017  
ADDENDUM #4-January 17, 2017  
ADDENDUM #5-January 19, 2017  
ADDENDUM #7-March 31, 2017  
ADDENDUM #8-April 12, 2017

**data**

project no:

drawn by:

# title

## ONE LINE DIAGRAM

sheet

EP6|01



6 DISTRIBUTION PANELBOARD "MDP"																				
VOLTS/PHASE/WIRE: 120/208 V, 3 PH 4 WIRE					MAIN SIZE & TYPE: 1000 AMP MAIN LUGS				LOCATION: BUILDING A				A/C RATING: 30,000 AIC			NOTES:				
ACCESSORIES: IDENTIFICATION, GROUNDING BAR, INSULATED GROUND BAR																				
CKT	NOC	AMP	POLE	LOAD (kVA)		PANEL / EQUIPMENT	LCL kVA	PHASE LOAD			LCL kVA	PANEL / EQUIPMENT	LOAD (kVA)		AMP	POLE	CKT			
				LTG	CO			A	B	C			LTG	CO				PWR		
1	200	3		1.6	7.7	17.3		27.0	59.6		33.7	LD	2.9	10.9	19.2	200	3	2		
	-	-		1.5	7.9	18.5		28.2		54.4	27.3	-	2.9	10.1	13.6	-	-	-		
	-	-		0.0	4.8	20.8		25.6		58.7	33.9	-	3.0	9.6	20.5	-	-	-		
3	200	3	1.3	5.9	16.9	14.6		24.4	57.8		34.1	LE	1.7	9.8	22.2	200	3	4		
	-	-		1.6	6.2	14.6		22.8		60.3	38.3	-	1.5	10.2	26.2	-	-	-		
	-	-		0.0	6.2	20.6		26.8		61.0	34.5	-	1.0	7.9	25.3	-	-	-		
5	200	3	1.5	9.2	10.9			22.0	48.3		27.2	LF	1.8	6.2	18.7	200	3	6		
	-	-		1.2	6.6	13.4		21.5		48.4	27.6	-	1.6	6.5	19.1	-	-	-		
	-	-		1.4	6.8	11.7		20.3		46.3	26.4	-	0.0	7.5	18.9	-	-	-		
7	200	3						0.0	0.0		0.0	SPACE					-	3		
	-	-						0.0		0.0	0.0	-					-	-		
	-	-						0.0		0.0	0.0	-					-	-		
TOTALS:								CONNECTED kVA PER PHASE			166	163	166	CONNECTED TOTAL KVA			495			
								CONNECTED AMPS PER PHASE			1381	1360	1383	CONNECTED AVERAGE AMPS PER PHASE			1375			
NEC DIVERSIFIED LOAD CALCULATIONS																				
LIGHTING 27kVA @125% =								33 kVA		ALL OTHER LOADS @100% =				328 kVA		DIVERSIFIED TOTAL KVA = 436				
RECEPTACLES 10kVA @100% =								10 kVA		25% OF LARGEST MOTOR =				0 kVA		AVERAGE AMPS PER PHASE = 1212				
REMAINDER 130kVA @ 50% =								65 kVA												

<div><div>⚠</div><div>PANEL "LA"</div><div>⚠</div></div>																													
VOLTS/PHASE/WIRE: 120/208 V, 3 PH 4 WIRE					PANEL SIZE & TYPE: 22" W x 6" D. BOLT-ON					MAIN SIZE & TYPE: 225 AMP MAIN CB					LOCATION:					AIC RATING: 42,000 AIC					NOTES:				
ACCESSORIES:					PANEL DIRECTORY. IDENTIFICATION, GROUNDING BAR, INSULATED GROUND BAR																								
CKT NO	OCP	LOAD (kVA)			DESCRIPTION	LCL kVA	PHASE LOAD			LCL kVA	DESCRIPTION	LOAD (kVA)			OCP	POLE	CKT NO												
		AMP	POLE	LTG			CO	PWR	A			B	C	LTG				CO	PWR										
1	20	1	1.3		LIGHTING	1.6	2.3			1.0	WASHER LAUNDRY A127		1.0		20	1	2												
3	20	1	1.5		LIGHTING	1.9		1.9		0.4	CO LAUNDRY A127		0.4		20	1	4												
5	30	2			DRYER LAUNDRY A101	1.3			2.6	1.3	DRYER LAUNDRY A127			1.3	30	2	6												
7	-	-			-	1.3	2.6			1.3	-			1.3	-	-	8												
9	20	1		1.0	WASHER LAUNDRY A101	1.0		2.6		1.6	ROOMS A126, A125		1.4	0.2	20	1	10												
11	20	1	1.4	0.2	ROOMS A103, A104	1.6			1.9	0.3	CUSTODIAN		0.2	0.1	20	1	12												
13	20	1	0.8		CO ROOMS A101, A102	0.8	2.0			1.2	RM A122		1.1	0.1	20	1	14												
15	20	1	0.6	0.6	WH/PUMP/FIRE COMP.	1.2		2.4		1.2	RM A119		1.1	0.1	20	1	16												
17	20	1	1.1	0.1	RM A107	1.2			1.8	0.6	CO STORAGE/DINING A130		0.6	20	1	18													
19	20	1	1.1	0.1	RM A110	1.2	2.1			0.9	CO FAMILY ROOM A131		0.9	20	1	20													
21	20	1	1.1	0.1	RM A111	1.2		2.4		1.2	RM A118		1.1	0.1	20	1	22												
23	20	1	0.9		CO RF ACCS, DINING A113	0.9			3.3	2.4	RANGE KITCHEN A132			2.4	50	2	24												
25	20	1	0.6		CO FAMILY ROOM/STOR.	0.6	3.0			2.4	-			2.4	-	-	26												
27	50	2			RANGE KITCHEN A115	2.4		3.4		1.0	REFRIGERATOR A132		1.0		20	1	28												
29	-	-		2.4	-	2.4			2.6	0.2	CO KITCHEN A132		0.2		20	1	30												
31	20	1	1.0		REFRIGERATOR A115	1.0	2.0			1.0	DISWASHER A132			1.0	20	1	32												
33	20	1	0.2		CO KITCHEN A115	0.2		1.2		1.0	GARBAGE DISP. A132			1.0	20	1	34												
35	20	1		1.0	DISHWASHER A115	1.0			2.9	1.9	RTU-1			1.9	30	3	36												
37	20	1	1.0		GARBAGE DISP. A115	1.0	2.9			1.9	-			1.9	-	-	38												
39	30	3		1.9	RTU-1	1.9		3.8		1.9	-			1.9	-	-	40												
41	-	-		1.9	-	1.9			3.8	1.9	RTU-1			1.9	30	3	42												
43	-	-		1.9	-	1.9	3.8			1.9	-			1.9	-	-	44												
45	30	3		1.9	RTU-1	1.9		3.8		1.9	-			1.9	-	-	46												
47	-	-		1.9	-	1.9			2.7	0.8	EUH-3			0.8	20	2	48												
49	-	-		1.9	-	1.9	2.7			0.8	-			0.8	-	-	50												
51	20	1	1.0		EUH-2	1.0		2.0		1.0	EUH-2			1.0	20	2	52												
53	20	1	1.0		-				2.0	1.0	-			1.0	-	-	54												
55	20	1	1.7		EUH-1	1.7	2.0			0.4	EGRESS LIGHTING	0.3			20	1	56												
57	20	1		1.7	-	1.7		3.4		1.7	CU-1/DSS-1			1.7	20	2	58												
59	20	1		0.4	KITCHEN ISLAND CO	0.4			2.1	1.7	-			1.7	-	-	60												
61	20	1	0.8		RTU CO's	0.8	1.2			0.4	KITCHEN ISLAND CO	0.4			20	1	62												
63	20	1		1.0	SMOKE DETECTORS	1.0		1.0		0.0	SPARE				20	1	64												
65	20	1			SPARE	0.0			0.0	0.0	SPARE				20	1	66												
67	20	1			SPARE	0.0	0.0			0.0	SPARE				20	1	68												
69	20	1			SPARE	0.0		0.0		0.0	SPARE				20	1	70												
71	20	1			SPARE	0.0			0.0	0.0	SPARE				20	1	72												
TOTALS:					CONNECTED KVA PER PHASE					27	28	26	CONNECTED TOTAL KVA					80											
					CONNECTED AMPS PER PHASE					221	232	213	CONNECTED AVERAGE AMPS PER PHASE					222											
NEC DIVERSIFIED LOAD CALCULATIONS																													
LIGHTING 3kVA @125% =					4 kVA					ALL OTHER LOADS @100% =					57 kVA					DIVERSIFIED TOTAL KVA = 77									
RECEPTACLES 10kVA @100% =					10 kVA					25% OF LARGEST MOTOR =					2 kVA					AVERAGE AMPS PER PHASE = 215									
REMAINDER 10kVA @ 50% =					5 kVA																								

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VOLTS/PHASE/WIRE: 120/208 V, 3 PH 4 WIRE										PANEL SIZE & TYPE: 22" W x 6" D, BOLT-ON			MAIN SIZE & TYPE: 200 AMP MAIN CB			LOCATION:			AIC RATING: 10,000 AIC			NOTES:								
ACCESSORIES:										PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR, INSULATED GROUND BAR, SUBFEED LUGS																				
CKT NO	OCP AMP	POLE	LOAD (kVA)			DESCRIPTION	LCL kVA	PHASE LOAD			LCL kVA	DESCRIPTION	LOAD (kVA)			OCP AMP	POLE	CKT NO												
			LTG	CO	PWR			A	B	C			LTG	CO	PWR															
1	20	1	1.5			LIGHTING	1.9	2.3			0.8	CO FIRE RM/FIRE COMP		0.2	0.6	20	1	2												
3	20	1	1.2			LIGHTING	1.5		2.0		0.8	GROUP ROOM C127		0.8		20	1	4												
5	20	1	1.0			LIGHTING	1.3			1.8	0.8	GROUP ROOM C126		0.8		20	1	6												
7	20	1		0.8		CO RECEPTION C122	0.8	2.0			1.2	GROUP ROOM C130,128		1.2		20	1	8												
9	20	1		1.6		CO OFFICES C117, C116	1.5		2.4		0.8	GROUP ROOM C131		0.8		20	1	10												
11	20	1		1.4		CO OFFICES C115, C114	1.4			2.4	1.0	WH/PUMP/CO DUST C133		0.2	0.8	20	1	12												
13	20	1		0.8		CO CUBICLES	0.8	1.6			0.8	CO CUBICLES		0.8		20	1	14												
15	20	1		0.8		CO OFFICE C106	0.8		1.8		1.0	COPIER COPY C121		1.0		20	1	16												
17	20	1		1.4		CO OFFICES C107, C108	1.4			2.8	1.4	CO C129, C125, C132		1.2	0.2	20	1	18												
19	20	1		1.0		REFRIGERATOR C113	1.0	2.4			1.4	CO CORR C118, 109, 102		1.4		20	1	20												
21	20	1		0.2		CO BREAK ROOM C113	0.2		2.1		1.9	RTU-1			1.9	30	3	22												
23	20	1		0.2		CO BREAK ROOM C113	0.2			2.1	1.9	-			1.9	-	-	24												
25	20	1		1.0		CO MEDS C112	1.0	2.9			1.9	-			1.9	-	-	26												
27	20	1		0.4		CO MEDS C112	0.4		2.3		1.9	RTU-1			1.9	30	3	28												
29	20	1		0.8		CO BREAK ROOM C113	0.8			2.7	1.9	-			1.9	-	-	30												
31	20	1		0.4		CO LAB C111	0.4	2.3			1.9	-			1.9	-	-	32												
33	20	1		0.2		CO LAB C111	0.2		1.2		1.0	EUH-2			1.0	20	2	34												
35	20	1		1.0		REFRIGERATOR C111	1.0			2.0	1.0	-			1.0	-	-	36												
37	30	3			1.9	RTU-1	1.9	3.6			1.7	EUH-1			1.7	20	2	38												
39	-	-			1.9	-	1.9		3.6		1.7	-			1.7	-	-	40												
41	-	-			1.9	-	1.9			2.3	0.5	EGRESS LIGHTING	0.4			20	1	42												
43	30	3			1.9	RTU-1	1.9	2.5			0.6	CO ELEC C115A		0.6		20	1	44												
45	-	-			1.9	-	1.9		4.0		2.1	CU-2/DSS-2			2.1	30	2	46												
47	-	-			1.9	-	1.9			4.0	2.1	-			2.1	-	-	48												
49	20	2			1.0	EUH-2	1.0	1.6			0.6	RTU CO'S		0.6		20	1	50												
51	-	-			1.0	-	1.0		2.4		1.4	CO CUBICLES		1.4		20	1	52												
53	20	1				DRINKING FOUNTAIN	0.0			1.4	1.4	CO CUBICLES		1.4		20	1	54												
55	20	1				SPARE	0.0	0.0			0.0	SPARE				20	1	56												
57	20	1				SPARE	0.0	0.0		0.0	0.0	SPARE				20	1	58												
59	20	1				SPARE	0.0	0.0		0.0	0.0	SPARE				20	1	60												
TOTALS:							CONNECTED KVA PER PHASE CONNECTED AMPS PER PHASE					21 177			21 182			ARC			CONNECTED TOTAL KVA CONNECTED AVERAGE AMPS PER PHASE			64 179						
NEC DIVERSIFIED LOAD CALCULATIONS																														
LIGHTING 4kVA @125% =							5 kVA			ALL OTHER LOADS @100% =							36 kVA			DIVERSIFIED TOTAL kVA = 58										
RECEPTACLES 10kVA @100% =							10 kVA			25% OF LARGEST MOTOR =							0 kVA			AVERAGE AMPS PER PHASE = 162										
REMAINDER 14kVA @ 50% =							7 kVA																							

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**consultant:**

## project:

**Tenant Finish  
for New  
Brighton  
Recovery  
Campus**  
4905, 4911, 4915, 4925,  
4931, & 4953 South 900  
East  
Salt Lake County, Utah

**date**

January 04, 2017

## revisions

PERMIT SET—December 28, 2016

1 ADDENDUM #1-January 04, 2017  
2 ADDENDUM #2-January 06, 2017  
3 ADDENDUM #3-January 11, 2017  
4 ADDENDUM #4-January 17, 2017  
5 ADDENDUM #5-January 19, 2017  
6 ADDENDUM #7-March 31, 2017

data

project no:

drawn by:

...

**title**

## PANEL SCHEDULES

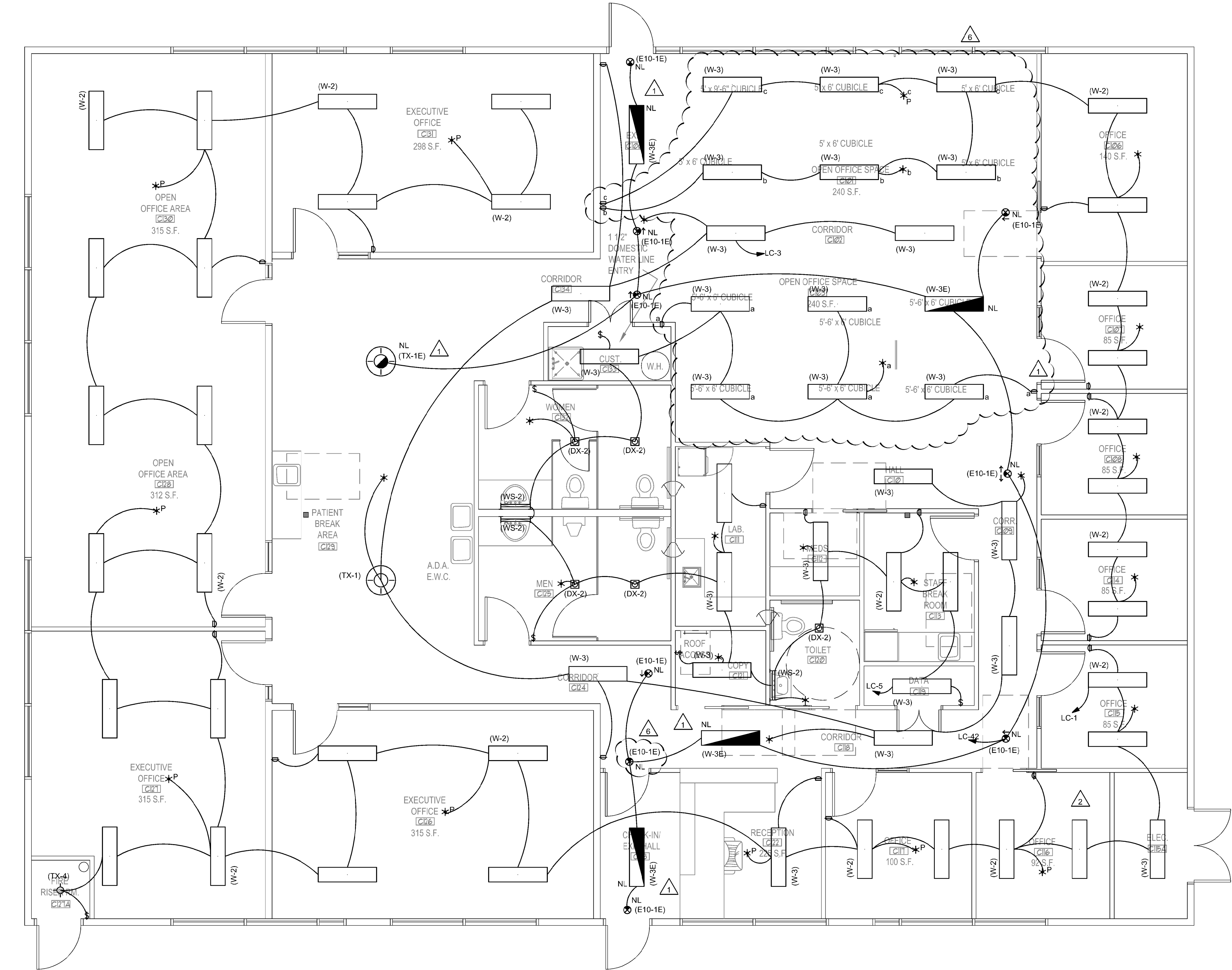
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# EP6|02

6 PANEL "LD" 3																													
VOLTS/PHASE/WIRE: 120/208 V, 3 PH 4 WIRE					PANEL SIZE & TYPE: 22" W x 6" D BOLT-ON					MAIN SIZE & TYPE: 250 AMP MAIN CB					LOCATION:					AIC RATING: 10,000 AIC					NOTES:				
ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR, INSULATED GROUND BAR, SUBFEED LUGS																													
CKT NO	OCP AMP	POLE	LOAD (kVA)			DESCRIPTION	LCL kVA	PHASE LOAD			LCL kVA	DESCRIPTION	LOAD (kVA)			OCP AMP	POLE	CKT NO											
			LTG	CO	PWR			A	B	C			LTG	CO	PWR														
1	20	1	1.4			LIGHTING	1.8	2.8			1.4	CO DINING D103	1.4		20	1	2												
3	20	1	1.2			LIGHTING	1.5		2.4		1.2	CO COMMON AREA D112	1.2		20	1	4												
5	20	1	0.6			LIGHTING	0.8			1.6	1.0	FB WORKOUT RM D113	1.0		20	1	6												
7	20	1		0.9		CO RECEPTION D109	0.9	1.9			1.0	FB WORKOUT RM D113	1.0		20	1	8												
9	20	1		0.7		WH/PUMP	0.7		1.7		1.0	FB WORKOUT RM D113	1.0		20	1	10												
11	20	1		0.9	0.3	CO D108A, D108, D107, D106	1.2			2.2	1.0	CO WORKOUT RM D113	1.0		20	1	12												
13	20	1		0.6		CO PNTRY/SERV, D104,105	0.6	1.6			1.0	CO WORKOUT RM D113	1.0		20	1	14												
15	20	1		1.0		REFRIGERATOR D105	1.0		2.0		1.0	DRINKING FOUNTAIN	1.0		20	1	16												
17	20	1		1.3		FREEZER D105	1.3			2.3	1.0	CO WORKOUT RM D113	1.0		20	1	18												
19	20	1			1.5	KITCHEN HOOD	1.5	2.5			1.0	CO WORKOUT RM D113	1.0		20	1	20												
21	30	2			1.7	SOFT SERVE MACHINE	1.7		2.3		0.6	CO WORKOUT RM D113	0.6		20	1	22												
23	-	-			1.7	-	1.7			2.5	0.8	FIRE CO/FIRE COMP D114A	0.2	0.6	20	1	24												
25	20	1		0.6		CO KITCHEN D101	0.6	1.4			0.8	CO OFFICE/STOR D115	0.8		20	1	26												
27	20	1		1.0		CO KITCHEN D101	1.0		1.8		0.8	CO YOGA STUDIO D114	0.8		20	1	28												
29	50	2			4.0	DISHWASHER	4.0			5.0	1.0	CO OFFICE D118	1.0		20	1	30												
31	-	-			4.0	-	4.0	4.8			0.8	CO MUSIC ROOM D117	0.8		20	1	32												
33	20	1		0.6		SANDWICH/SALAD FRIDGE	0.6		1.4		0.8	CO ART ROOM D116	0.8		20	1	34												
35	20	1		1.0		CO KITCHEN D101	1.0			1.4	0.4	CO COMPUTER LAB D119	0.4		20	1	36												
37	20	1		1.8		ESPRESSO MACHINE	1.8	2.2			0.4	CO COMPUTER LAB D119	0.4		20	1	38												
39	20	1		1.0		CO KITCHEN D101	1.0		1.4		0.4	CO COMPUTER LAB D119	0.4		20	1	40												
41	20	3		0.5		GEF-1	0.5			2.4	1.9	RTU-1	1.9	30	3	42													
43	-	-		0.5		-	0.5	2.4			1.9	-	1.9	-	-	44													
45	-	-		0.5		-	0.5		2.4		1.9	-	1.9	-	-	46													
47	20	3		0.4		MAU-1	0.4			2.3	1.9	RTU-1	1.9	30	3	48													
49	-	-		0.4		-	0.4	2.3			1.9	-	1.9	-	-	50													
51	-	-		0.4		-	0.4		2.3		1.9	-	1.9	-	-	52													
53	30	3		1.9		RTU-1	1.9			2.9	1.0	EUH-2	1.0	20	2	54													
55	-	-		1.9		-	1.9	2.9			1.0	-	1.0	-	-	56													
57	-	-		1.9		-	1.9		3.8		1.9	RTU-1	1.9	30	3	58													
59	20	1		1.8		ICE MAKER	1.8			3.7	1.9	-	1.9	-	-	60													
61	20	1		1.5		ANSUL FIRE PANEL	1.5	3.4			1.9	-	1.9	-	-	62													
63	20	1	0.2			EGRESS LIGHTING	0.3		1.9		1.7	EUH-1	1.7	20	2	64													
65	20	1	1.5			BLDG A & B CANOPY LTG	1.9			3.2	1.7	-	1.7	-	-	66													
67	20	1	1.5			BLDG E & F CANOPY LTG	1.9	2.5			1.0	EUH-2	1.0	20	2	68													
69	20	1	1.5			BLDG C & D CANOPY LTG	1.9		2.5		1.0	-	1.0	-	-	70													
71	20	1	0.9			PARKING LOT LTG	1.1			2.6	1.7	CU-1/DSS-1	1.7	20	2	72													
73	20	1		0.6		RTU CO'S	0.6	2.3			1.7	-	1.7	-	-	74													
75	20	2		0.8		EUH-3	0.8		1.8		1.0	EUH-2	1.0	20	1	76													
77	-	-		0.8		-	0.8			1.8	1.0	-	1.0	20	1	78													
79	20	1				SPARE	0.0	0.0			0.0	SPARE			20	1	80												
81	20	1				SPARE	0.0		0.0		0.0	SPARE			20	1	82												
83	20	1				SPARE	0.0			0.0	0.0	SPARE			20	1	84												
TOTALS:					CONNECTED kVA PER PHASE					33	28	34	CONNECTED TOTAL kVA					95											
					CONNECTED AMPS PER PHASE					275	231	282	CONNECTED AVERAGE AMPS PER PHASE					263											
NEC DIVERSIFIED LOAD CALCULATIONS																													
LIGHTING 9kVA @125% =					11 kVA					ALL OTHER LOADS @100% =					55 kVA					DIVERSIFIED TOTAL kVA = 86									
RECEPTACLES 10kVA @100% =					10 kVA					25% OF LARGEST MOTOR =					0 kVA					AVERAGE AMPS PER PHASE = 240									
REMAINDER 21kVA @50% =					10 kVA																								

6 PANEL "LE2"																								
VOLTS/PHASE/WIRE: 120/208 V, 3 PH 4 WIRE					PANEL SIZE & TYPE: 22" W x 6" D BOLT-ON					MAIN SIZE & TYPE: 100 AMP MAIN LUGS					LOCATION:					AIC RATING: 10,000 AIC		NOTES:		
ACCESSORIES:					PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR, INSULATED GROUND BAR, SUBFEED LUGS																			
CKT NO	OCP AMP	POLE	LOAD (kVA)			DESCRIPTION	LCL kVA	PHASE LOAD			LCL kVA	DESCRIPTION	LOAD (kVA)			OCP AMP	POLE	CKT NO						
			LTG	CO	PWR			A	B	C			LTG	CO	PWR									
1	20	2			0.8	EUH-3	0.8	1.0			0.2	CO SERVING E140		0.2	20	1	2							
3	-	-			0.8	-	0.8		1.0		0.2	CO SERVING E140		0.2	20	1	4							
5	20	2			1.0	EUH-2	1.0			2.0	1.0	REFRIGERATOR E140		1.0	20	1	6							
7	-	-			1.0	-	1.0	2.1			1.1	GATHERING/LEARN E136		1.1	20	1	8							
9	20	2			0.8	EUH-3	0.8		1.6		0.8	CO AV E139		0.8	20	1	10							
11	-	-			0.8	-	0.8			0.8	0.0	SPARE			20	1	12							
13	20	2			0.8	EUH-3	0.8	0.8			0.0	SPARE			20	1	14							
15	-	-			0.8	-	0.8		0.8		0.0	SPARE			20	1	16							
17	20	2			1.7	EUH-1	1.7			1.7	0.0	SPARE			20	1	18							
19	-	-			1.7	-	1.7	1.7			0.0	SPARE			20	1	20							
21	20	2			1.0	EUH-2	1.0		1.0		0.0	SPARE			20	1	22							
23	-	-			1.0	-	1.0			1.0	0.0	SPARE			20	1	24							
25	20	1		0.2	0.6	CO FIRE E135/FIRE COMP.	0.8	0.8			0.0	SPARE			20	1	26							
27	20	1		1.0		DRINKING FOUNTAIN	1.0		1.0		0.0	SPARE			20	1	28							
29	20	1				SPARE	0.0			0.0	0.0	SPARE			20	1	30							
31	20	1				SPARE	0.0	0.0			0.0	SPARE			20	1	32							
33	20	1				SPARE	0.0		0.0		0.0	SPARE			20	1	34							
35	20	1				SPARE	0.0			0.0	0.0	SPARE			20	1	36							
TOTALS:							CONNECTED kVA PER PHASE					6	5	6	CONNECTED TOTAL kVA					17				
							CONNECTED AMPS PER PHASE					53	45	46	CONNECTED AVERAGE AMPS PER PHASE					48				
NEC DIVERSIFIED LOAD CALCULATIONS																								
LIGHTING 0kVA @ 125% =					0 kVA					ALL OTHER LOADS @100% =					13 kVA					DIVERSIFIED TOTAL kVA = 17				
RECEPTACLES 5kVA @ 100% =					5 kVA					25% OF LARGEST MOTOR =					0 kVA					AVERAGE AMPS PER PHASE = 48				
REMAINDER 0kVA @ 50% =					0 kVA																			





1 LIGHTING PLAN - BUILDING 'C'  
SCALE: 1/4"=1'-0"

## GENERAL SHEET NOTES

- OCCUPANCY SENSORS SHALL NOT TURN LIGHTS ON TO MORE THAT 50%. LIGHTS MUST BE MANUALLY ADJUSTED TO 100%. PHOTOCELLS TO BE SET AT 30 FC. PROVIDE ROOM/DIMMING CONTROLLERS AS NECESSARY TO FACILITATE LIGHTING OPERATION AS DESCRIBED.

## SHEET KEYNOTES

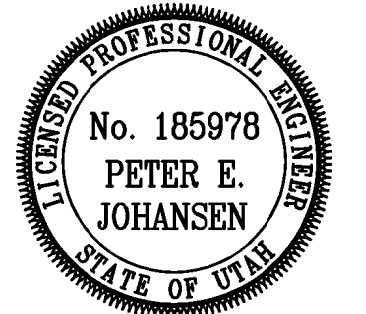
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- ADDENDUM #7-March 31, 2017

## data

project no:

drawn by:

checked by:

## title

LIGHTING PLAN -  
BUILDING 'C'

## sheet

EL11C

BUILDING 'C' 4905 South 900 East PARCEL #22081850080000

LIGHTING FIXTURE SCHEDULE								
NOTE TO BIDDERS: COMPLY WITH THE SPECIFICATIONS.								
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 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 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/LOUVER/REFLECTOR/OTHER	LAMP	WATTS	VOLTS	MANUFACTURER	CATALOG NUMBER	NOTES
	DX	LED DOWNLIGHT, THERMALLY PROTECTED HOUSING; TO ACCOMMODATE MULTIPLE TRIMS AND REFLECTOR ASSEMBLIES FOR LAMPS AS LISTED BELOW; ELECTRONIC BALLASTS; LOW IRIDESCENT REFLECTOR FINISH (EVEN IF NOT SHOWN IN CATALOG #); SELF-FLANGING TRIM UNLESS NOTED.						
	DX-1	RECESSED DOWNLIGHT; VERTICAL, FULL ON AT 0 VOLTS CONTROL INPUT 6" 3500 K DIMMALE 0-10V	1500 LU 3500K	27W	120/277V	PEACHTREE	6BLRD-IC-18-35K-80-SH-TRW-120 OR EQUIVALENT	
	DX-2	RECESSED DOWNLIGHT; VERTICAL, FULL ON AT 0 VOLTS CONTROL INPUT 6" 3500K, 90 CRI 2000 LUMENS DIMMALE 0-10V DAMP LOCATION	2000 LI 3500K	54W	120/277V	PEACHTREE	6BLRD-IC-20-35K-80-SH-RCA-120 OR EQUIVALENT	
	DX-4	RECESSED DOWNLIGHT; LED 6" SHOWER LIGHT 4000K	1250 L 3500K	27W	120/277V	PEACHTREE EATON	6BLRD-IC-13-35K-80-SH-RCA-WL-120 SLD612-80-35-WH WITH H7ICAT HOUSING OR EQUIVALENT	
	E	E SUFFIX INDICATES THAT FIXTURE IS PROVIDED WITH AN EMERGENCY BATTERY PACK TO PROVIDE POWER LED LAMPS, TO PROVIDE 90 MINUTES OF EMERGENCY POWER TO FIXTURE. MINIMUM LIGHT OUTPUT FOR TYPICAL 4' LAMP SHALL BE 1100 LUMENS OR HIGHER;UNIVERSAL TRANSFORMER FOR 120 OR 277 VOLTS; LOW VOLTAGE PROTECTION, COMBINATION TEST SWITCH AND AC "ON" INDICATOR; 10 YEAR PRO-RATA WARRANTY; INSTALL TEST SWITCH IN A MANNER THAT REQUIRES NO DISASSEMBLY FOR TESTING.						
	E	EMERGENCY BATTERY PACK. self testing ballasts		3W	120/277V	DUAL-LITE BODINE LITHONIA EMERGI LITE EVENLINT	UFO 6WI REDITEST PS1400QD SD FPDL/U BAL1400	
	E10	EXIT SIGN: METAL HOUSING; CEILING MOUNT, SEE DRAWINGS; ARROWS PER PLANS; LED LAMPS; EDGE LIGHTED CLEAR LENS; GREEN LETTERS ON CLEAR BACKGROUND. MUST MEET NFPA ILLUMINATION STANDARDS. UNITS SHOWN ARE CEILING MOUNT MODELS. CONTRACTOR TO PROVIDE MATCHING LOW LEVEL WALL MOUNTED UNITS WHERE REQUIRED.						
	E10-1E	SINGLE FACE: WITH EMERGENCY BATTERY PACK	LED	2W	120/277V	DUAL-LITE MCPHILBEN EELP LITHONIA EVENLITE ISOLITE CHLORIDE LIGHTOLIER	LECSGWA 45VL-1-GC-XX EDG 1 GC W EM LRP W 1 GC XX 120/277 SOV-AC-G-1M WH XX UC EDGL-S-S-G-BK (BLACK HOUSING) STDLX-X-1-GC-X LEAC1GCX	
	E10-2E	DUAL FACE: WITH EMERGENCY BATTERY PACK	LED	2W	120/277V	DUAL-LITE MCPHILBEN EELP LITHONIA EVENLITE ISOLITE CHLORIDE LIGHTOLIER	LECDGWA 45VL-2-GM-XX EDG 2 GC W EM LRP W 2 GMR XX 120/277 SOV AC G 2M WH XX UC EDGL-D-S-G-BK (BLACK HOUSING) STDLX-X-2-GC-X LEAC2GC7	
	HG	EXTERIOR CANOPY FIXTURES						
	HG-1	RECESSED SQUARE LED CANOPY LIGHT, BRONZE FINISH, WIDE DISTRIBUTION	LED 3000K	50W 3800 LU	120/277V	MCGRAW EDISON	LRC-B16-1-LED-E1-WST	
	OC	WALL MOUNTED TRAPEZOIDAL WALL PACK, WET LOCATION						
	OC-32	LED WALL PACK, TYPE IV OPTICS BRONZE FINISH	LED 3500K	24W 1600 LU	120/277V	LITHONIA	WST-LED-1-10A700-35K-SR4-MVOLT	
	TX	SPECIAL FIXTURES AS INDICATED. MEET ALL REQUIREMENTS OF SPECIFICATIONS AND FIXTURE SCHEDULE. VISUAL AND FINISH APPROVAL REQUIRED.						
	TX-1	Surface Mounted Drum 36" Diameter	LED 3500K	100W	120/277V	SHAPER SPI	122-36-L7-UNV-SN AIC11866-L100.4WDML-PT04-120-277V-3500K-FB01	
	TX-2	Surface Mounted Drum 24" Diameter	LED 3500K	37W	120/277V	SHAPER SPI	122-24-L5-UNV-SN AIC11865-L46.6WDML-PT04-120-277V-3500K-FB01	
	TX-3	Surface Mounted Bedroom Light	LED 3500K	24W	120/277V	BETACALCO	FIERO-60 1200-3500K-PC-SN	
	TX-4	Surface Mounted Closet Light	LED 3000K	22W	120/277v	METALUX	FM-15-W-R-30-R	
	TX-5	PENDANT	LED 3500K	21W	120/277V	SPI	SIP11783-2F21-120-F-AC1	

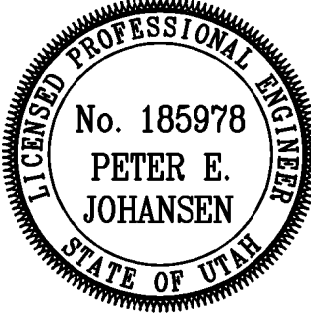
W	LOW PROFILE WRAPAROUND: SURFACE MOUNTED SUITABLE FOR MOUNTING ON LOW DENSITY CEILINGS WRAPAROUND ACRYLIC PRISMATIC DIFFUSER; WHITE ENAMEL ENDPLATES; MINIMUM CU OF 70 @ 80/50/20 AND RCR=1;					
W-2	NARROW BODY WRAPAROUND; APPROX; 3' X 12" X 48" X 48"; 5500 LUMENS	LED 3500K	57W	277/120V	EATON	DSI-WD-3-L35-1-D-UNV-SU-JB-4-STD-FC-W
W-3	NARROW BODY WRAPAROUND; APPROX; 3' X 10" X 48" X 48"; 4800 LUMENS	LED 3500K	48W	277/120V	LITHONIA COLUMBIA METALLUX DAYBRITE	LBL4 LP840 LWC4 40 ML EU WNLED LD1 41 ' UNV L835 CD1 U OWL450L835UNV
WS	WALL MOUNTED LED LOCATED ABOVE WALL ELEMENT (MIRROR/WHITEBOARD, ETC.); AS INDICATED ON DRAWINGS;					
WS-2	36" LED VANITY LIGHT SATIN CHROM FINISH 2.25" WIDE	LED 3500K	19W	120/277V	EDGE LIGHT EUREKA LBL	TW12 S11 1RE 36" 30K CH 3541 35 LED 17.40 120/277 SC WH LW496 OP XX LED 277
ZX	OUTDOOR AREA LIGHT. SINGLE HEAD PER POLE AS SHOWN ON DRAWINGS. WET LABEL. LED LIGHT ENGINE, OPTICS AND DRIVERS ACCESSIBLE FROM BELOW; RATED 100 MPH WITH 1.3 GUST FACTOR					
ZX-2	LED POLE MOUNTED AREA LIGHT, TYPE II OPTICS, BRONZE FINISH HOUSE SIDE SHIELD 9' SSS POLE, FINISH TO MATCH FIXTURE	LED 3500K	72W 3500 LU	120/277V	LITHONIA	DSX0-LED-20C-1000-35K-T2M-MVOLT-HS
ZX-4	LED POLE MOUNTED AREA LIGHT, TYPE IV OPTICS, BRONZE FINISH HOUSE SIDE SHIELD 9' SSS POLE, FINISH TO MATCH FIXTURE	LED 3500K	72W 3500 LU	120/277V	LITHONIA	DSX0-LED-20C-1000-35K-T4M-MVOLT-HS

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date

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revisions

- 6
- 5
- 4
- 3
- 2
- 1
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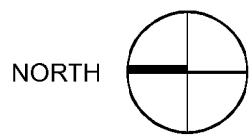
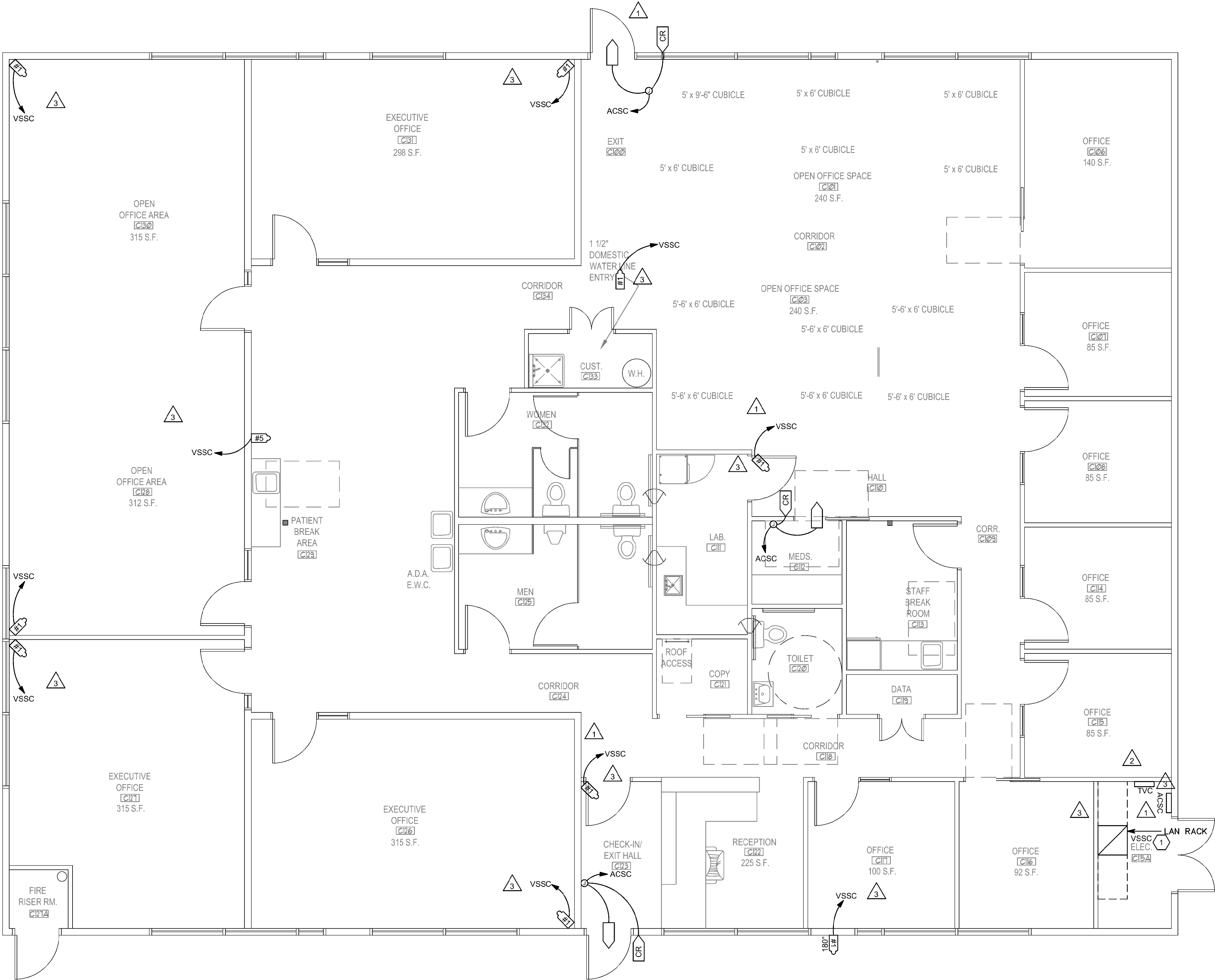
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LIGHTING  
FIXTURE  
SCHEDULE  
sheet

EL601



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1 AUXILIARY PLAN - BUILDING 'C'

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

GENERAL SHEET NOTES

1.

SHEET KEYNOTES

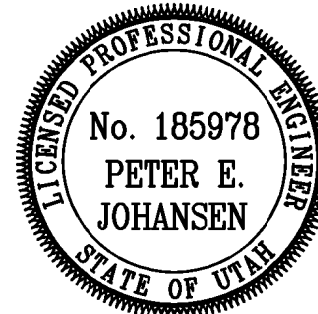
1. VIDEO SURVEILLANCE CAMERA SYSTEM SHALL BE INSTALL IN "LAN" RACK WITH ASSOCIATED PATCH PANEL, NETWORK SWITCH, AND NETWORK VIDEO RECORDER/SERVER.

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AUXILIARY PLAN -  
BUILDING 'C'

sheet

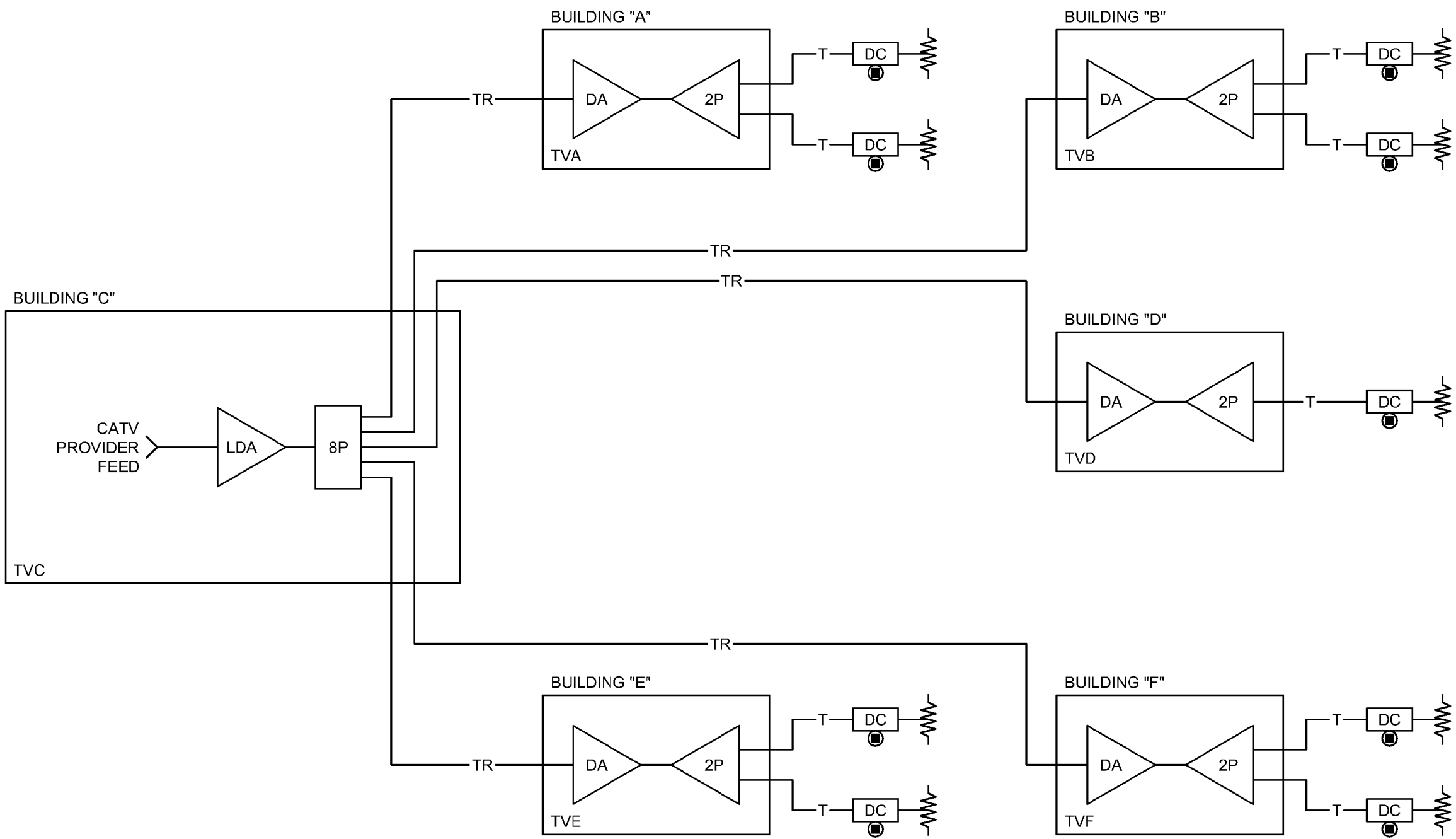
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BUILDING 'C' 4905 South 900 East PARCEL #22081850080000

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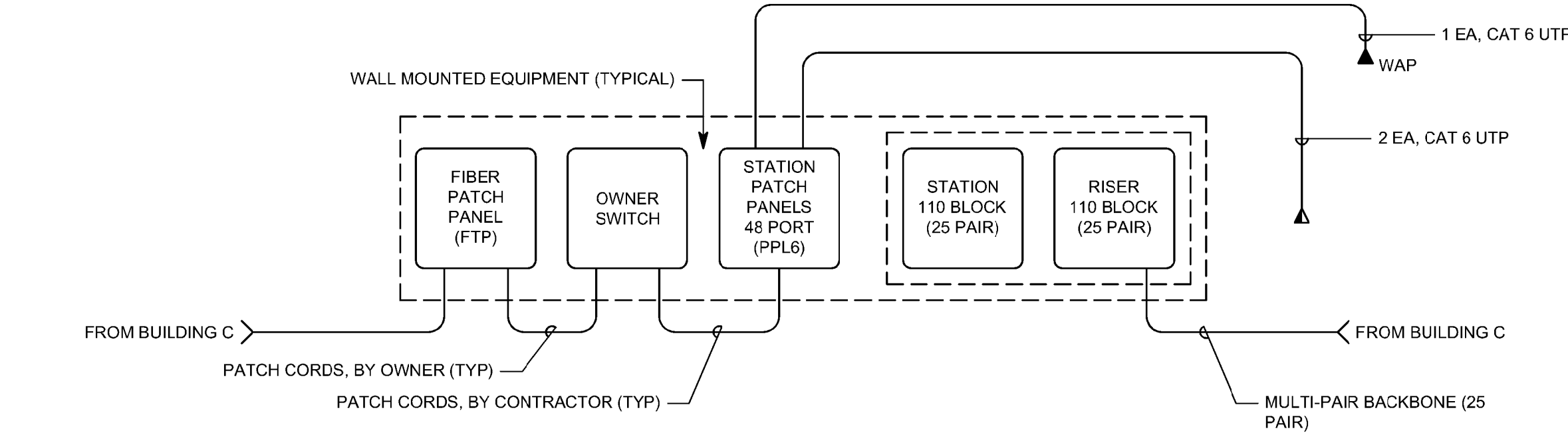
### 3 TV DISTRIBUTION SYSTEM DIAGRAM

NO SCALE



### STRUCTURED CABLING SYSTEM NOTES

- REFER TO EP SERIES SHEETS FOR VOICE/DATA OUTLET QUANTITIES AND LOCATIONS.
- PROVIDE PLENUM RATED CABLE IN ALL AIR PLENUMS. IF A PLENUM RATED CABLE IS NOT SPECIFIED, PROVIDE THE PLENUM RATED EQUIVALENT TO THE SPECIFIED CABLE.
- ALL CABLE, REGARDLESS OF LENGTH, INSTALLED UNDER THIS CONTRACT ARE TO BE LABELED.
- UNLESS OTHERWISE NOTED, INSTALL ALL CABLE INSIDE RACEWAY SYSTEMS. WHERE RACEWAY SYSTEMS HAVE NOT BEEN PROVIDED OR SPECIFIED, INSTALL CABLE THROUGH THE SPECIFIED "CADDIE" CLIPS INSTALLED ABOVE ACCESSIBLE CEILINGS AT THE MINIMUM INTERVALS IDENTIFIED IN THE SPECIFICATIONS. SUPPORT "CADDIE" CLIPS DIRECTLY FROM THE BUILDING STRUCTURE, NOT FROM OTHER BUILDING SYSTEM SUPPORT WIRES OR CABLE.
- GROUND ALL EQUIPMENT AS DETAILED. COORDINATE GROUNDING WITH ELECTRICAL CONTRACTOR.
- ALL CABLE, FIBER, AND UTP TO BE TERMINATED ON BOTH ENDS.
- ALL VOICE/DATA SYSTEMS CABLE IS TO BE INSTALLED INSIDE MINIMUM 1" CONDUIT. STUB CONDUIT FROM JUNCTION BOX LOCATION TO CABLE MANAGEMENT SYSTEM SPECIFIED FOR ACCESSIBLE CEILING.
- INSTALL ALL ELECTRONIC SYSTEMS EQUIPMENT IN COMPLIANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS, SEISMIC CODES, AND INDUSTRY WIDE ACCEPTED PRACTICES. SUPPORT EQUIPMENT WEIGHT FROM BUILDING STRUCTURE. DURING THE SUBMITTAL PROCESS, PROVIDE SHOP DRAWINGS WHICH DETAIL PROPOSED MOUNTING FOR ALL SUCH EQUIPMENT.



### 2 HORIZONTAL WALL MOUNT DIAGRAM (TYP. FOR BUILDINGS A, B, D, E, & F)

NO SCALE

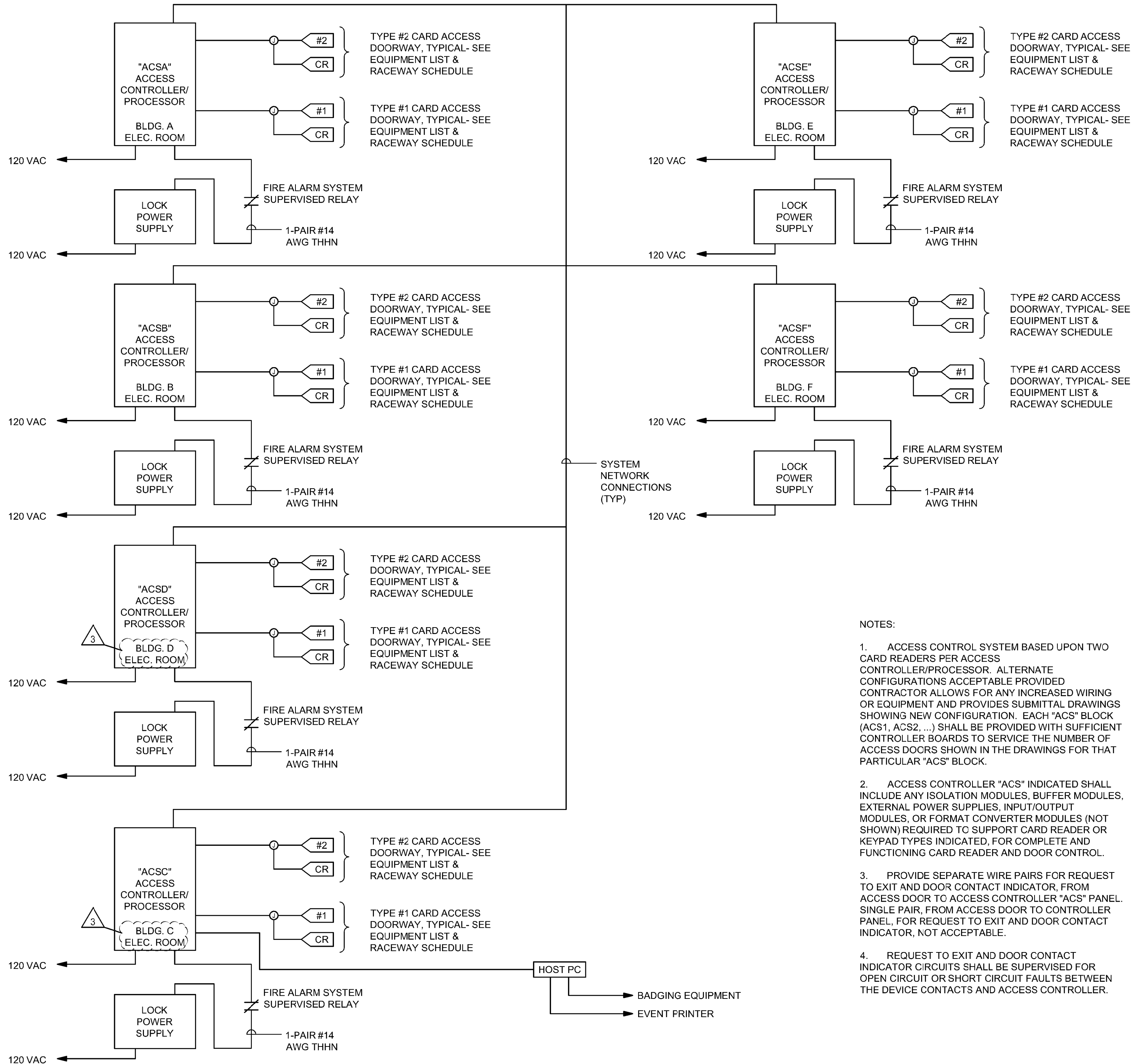
### TV DISTRIBUTION EQUIPMENT LIST

SYMBOL	DESCRIPTION	QTY	ACCEPTABLE TYPES
#P	MULTI-PORT SPLITTER	OFF	2-PORT BLONDER TONGUE SXRS-2 4-PORT BLONDER TONGUE SXRS-4
LDA	BROADBAND AMPLIFIER (LAUNCH)	OFF	BLONDER TONGUE RMDA 750-30
DA	BROADBAND AMPLIFIER	OFF	BLONDER TONGUE ZCM-201
DC	DIRECTIONAL COUPLER/WALL TAP PLATE	OFF	BLONDER TONGUE VERSATAP SERIES MODEL V-3889 SERIES
RF	RF TERMINATOR	A/R	75 OHM TERMINATOR
T	COAXIAL CABLE, HORIZONTAL DROP	A/R	RG-6 (SEE SPECIFICATIONS)
TR	COAXIAL CABLE, TRUNK	A/R	RG-11 (SEE SPECIFICATIONS)

### SECURITY EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION	MOUNTING *	ROUGH-IN	QTY	ACCEPTABLE TYPES
CR	CARD READER	40"	4SQ W/ 1G RING	OFF	SEE SECTION 281300
#1	CARD ACCESS DOOR TYPE, TYPICAL. REFER TO CARD ACCESS DOOR TYPE SCHEDULE.	SEE SCHEDULE	SEE SCHEDULE	OFF	REFER TO CARD ACCESS DOOR TYPE SCHEDULE & SECTION 281300
VSS	VSS CAMERA/ENCLOSURE TYPE, TYPICAL. REFER TO VSS CAMERA/ENCLOSURE TYPE SCHEDULE.	SEE SCHEDULE	SEE SCHEDULE	OFF	SEE VSS CAMERA/ENCLOSURE TYPE SCHEDULE
ACS	CARD ACCESS CONTROLLERS & PWR SUPPLIES	72"	4"x4" GUTTER & STUBS A/R	A/R	SEE SECTION 281300
VSS	VIDEO SURVEILLANCE SYSTEM	RACK MOUNTED			COORDINATE WITH OWNER

\* COORDINATE MOUNTING HEIGHTS WITH ARCHITECTURAL ELEVATIONS BEFORE INSTALLATION.



#### NOTES:

- ACCESS CONTROL SYSTEM BASED UPON TWO CARD READERS PER ACCESS CONTROLLER/PROCESSOR. ALTERNATE CONFIGURATIONS ACCEPTABLE PROVIDED CONTRACTOR PROVIDES SUBMITTAL DRAWINGS SHOWING NEW CONFIGURATION. EACH "ACS" BLOCK (ACSE1, ACSE2, ...) SHALL BE PROVIDED WITH SUFFICIENT CONTROLLER BOARDS TO SERVICE THE NUMBER OF ACCESS DOORS SHOWN IN THE DRAWINGS FOR THAT PARTICULAR "ACS" BLOCK.
- ACCESS CONTROLLER "ACS" INDICATED SHALL INCLUDE ANY ISOLATION MODULES, BUFFER MODULES, EXTERNAL POWER SUPPLIES, INPUT/OUTPUT MODULES, OR FORMAT CONVERTER MODULES (NOT SHOWN) REQUIRED TO SUPPORT CARD READER OR KEYPAD TYPES INDICATED, FOR COMPLETE AND FUNCTIONING CARD READER AND DOOR CONTROL.
- PROVIDE SEPARATE WIRE PAIRS FOR REQUEST TO EXIT AND DOOR CONTACT INDICATOR, FROM ACCESS DOOR TO ACCESS CONTROLLER "ACS" PANEL. SINGLE PAIR, FROM ACCESS DOOR TO CONTROLLER PANEL, FOR REQUEST TO EXIT AND DOOR CONTACT INDICATOR, NOT ACCEPTABLE.
- REQUEST TO EXIT AND DOOR CONTACT INDICATOR CIRCUITS SHALL BE SUPERVISED FOR OPEN CIRCUIT OR SHORT CIRCUIT FAULTS BETWEEN THE DEVICE CONTACTS AND ACCESS CONTROLLER.

### 1 ACCESS CARD SYSTEM (ACS) RISER DIAGRAM

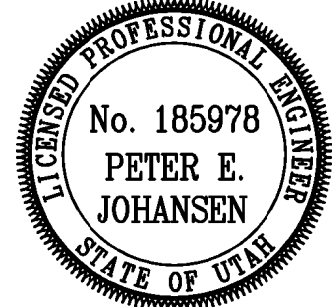
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AUXILIARY RISER  
DIAGRAMS

#### sheet

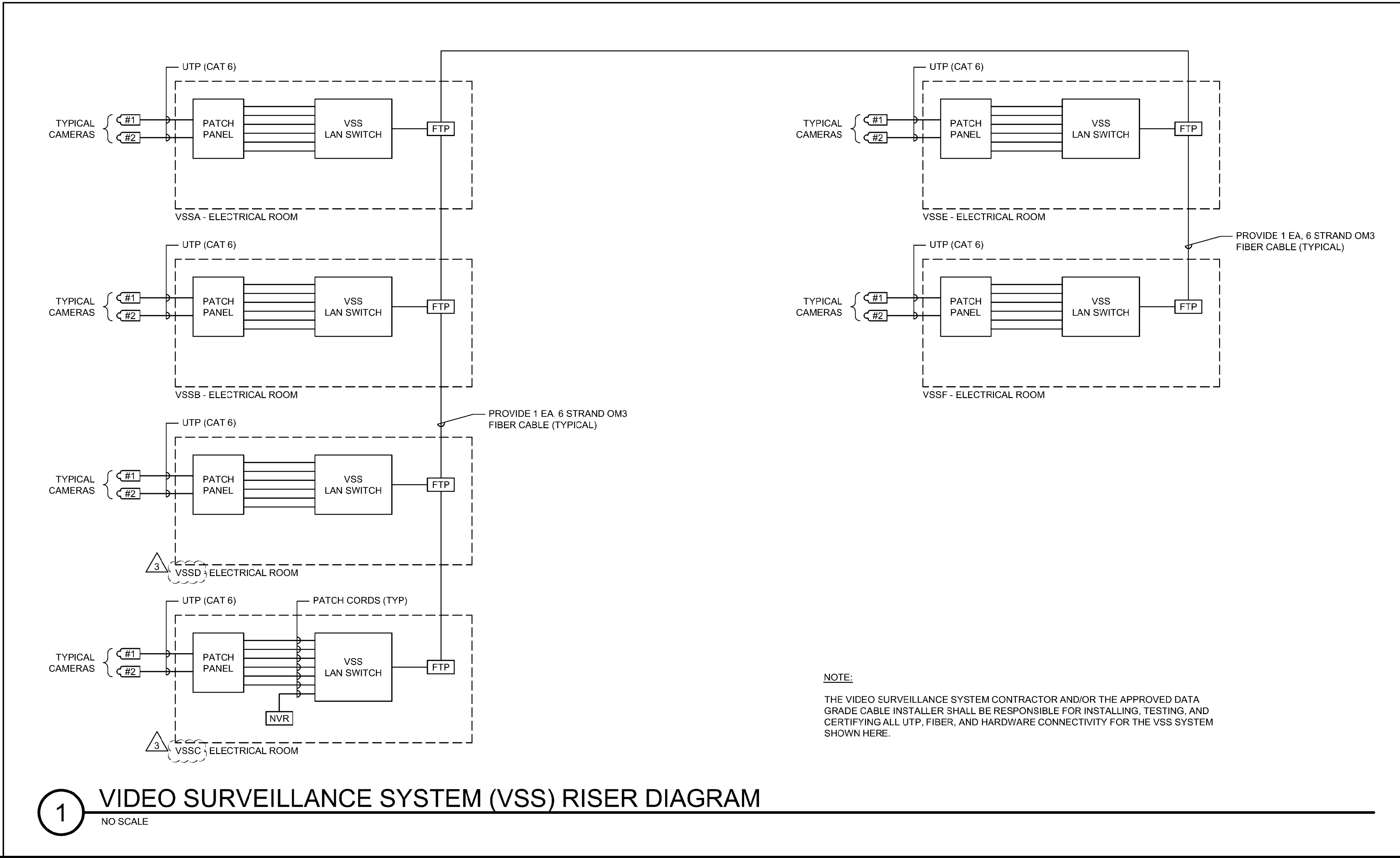
EY601



VSS CAMERA/ENCLOSURE TYPE SCHEDULE			
CAMERA TYPE NUMBER	SYMBOL	DESCRIPTION	INCLUDES
TYPE 1		INTERIOR CAMERA - FIXED DOME (CEILING MOUNTED UNLESS J-BOX SHOWN)	* CAMERA/ENCLOSURE-FLUSH MOUNTED * CAT6 SIGNAL CABLE AS INDICATED TO HEADEND * POE  PROVIDE AVIGILON 1.0C-H4A-DC1 OR APPROVED EQUAL.
TYPE 2		INTERIOR CAMERA - FIXED DOME (WALL MOUNTED)	* CAMERA/ENCLOSURE-SURFACE MOUNTED * CAT6 SIGNAL CABLE AS INDICATED TO HEADEND (VSS) * POE * WALL MOUNT HARDWARE  PROVIDE AVIGILON 1.0C-H4A-D1 OR APPROVED EQUAL.
TYPE 3		EXTERIOR CAMERA - MULTI SENSOR (WALL PENDANT MOUNTED)	* CAMERA/ENCLOSURE-SURFACE MOUNTED * CAT6 SIGNAL CABLE AS INDICATED TO HEADEND (VSS) * POE * ENVIRONMENTAL ASSEMBLY * 180"  PROVIDE AVIGILON 9W-H3-3MH-DP1 OR APPROVED EQUAL. WALL MOUNT - AVIGILON MNT-PEND-WALL CORNER MOUNT - AVIGILON MNT-AD-CORNER
TYPE 4		EXTERIOR CAMERA - MULTI-SENSOR (CORNER PENDANT MOUNTED)	* CAMERA/ENCLOSURE-SURFACE MOUNTED * CAT6 SIGNAL CABLE AS INDICATED TO HEADEND (VSS) * POE * ENVIRONMENTAL ASSEMBLY * 270"  PROVIDE AVIGILON 9W-H3-3MH-DP1 OR APPROVED EQUAL. WALL MOUNT - AVIGILON MNT-PEND-WALL CORNER MOUNT - AVIGILON MNT-AD-CORNER
TYPE 5		INTERIOR CAMERA - MULTI-SENSOR (CEILING MOUNTED)	* CAMERA/ENCLOSURE-FLUSH MOUNTED * CAT6 SIGNAL CABLE AS INDICATED TO HEADEND (VSS) * POE * 180" - 270"  PROVIDE AVIGILON 9W-H3-3MH-DC1 OR APPROVED EQUAL.
TYPE 6		EXTERIOR CAMERA - FIXED BULLET (WALL MOUNTED)	* CAMERA/ENCLOSURE-SURFACE MOUNTED * CAT6 SIGNAL CABLE AS INDICATED TO HEADEND (VSS) * POE * ENVIRONMENTAL ASSEMBLY  PROVIDE AVIGILON 2.0C-H4A-B02-IR OR APPROVED EQUAL.

VIDEO SURVEILLANCE EQUIPMENT SCHEDULE		
SYMBOL	DESCRIPTION	ACCEPTABLE TYPES
	POE NETWORK SWITCH	NETGEAR
	NETWORK VIDEO RECORDER	SEE SPECIFICATION 282300
	VIDEO CAMERA	SEE VSS CAMERA SCHEDULE
CABLE	4 PAIR, CAT 6, UTP PLENUM	SEE SPECIFICATIONS

OFF = OBTAIN FROM PLANS; A/R = AS REQUIRED



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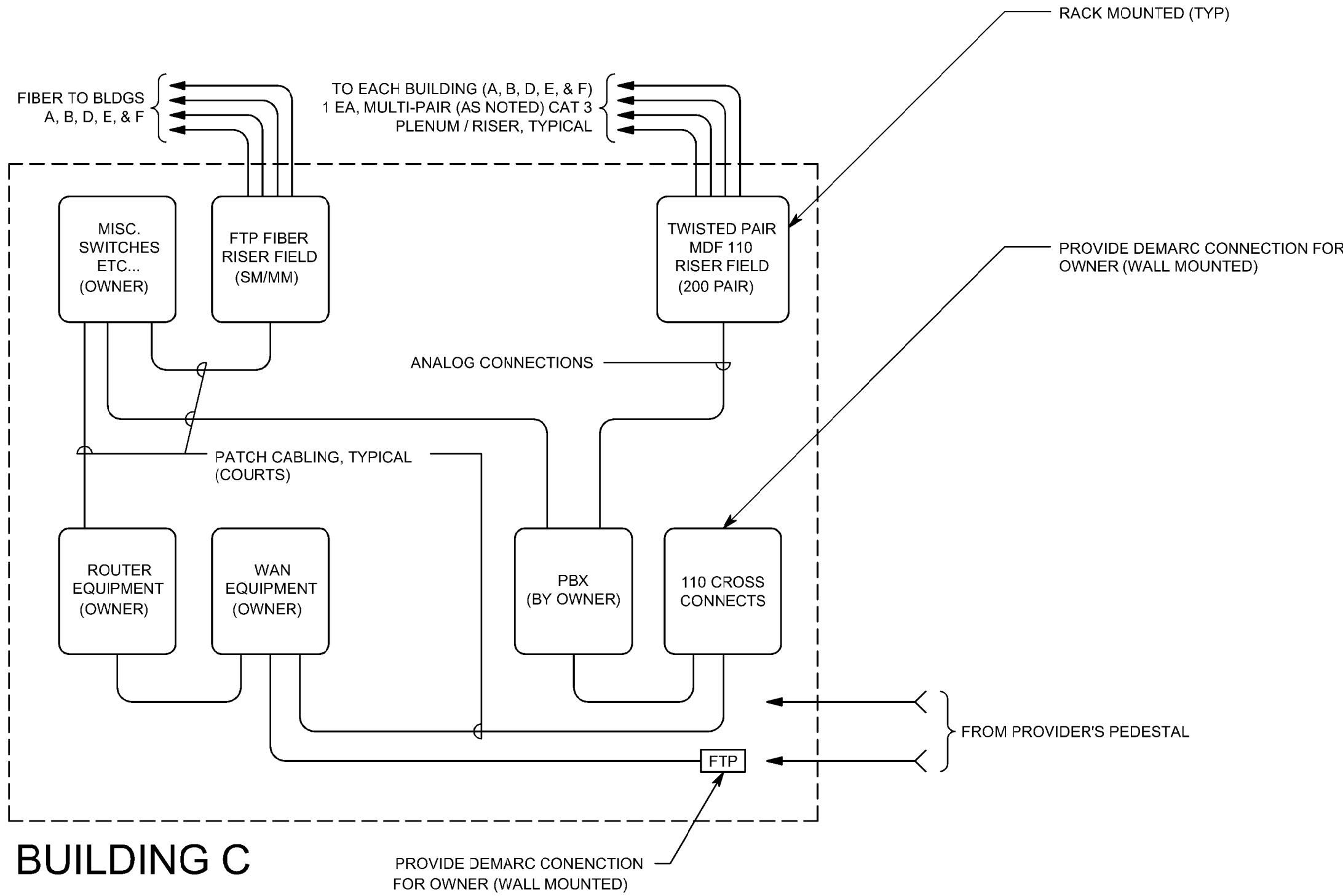
BUILDING 'C' 4905 South 900 East PARCEL #22081850080000

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5

MAIN NETWORK ROOM SINGLE LINE DIAGRAM W/UTILITY DEMARC INFORMATION

NTS

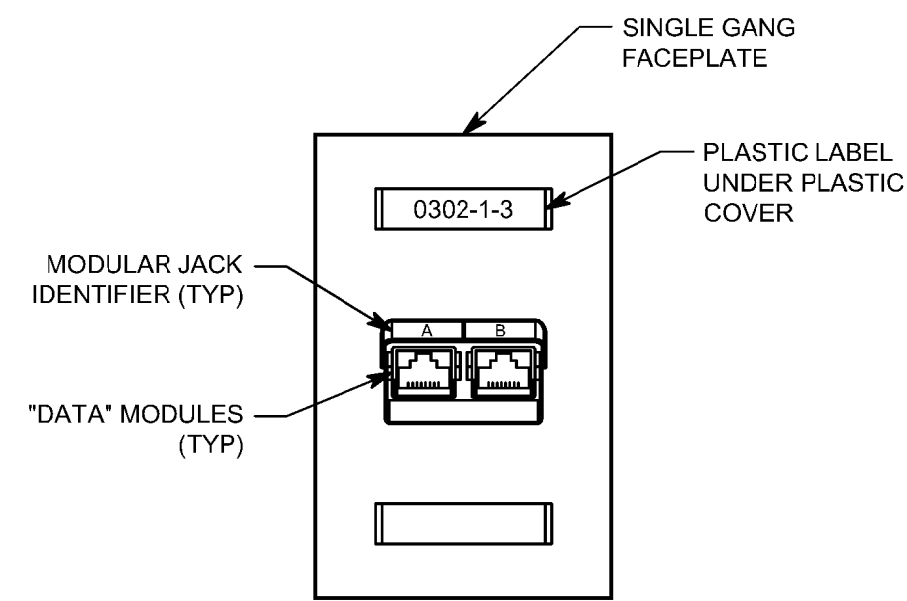


BUILDING C

4

DATA PLATE DETAIL (TYP)

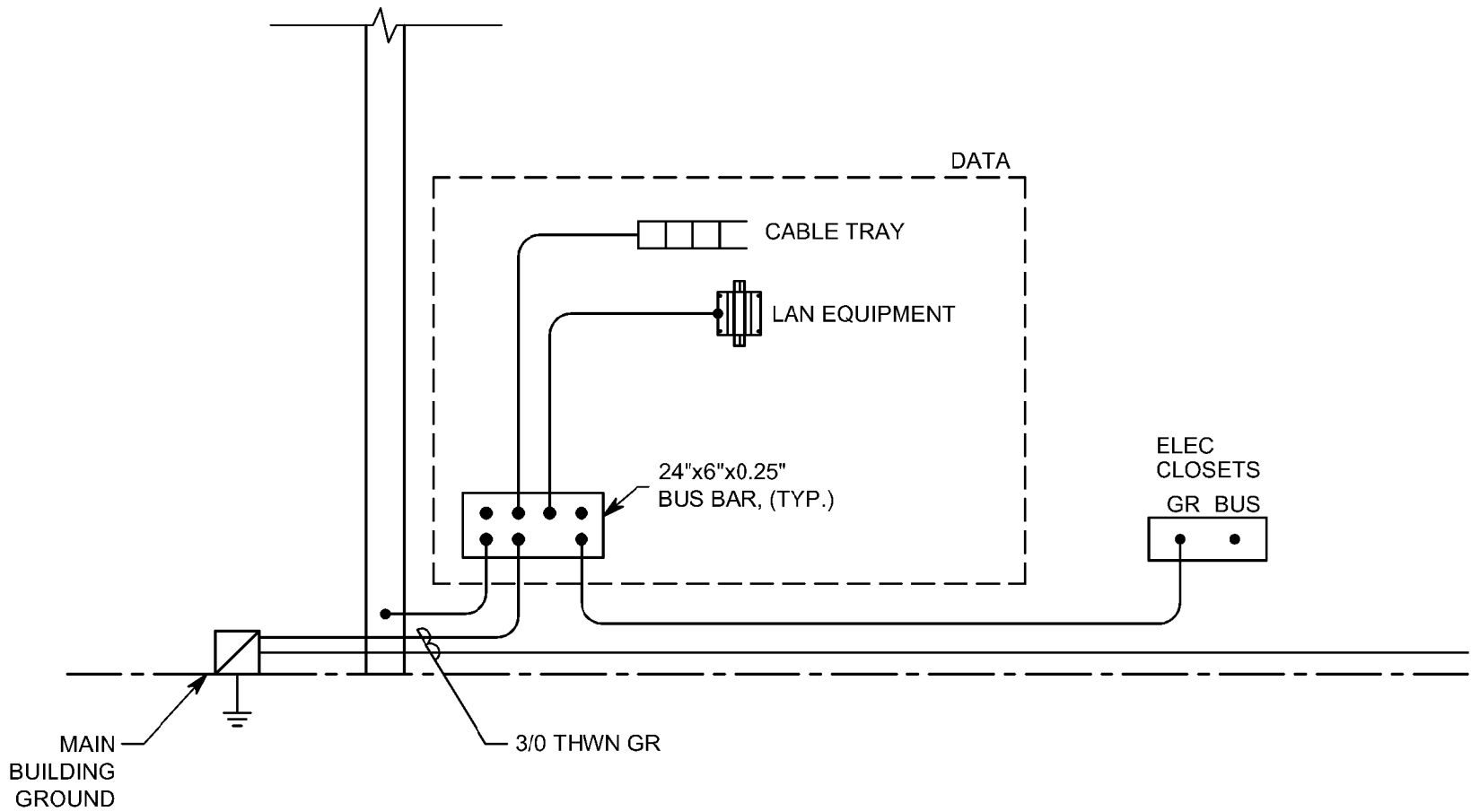
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3

VOICE-DATA GROUNDING AND CONDUIT RISER DIAGRAM

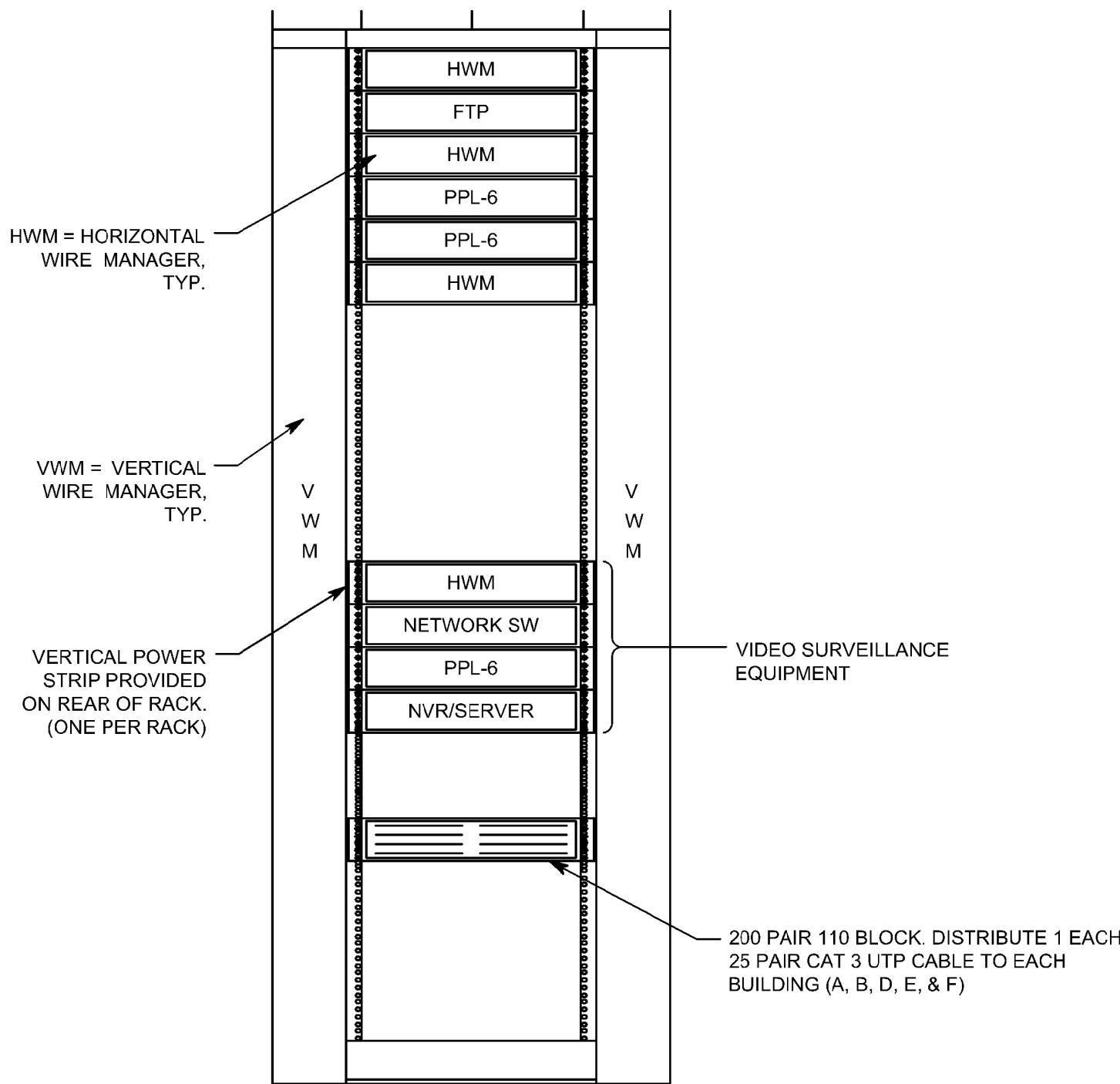
NTS



2

HORIZONTAL TERMINATION RACK ELEVATION - BUILDING C

NTS



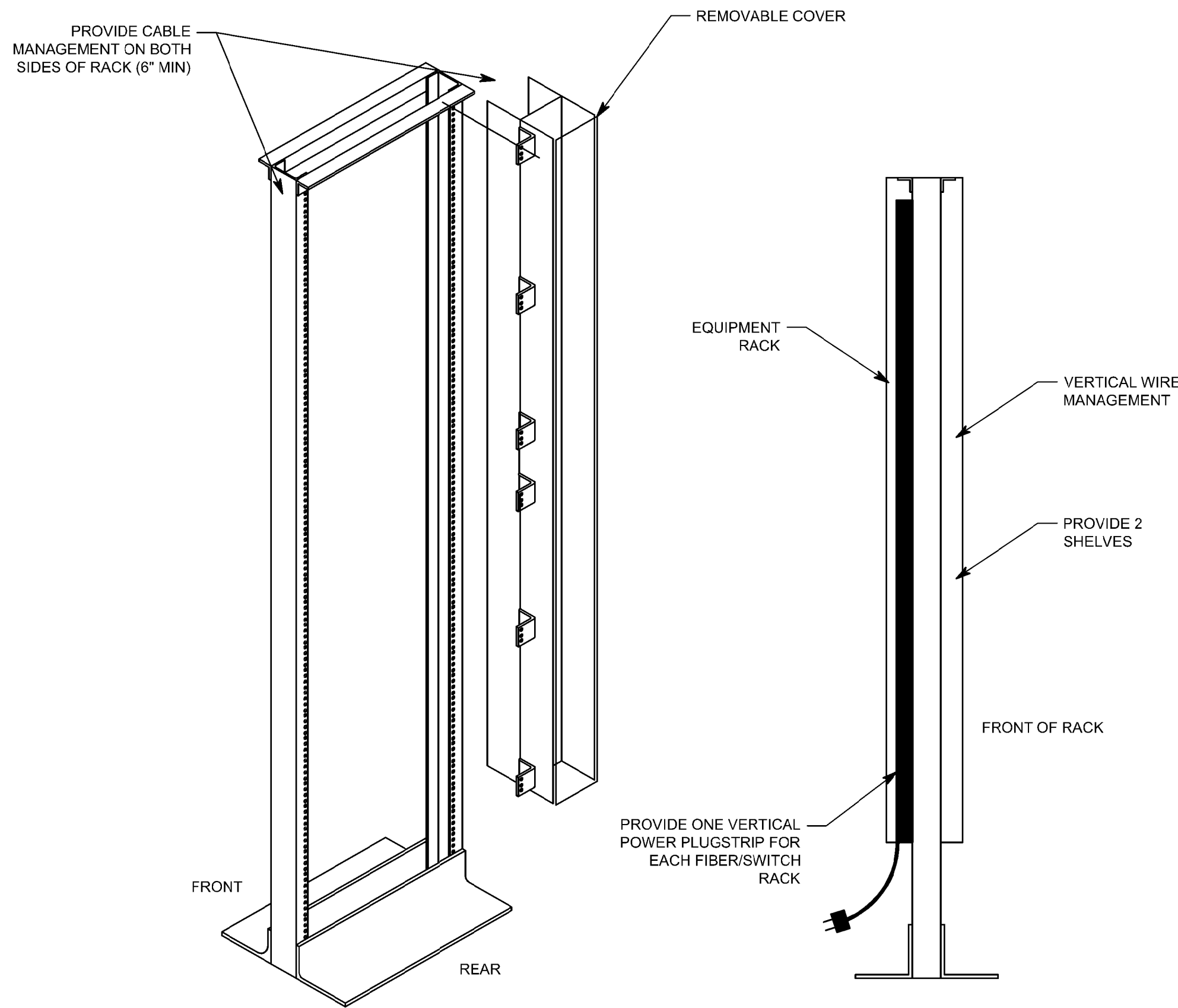
NOTES:

- RACK LAYOUTS ARE FOR COORDINATION PURPOSES. ALL FINAL RACK LAYOUTS ARE TO BE COORDINATED WITH OWNER PERSONNEL.
- PROVIDE ALL WIRE MANAGEMENT ACCESSORIES SHOWN.

1

OPEN FRAME EQUIPMENT RACK/RACEWAY MOUNTING DETAILS

NO SCALE



VOICE/DATA EQUIPMENT/CABLE LIST

GENERAL NOTE:  
THIS REPRESENTS ITEMS OF SIGNIFANCE USED DURING THE DESIGN OF THE CABLING INSTALLATION, WHILE THE ITEMS INDICATED BELOW SHALL NOT BE CONSTRUED AS A "BILL OF MATERIALS". FURNISH ALL MISCELLANEOUS HARDWARE AND SUPPORTS WHICH MAY NOT BE LISTED HERE FOR A COMPLETE INSTALLATION. COMPARE CATALOG NUMBERS WITH DESCRIPTION AND PRIOR TO PURCHASING ANY EQUIPMENT OR CABLE. REFER TO SECTION 16741 FOR ADDITIONAL INFORMATION. NOTIFY ENGINEER OF DISCREPANCIES PRIOR TO BID AND PROVIDE COMPLETE SUBMITTAL FOR APPROVAL.

SYMBOL	ITEM DESCRIPTION	COMMENTS
	4 PAIR 24 GAUGE CAT 6 UTP, PLENUM CABLE	SEE SPECIFICATIONS
	6 STRAND FIBER PLENUM CABLE, MULTI-MODE (OM3)	SEE SPECIFICATIONS
PPL6-48	48-PORT PATCH PANEL WITH CAT 6 RJ45 JACKS; MOUNTED IN RACK.	PROVIDE FOR QUANTITY OF PORTS SHOWN ON DRAWINGS, PLUS 20%
FTP	SC TYPE CONNECTOR PANEL - PORTS AS REQUIRED	PROVIDE MODULAR TYPE WITH ADAPTOR PLATES.
	DATA RACK, FLOOR MOUNTED	OPEN RACK, STANDARD 19", PROVIDE RACKS AS SHOWN IN ROOM LAYOUT DETAILS. SEE SPECIFICATIONS.
WAP	DATA JACK, 2 CAT 6 CABLES EACH	PROVIDE WITH CAT 6 COMPLIANT RJ45 MODULAR CONNECTORS. SEE DETAIL.
PATCH CORDS	PATCH CORDS, CAT 6	PROVIDE 1 EACH FOR EVERY CABLE TERMINATED FROM HORIZONTAL CABLING OUTLETS.
	110 STYLE PUNCHDOWN BLOCKS (DUAL SIDED - 1 SIDE STATION, 1 SIDE RISER)	PROVIDE QUANTITY OF PAIRS NEEDED, A 100 PAIR CABLE WOULD NEED 100 PAIR FOR EACH SIDE OF THE BLOCK

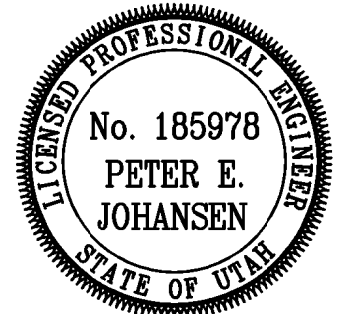
NIC = NOT IN CONTRACT

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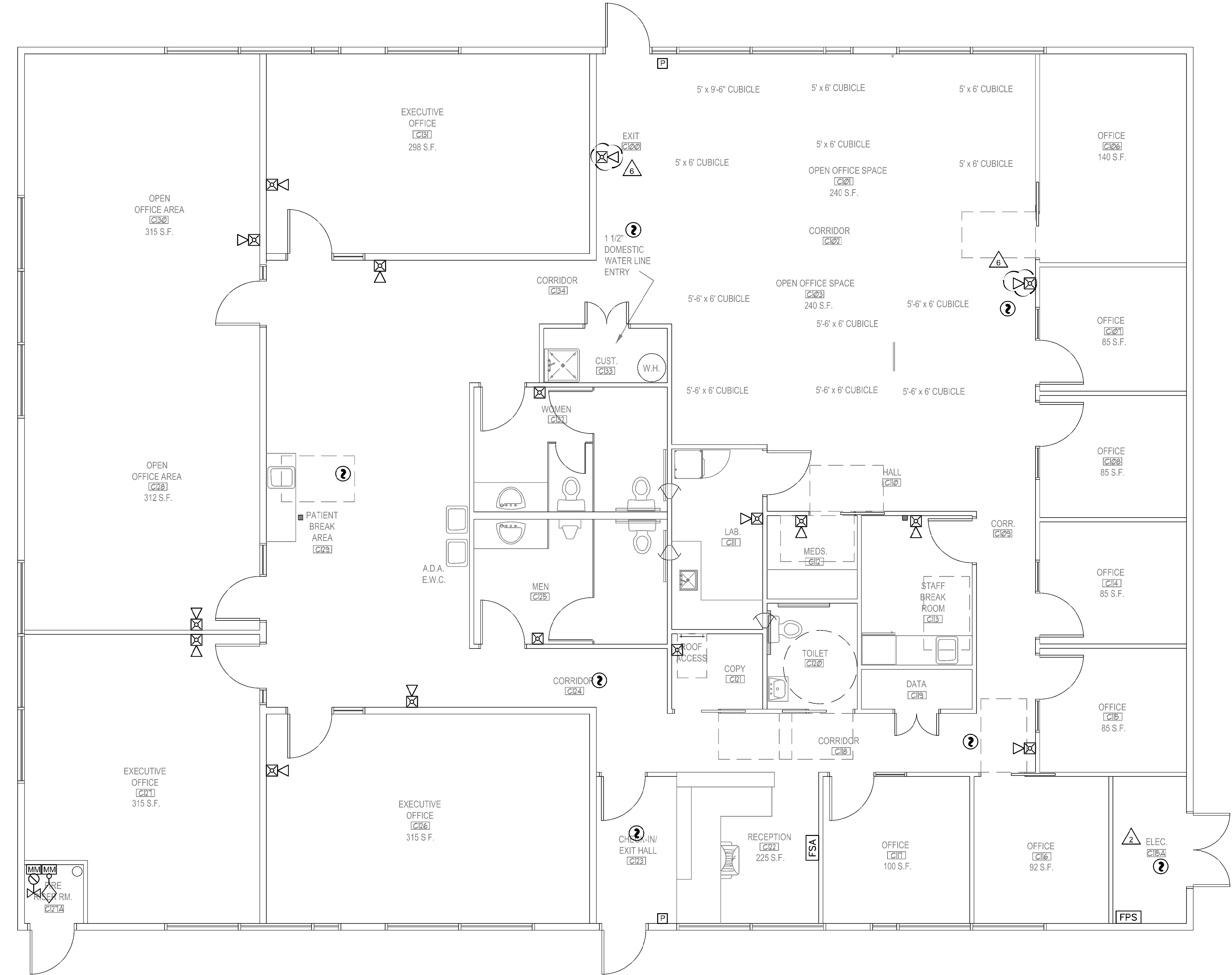
AUXILIARY RISER  
DIAGRAMS

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EY6 03



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# 1 FIRE ALARM PLAN - BUILDING 'C'

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

## GENERAL SHEET NOTES

1.

## SHEET KEYNOTES

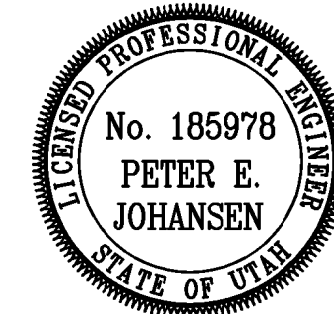
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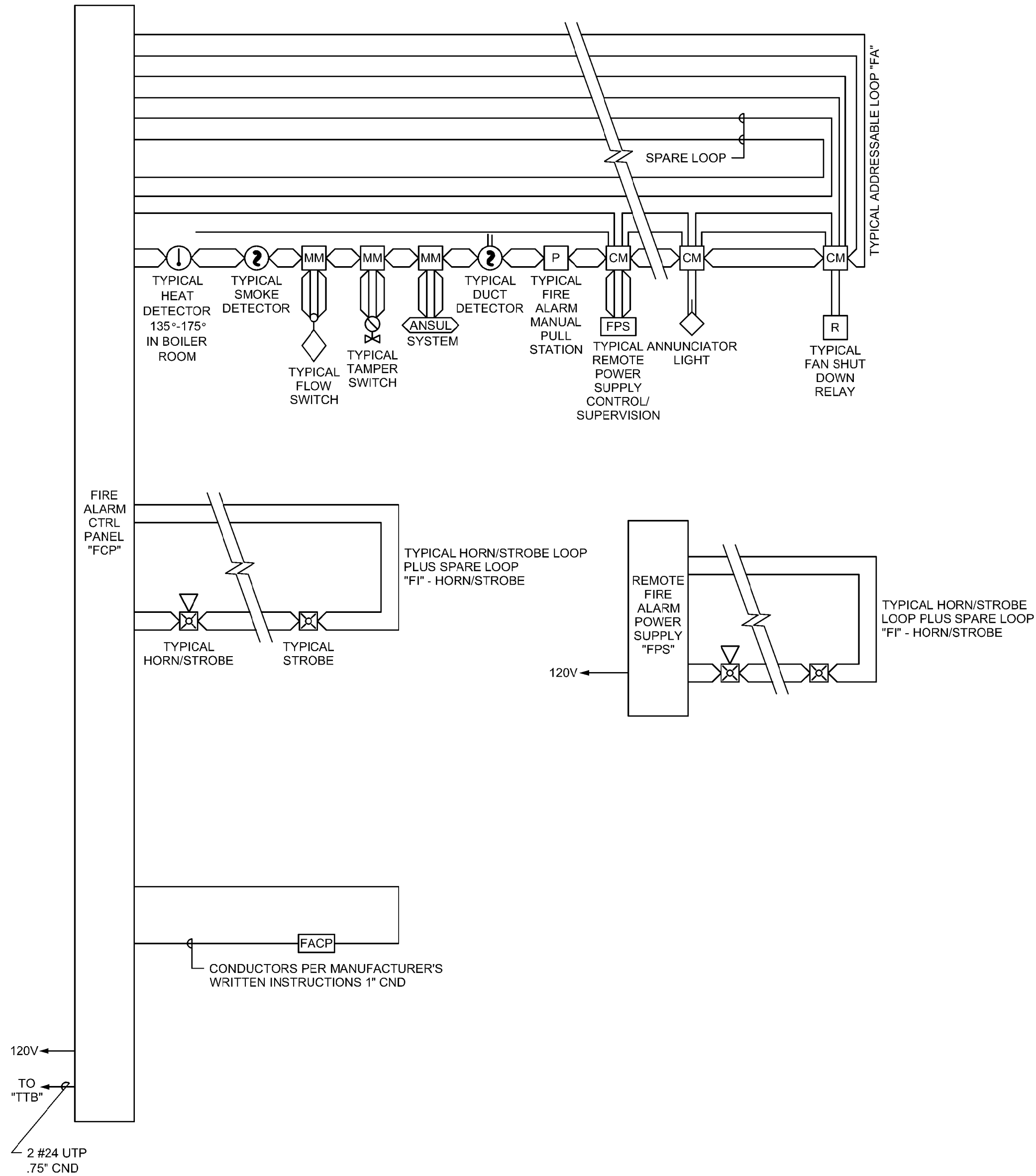
FIRE ALARM PLAN  
- BUILDING 'C'

sheet

FA11C

WIRING SCHEDULE				
FUNCTION	< 500'	< 1000'	1000'-3000'	> 3000'
ADDRESSABLE LOOP	#18 TSP	#18 TSP	#16 TSP	#14 TSP
POWER LOOP	#14 THWN	#14 THWN	#12 THWN	#10 THWN
SPARE LOOP	#14 THWN	#14 THWN	#12 THWN	#10 THWN
STROBE HORNS	#14 THWN	#14 THWN	#12 THWN	#10 THWN
MAGNETIC DOOR HOLDER	#12 THWN	#10 THWN		
SPEAKERS	#16 TSP	#16 TSP	#14 TSP	#14 TSP

FIRE ALARM INPUT/OUTPUT MATRIX		OUTPUT DEVICES										NOTES
		GENERAL ALARM BLDG 'A'	GENERAL ALARM BLDG 'B'	GENERAL ALARM BLDG 'C'	GENERAL ALARM BLDG 'D'	GENERAL ALARM BLDG 'E'	GENERAL ALARM BLDG 'F'	TROUBLE ALARM	SUPERVISORY ALARM	FAN SHUTDOWN	FIRE DAMPER	
INITIATING DEVICES	1	RISER BLDG 'A' FLOW	●						●			
	2	RISER BLDG 'A' TAMPER		●						●		
	3	RISER BLDG 'B' FLOW							●			
	4	RISER BLDG 'B' TAMPER		●						●		
	5	RISER BLDG 'C' FLOW			●				●	●		
	6	RISER BLDG 'C' TAMPER									●	
	7	RISER BLDG 'D' FLOW				●			●	●		
	8	RISER BLDG 'D' TAMPER									●	
	9	RISER BLDG 'E' FLOW					●		●	●		
	10	RISER BLDG 'E' TAMPER									●	
	11	RISER BLDG 'F' FLOW						●	●	●		
	12	RISER BLDG 'F' TAMPER									●	
	13	BLDG 'A' INITIATING LOOP	●						●	●		
	14	BLDG 'B' INITIATING LOOP		●					●	●		
	15	BLDG 'C' INITIATING LOOP			●				●	●		
	16	BLDG 'D' INITIATING LOOP				●			●	●		
	17	BLDG 'E' INITIATING LOOP					●		●	●		
	18	BLDG 'F' INITIATING LOOP						●	●	●		
19	CIRCUIT TROUBLE								●			
20	AC POWER LOSS								●			
21	LOW BATTERY POWER								●			
22	SYSTEM TROUBLE								●			
23	REMOTE POWER SUPPLY TROUBLE								●			



1 FIRE ALARM RISER  
NO SCALE

## GENERAL SHEET NOTES

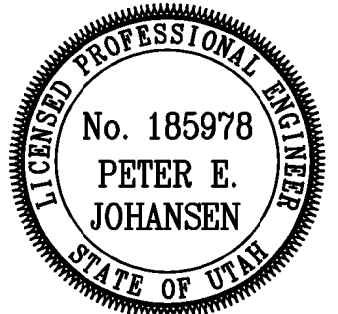
- PLANS ARE BASED UPON 99 MONITOR AND CONTROL DEVICES PER ADDRESSABLE LOOP. OTHER CONFIGURATIONS ARE ACCEPTABLE SUBJECT TO CONTRACTOR ALLOWING FOR INCREASED WIRING REQUIREMENTS AND SUBMITTAL DRAWINGS SHOWING NEW WIRING CONFIGURATION. MAXIMUM INITIAL DEVICES PER LOOP SHALL NOT EXCEED 75% MAXIMUM ALLOWABLE.
- PLANS ARE BASED UPON THE WIRING SCHEDULE SHOWN. WHERE MANUFACTURER'S REQUIREMENTS EXCEED REQUIREMENTS SHOWN, INCLUDE ADDITIONAL ASSOCIATED COSTS AND SUBMITTAL DRAWINGS INDICATING NEW WIRING CONFIGURATION.
- FLOW AND TAMPER CONFIGURATION BASED UPON FIRE SPRINKLER DESIGN CONCEPT. FIELD VERIFY ACTUAL REQUIREMENTS. INCLUDE ANY ADDITIONAL MONITOR MODULES REQUIRED BY ACTUAL DESIGN REQUIREMENTS.
- BATTERY CAPACITY TO BE ADEQUATE TO OPERATE 15 MINUTES AFTER 24 HOURS PLUS 25% SPARE CAPACITY.
- VFD REQUIRES TWO RELAYS, ONE FOR SMOKE CONTROL, ONE SPARE.
- RUN SPARE LOOPS IN SAME CONDUIT. DO NOT EXCEED 40% AREA FILL OF CONDUITS.
- PROVIDE DUCT DETECTORS FOR SUPPLY AND RETURN AIR SYSTEMS OVER 2000 CFM. INSTALL DUCT DETECTORS PER NFPA 72 REQUIREMENTS AND PROVIDE ADDITIONAL DUCT ARRANGEMENT.
- PROVIDE MANUAL PULL STATIONS IN BOILER ROOMS AND KITCHENS.
- PROVIDE ONE YEAR OFF SITE MONITORING INCLUDING ALL INTERFACE DEVICES AND MONITORING CHARGES. COORDINATE WITH BUILDING OWNER'S OFF SITE MONITORING COMPANY.
- LOCATE SMOKE DETECTORS MINIMUM 3' FROM AIR SUPPLY AND RETURN LOUVERS.
- PROVIDE SYNCHRONIZED STROBES THROUGHOUT FACILITY. PROVIDE SYNCHRONIZATION MODULES PER MANUFACTURER'S REQUIREMENTS. INCLUDE ADDITIONAL WIRING, IF REQUIRED.
- INITIATING AND INDICATING LOOPS SHALL NOT SERVE AN AREA OF GREATER THAN 22,500 SQUARE FEET. PROVIDE ADDITIONAL LOOPS FOR AREAS LARGER THAN THIS.
- ALL OUTPUT DEVICES ARE DESIGNED ON SYSTEMS WITH 2 AMP POWER SUPPLY.
- HORN/STROBE BASED ON 120 MILLIAMPS. DOOR HOLDERS BASED ON 70 MILLIAMPS.
- INSTALL DUCT DETECTORS PER NFPA 72 REQUIREMENTS AND PROVIDE ADDITIONAL DUCT DETECTORS DEPENDING UPON FINAL DUCT ARRANGEMENT.

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FIRE ALARM

RISER DIAGRAM

sheet

FA601