ADDENDUM 5

DATE:	December 1, 2016
PROJECT:	MSB First Floor Infill LRC 3 & 4
RFP NO:	744-R1705
OWNER:	The University of Texas Health Science Center at Houston
TO:	Prospective Proposers

This Addendum forms part of and modifies Proposal Documents dated, October 19, 2016, with amendments and additions noted below.

The issue for construction document dated 7/8/16 is below. It was inadvertently omitted from the previous Addendum.

MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas
Health Science Center at Houston

Philo Wilke Partnership
11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

Structural Engineer
Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer
E&C Engineers and Consultants
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

07/08/2016
Issue for Construction

MSB 1st Floor Infill LRC 3 & 4

PWP No. 214-198R

Standard Abbreviations — 26

A/C	Air Conditioning	INSUL	Insulation
A/W	Air/Water	IPS	Inside Pipe Size
ACOUS	Acoustical		
ADJ	Adjustable	JT(S)	Joint(s)
AFF	Above Finish Floor		
ALUM	Aluminum	KSI	Kips Per Square Inch
AMP	Ampers	KW	Kilowatt
AMS	Automated		
ANOD	Anodized	LAM	Laminate
ATTN	Attenuation, Attention	LL	Live Load
AUX	Auxiliary	LTS	Lights
		LPDL	Low Pressure Decorative Laminate
BLDG	Building		
BLK	Black	M.O.	Masonry Opening
BTU	British Thermal Units	MANUF	Manufacturer
BTUH	Btu Per Hour	MAX	Maximum
		MECH	Mechanical
C	Celsius	MED	Medium, Medical
C.I.	Cast Iron	MIN	Minimum
C.O.	Clean Out	MISC	Miscellaneous
CFM	Cubic Feet Per Minute	MTG	Mounting, Meeting
CJ	Construction Joint	MTL	Metal, Material
CKT	Circuit		
CLOS	Closet	N.C.	Normally Closed
CLR	Clear	N.O.	Normally Opened
CMU	Concrete Masonry Unit	N/A	Not Applicable
COL	Column	NO	Number
CONC	Concrete		
COND	Condensing, Condition	O.C.	On Center
CONN	Connection	O.D.	Overflow Drain, Outside Dimension
CONT	Continuous	O/A	Outside Air
CTR	Center		
CW	Cold Water	PART	Partition
		PB	Push Button
D	Depth	PLAS	LAM Plastic Laminate
DESCR	Description	PLMBG	Plumbing
DET	Detail	PLYWD	Plywood
DIA	Diameter	PSF	Pounds Per Square Foot
DIM	Dimension	PSI	Pounds Per Square Inch
DL	Dead Load	PTD	Painted
DN	Down	PVC	Poly Vinyl Chloride
DWG	Drawing		
		R.D.	Roof Drain
E.C.	Electrical Contractor	R/A	Return Air
EA	Each	RE	Refer To
EDF	Electronic Drinking Fountain	REF	Reference
EF	Exhaust Fan	REINF	Reinforced
EL	Elevation, Elevator	REQ'D	Required
ELEC	Electrical	RH	Relative Humidity
EMER	Emergency	RO	Rough Opening
EQ	Equal	RPM	Revolutions Per Minute
EQUIP	Equipment	RTU	Roof Top Unit
EXT	Exterior		
		S/A	Supply Air
F	Farenheit	SC WD	Solid-core Wood
FACP	Fire Alarm Control Panel	SCHED	Schedule
FD	Floor Drain	SIM	Similar
FEC	Fire Extinguisher Cabinet	SPST	Single Pole, Single Throw
FIN	Finish	STD	Standard
FLUOR	Fluorescent	STL	Steel
FURN	Furnish, Furniture	STOR	Storage
		STRUCT	Structure, Structural
G.C.	General Contractor	SYS	System
GA MTL	Galvanized Metal		
GALV	Galvanized	TEMP	Tempered, Temperature
GFI	Ground Fault Interupter	THK	Thick
GND	Ground	TTB	Telephone Terminal Board
GYP BD	Gypsum Board	TYP	Typical
H	Height	UNO	Unless Noted Otherwise
H.M.	Hollow Metal		
HARDWD	Hardwood	VAC	Volt Alternative Current
HDW	Hardware	VDC	Volt Direct Current
HPDL	High Pressure Decorative Laminate	VTR	Vent Through Roof
HORIZ	Horizontal		
HT	Height	W	Width
HVAC	Heating, Ventilation, & A/C	W/	With
HW	Hot Water	WB	Wet Bulb
HZ	Hertz	WD	Wood
		WWF	Welded Wire Fabric
IG	Isolated Ground	WWM	Welded Wire Mesh
IN	Inch		

Note: Refer to the Specifications for abbreviations of trade association names.

Standard Building Element Symbols — 21

Reflected Ceiling Plan

Symbol	Description
	Surface mounted incandescent, compact fluorescent or LED downlight
	Recessed incandescent, compact fluorescent or LED downlight
	Recessed wall washer - shading indicates direction
	Lay-in or recessed fluorescent light troffers - prismatic lense
	Lay-in or recessed fluorescent light troffers - parabolic lense
	Lay-in or recessed direct and indirect fluorescent light
	Suspended fluorescent strip fixture
	Suspended architectural flourescent strip fixture
	Wall mounted architectural fixture
	Under cabinet fluorescent light fixture
S	Speaker
SD	Smoke detector
	Supply air grille
	Return/exhaust air grille
	Sprinkler head
	Ceiling/wall mtd. exit sign - arrow/line indicates direction

Floorplans

Height	110V, 20A duplex outlet (Height indicated if not standard)
Height D	110V, 20A duplex dedicated outlet (Height indicated if not standard)
Height	220V, 30A duplex outlet (Height indicated if not standard)
Height	110V, 20A quadplex outlet (Height indicated if not standard)
	110V, 20A flush floor mounted duplex outlet
	Flush floor mounted telephone outlet
Height	Telephone outlet (RJ11) (Height indicated if not standard)
Height	Computer data outlet (RJ45) (Height indicated if not standard)
Height	Combined telephone/computer data outlet (Height indicated if not standard)
J	Electrical/communications junction box
FAS	Fire Alarm Strobe
FAP	Fire Alarm Pull
T	Thermostat
PB	Door operator push button
CR	Card reader
NCAP	Nurse call alarm panel
$	Single pole switch
$3	3-way switch
$D	Dimmer switch
FEC	Fire extinguisher cabinet
FE	Fire extinguisher on bracket
ZV	Zone valve

Elevations

E V D N	Electrical, voice, data, voice/data outlets in elevation
A V D W N S	Medical gases/Lab gas outlets (Air, Vacuum, Oxygen, Waste Anes Vac, Nitrogen, Slide

Notes:
1. See the individual drawings for additional symbol, legends for symbols not shown.
2. Refer to the Construction Specifications Institute's (CSI) publication TD-2-6, Standard Reference Symbols, 10/91 Edition, for additional building element symbols not shown here or elsewhere in the Drawings.
3. See additional legends located in the specific discipline drawings (Structural, MEP, etc.) for building element symbols used on those discipline drawings.

Project Description — 16

The project consists of the addition of approximately 2,170 square feet of office space to the first floor of the UTHealth Medical School Building located in Houston, Texas. Construction will consist of adding a suspended concrete slab, partitions, finishes, mechanical systems, and electrical systems.

Standard Material Indications — 18

Section

Acoustical Ceiling Board	Plaster with Expanded Metal Lath
Aluminum	Plastic Glazing
Brick	Plastic Laminate (Large Scale)
Carpet	Plywood
Ceramic Tile	Precast Concrete, Cast Stone
Concrete	Resilient Flooring, Pre-Molded Joint Filler
Concrete Masonry Unit	Rigid Insulation Board
Earth	Sand, Grout
Exterior Insulation and Finishing System	Steel
Insulation - batt or blanket	
Finished Wood, Hardwood	
Glass	
Gravel, Coarse Porous Fill	
Gypsum Board	
Gypsum Sheathing	
Oriented Standard Board (OSB)	
Ornamental Metal, Bronze, Brass	
Particle Board	

Elevation

Ceramic Tile	
Concrete, Plaster, Lime-stone, Synthetic Stone	
Glass, Mirrors	
Metal, Plastic Laminate	

Reflected Ceiling Plan

Gypsum Board or Plaster	
Pre-finished Metal Suspension Grid with Lay-in Panels	

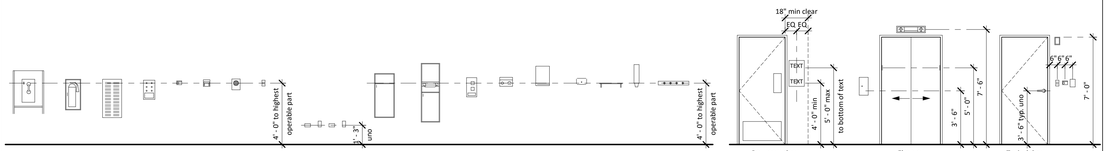
Note: Refer to the Construction Specifications Institute's (CSI) publication TD-2-6 Standard Reference Symbols, 10/91 Edition, for additional material indications not shown.

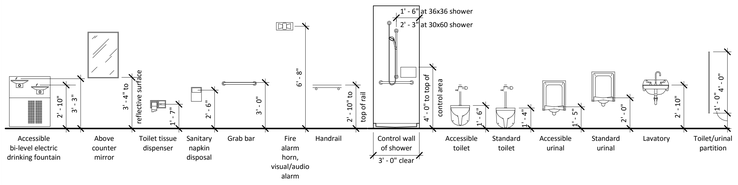
Standard Reference Symbols — 11

Description	Symbol	Designators
Benchmark Indicator	F.F. EL = BM	BM = Coordinate, Elevation, or Station Sequence Designation
Building Section		No = Detail Number Dwg = Sheet Number
Control Elevation Indicator	Name Elevation	
Column Line or Grid Indicator	No	No = Alphanumeric Grid Designation
Detail Indicator (Enlarged Detail)	No SIM Dwg	No = Detail Number Dwg = Sheet Number
Detail Indicator (Section)		No = Detail Number Dwg = Sheet Number
Wall Section		No = Detail Number Dwg = Sheet Number
Door Tag	No HS	No = Door Type HS = Hardware Set
Exterior Elevation/View Indicator	No Dwg	No = Detail Number Dwg = Sheet Number
Interior Elevation/View Indicator	No Dwg	No = Detail Number Dwg = Sheet Number
Equipment Identifier	No	No = Equipment Designation
Face Dimension	Dim	Dim = Distance, Face of Finish to Face of Finish
Finish Grade Indicator (New)	Elev	Elev = Finish Grade Elevation
Finish Grade Indicator (Existing)	Elev	Elev = Finish Grade Elevation
Finish Type Identifiers	No	No = Finish Designation
Cabinet type Identifiers	No	No =Cabinet Type Identifier
Countertop Type Identifiers	No	No =Countertop Type Identifier, See 3 A560 for legend
Glass Type/Opening Identifier	No	No = Glass Type or Opening Designation
Graphic Scale	0 4' 8' 16'	
Keyed Note Indicator	No	No = Note Designation
North Indicator	Plan North TN	PN = Plan North TN = True North
Partition Type Indicator	No	No = Partition Type Designation
Revision Indicator	No	No = Revision Designation
Room Identifier	Name No	Name = Name of Space No = Room Designation
Room and Finish Type Identifier	Name No FT	Name = Name of Space No = Room Designation FT = Room Finish Type Designator
Toilet Accessory Identifier	No	No = Accessory Designation

Note: Refer to the Construction Specifications Institute's (CSI) publication TD-2-6 Standard Reference Symbols, 10/91 Edition, for additional material indications not shown.

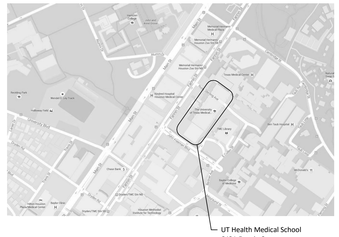
Typical Mounting Heights — 14



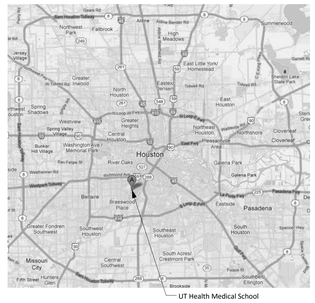


Notes:

1. All mounting heights shown are typical. Heights shown in elevations and details take precedence over the typical heights given here.
2. Mounting heights for many common elements are shown. Not all elements occur in this project.



Project Location Map — 10



Project Vicinity Map — 5

Applicable Codes and Standards
1. International Building Code (IBC) 2009
2. Life Safety Code, NFPA 101, 2009 Edition
3. Texas Department of Licensing and Regulation (TDLR) - Texas Accessibility Standards of the Architectural Barriers Act, 2012
4. NFPA 10 - Fire Extinguishers (Referenced by IBC)
5. NFPA 13 - Installation of Sprinkler Systems (Referenced by IBC)
6. NFPA 70 - National Electrical Code (Referenced by IBC)
7. NFPA 72 - National Fire Alarm Code (Referenced by IBC)
8. NFPA 220 - Standard on Types of Building Construction (Referenced by NFPA 101)

Occupancy Classification
Business, Group B (302.1 IBC)
New Business (6.1.11 NFPA 101)

Construction Classification
Type IB (IBC)
Type II(222) (NFPA 220)

Fire Protection
1. Existing sprinkler system shall be modified to fully sprinkle new construction, in conformance to NFPA 13 (IBC).
2. A manual fire alarm system and automatic fire detection system is required. An electrically supervised, automatic smoke detection system is required in corridors, and waiting areas that are open to corridors.
3. Fire extinguishers are required to be located no more than 75 ft. travel distance from any point. (NFPA 10)
4. All fire extinguishers shall have a U/L rating of 4A-60BC. (NFPA 10)
5. Maximum allowable area per fire extinguisher: 11, 250 Sq.Ft.

Occupant Load and Egress (IBC Table 1004.1.1)

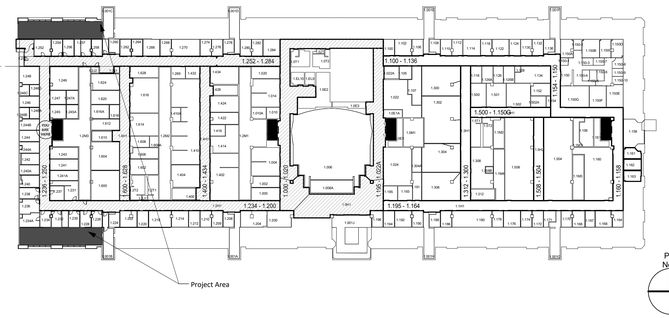
1. Occupant Load (IBC, NFPA):	
Existing Assembly Areas (4,152 Sq.Ft./7 Sq.Ft. per Person)	594
Existing Business Areas (69,875 Sq.Ft./100 Sq.Ft. per Person)	699
New Business Area (2,170 Sq.Ft./100 Sq.Ft. per Person)	22
Total:	1315
2. Exit Width:	
Exit Width Required (0.2 In./Person) (NFPA):	263 inches
Exit Width Provided:	398 inches
3. Arrangement of Exits:	
Minimum Number of Exits Required (IBC):	3
Number of Exits Provided:	10
Minimum Separation Permitted (1/2 Diagonal Dimension of Building):	258 feet
Actual Separation Provided:	399 feet
4. Maximum Exit Travel Distance (NFPA, IBC):	
200 Ft., Any Point to Exit	
150 Ft., Any Exit Access Door to Exit	

Finishes
1. Walls and Ceilings: ASTM E 84 Class A or B (NFPA, IBC)
Exception: May be Class C in rooms with capacity less than 4. (NFPA, IBC)
Exception: Class C wainscot less than 1,000 sq. ft. permitted in lobby.

Building Code Information — 7

Cover Sheet	Cover Sheet
G-100	General Information
G-102	Fire Resistive Assemblies Design Reference
G-110	Fire Safety Plan
S-000	General Notes
S-100	Level 1 and Level 2 New Floor Infill Framing
S-200	Sections and Details
S-201	Typical Details
A-110	Floor Plan East
A-111	Floor Plan West
A-130	Equipment and Furniture Plan
A-161	Demolition Reflected Ceiling Plan - Ground Level
A-162	Reflected Ceiling Plans -Ground Level
A-163	Demolition Reflected Ceiling Plan - Level 1
A-164	Reflected Ceiling Plans - Level 1
A-520	Partition Types and Interior Construction Details
A-540	Door and Window Details
MEP0.0	Mechanical/Electrical/Plumbing Symbols/Abbreviations/General Notes
MEP0.1	Mechanical/Electrical/Plumbing Schedules And Details
M1.0GAE	Mechanical Demolition and Alteration Plans Ground Floor East
M1.0GEW	Mechanical Demolition and Alteration Plans Ground Floor West
DM1.01A	Mechanical Demolition Plan First Floor North
M1.01A	Mechanical Alteration Plan First Floor North
M1.01AE	Mechanical Demolition and Alteration Plans First Floor East
M1.01AW	Mechanical Demolition and Alteration Plans First Floor West
EL1.0GAE	Electrical Lighting Demolition and Alteration Plans Ground Floor East
EL1.0GAW	Electrical Lighting Demolition and Alteration Plans Ground Floor West
EP1.0GAE	Electrical Power Demolition and Alteration Plans Ground Floor East
EP1.0GAW	Electrical Power Demolition and Alteration Plans Ground Floor East
DEL1.01A	Electrical Lighting Demolition Plan First Floor North
EL1.01A	Electrical Lighting Alteration Plan First Floor North
EL1.01AE	Electrical Lighting Demolition and Alteration Plans First Floor East
EL1.01AW	Electrical Lighting Demolition and Alteration Plans First Floor West
EP1.01A	Electrical Power Alteration Plan First Floor North
EP1.01AE	Electrical Power Demolition and Alteration Plans First Floor East
EP1.01AW	Electrical Power Demolition and Alteration Plans First Floor West
P1.0GAE	Plumbing Demolition and Alteration Plans Ground Floor East
P1.0GAW	Plumbing Demolition and Alteration Plans Ground Floor West
P1.01AE	Plumbing Demolition and Alteration Plans First Floor East
P1.01AW	Plumbing Demolition and Alteration Plans First Floor West

Drawing Index — 2



1st Floor - Key Plan — 1

1/4" = 1'-0"

Philo Wilke Partnership
11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

REGISTERED ARCHITECT — CATHY L. HORAN — 12286 — STATE OF TEXAS

07/08/2016

Consultants

Structural Engineer
Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer
E&C Engineers and Consultants
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

Issues / Revisions

No.	Date	Description
	07/08/2016	Issue for Construction

Project

MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas Health Science Center at Houston

Drawing Name

General Information

Copyright (C) 2016 by PhiloWilke Partnership. All rights reserved.

This document and the information herein is the property of PhiloWilke Partnership. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by PhiloWilke Partnership. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by PhiloWilke Partnership.

Print Date / Time: 8/8/2016 2:16:08 PM

P&W Commission Number: 214-198R

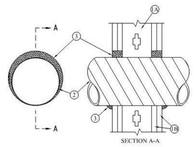
Sheet Number: G-100

C:\Users\dandrew\Documents\LRC infill 3&4 (Central)_dandrew.rvt

System No. W-L-7013

September 07, 2004

F Rating - 2 Hr
T Rating - 0 Hr



1. Wall Assembly - The 2 hr fire rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs - Wall framing shall consist of steel channel studs to be min 3-1/2 in. wide and spaced max 24 in. OC.

B. Gypsum Board* - Two layers of min 5/8 in. thick gypsum wallboard, as specified in the individual Wall and Partition Design. Max diam of opening is 17-1/2 in.

2. Through-Penetrant - One steel duct to be installed either concentrically or eccentrically within the firestop system. An annular space of min 0 in. to max 1-1/2 in. is required within the firestop system. Steel duct to be rigidly supported on both sides of wall assembly. The following sizes of steel ducts may be used.

A. Steel Duct - Nom 16 in. diam (or smaller) No. 24 gauge (or heavier) spiral wound galv steel duct.

B. Steel Duct - Nom 10 in. diam (or smaller) No. 28 gauge (or heavier) galv steel vent duct.

3. Fill, Void or Cavity Material* - Caulk or Sealant - Min 1-1/4 in. thickness of fill material applied within annulus, flush with both surfaces of wall assembly. At the point contact location between duct and wallboard, a min 1/4 in. diam bead of caulk shall be applied at the wallboard/duct interface on both surfaces of wall assembly.

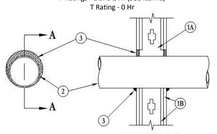
3M COMPANY - CP25WB+ or FB-3000 WT

Penetration Seal at Small Diameter Steel Duct	N.T.S.	29

System No. W-L-1146

September 03, 2004

F Ratings - 1 and 2 Hr (See Item 1)
T Rating - 0 Hr



1. Wall Assembly - The 1 or 2 hr fire rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-1/2 in. wide and spaced max 24 in. OC. When steel studs are used and the diam of opening exceeds the width of stud cavity, the opening shall be framed on all sides using lengths of steel stud installed between the vertical studs and screw-attached to the steel studs at each end. The framed opening in the wall shall be 4 to 6 in. wider and 4 to 6 in. higher than the diam of the penetrating item such that, when the penetrating item is centered in the opening, a 2 to 3 in. clearance is present between the penetrating item and the framing in all four sides.

B. Gypsum Board* - The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 26 in. in. for steel stud walls. Max diam of opening is 14-1/2 for wood stud walls.

The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. Through-Penetrant - One metallic pipe, conduit or tubing installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and perimeter of opening shall be min of 0 in. (point contact) to max 2 in. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

A. Steel Pipe - Nom 24 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. Iron Pipe - Nom 24 in. diam (or smaller) service weight (or heavier) cast iron soil pipe, nom 12 in diam (or smaller) or Class 50 (or heavier) ductile iron pressure pipe.

C. Conduit - Nom 6 in. diam (or smaller) steel conduit or nom 4 in diam (or smaller) steel electrical metallic tubing

D. Copper Tubing - Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing

E. Copper Pipe - Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.

3. Fill, Void or Cavity Materials* - Caulk or Sealant - Min 5/8 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. Min 1/2 in. diam bead of caulk applied to the penetrant/wallboard interface at the point contact location on both sides of wall.

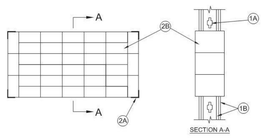
3M COMPANY - CP25WB+ or FB-3000 WT

Penetration Seal for Metalic Pipes, Conduit, or Tubing	N.T.S.	28

System No. W-L-0011

December 19, 2007

F Ratings - 1 and 2 Hr (See Item 1)
T Ratings - 1 and 2 Hr (See Item 1)
L Rating at Ambient - 2 CFM/sq ft.
L Rating at 400 F - 2 CFM/sq ft.



1. Wall Assembly - The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400 or V400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-5/8 in. (92 mm) wide and spaced max 24 in. (305 mm) OC. Additional framing members shall be used to completely frame around opening.

B. Gypsum Board* - Thickness, type, number of layers and fasteners as required in the individual Wall and Partition Design. Max area of opening is 540 in.2 (0.35 m2) with a max dimension of 30 in.(762 mm).

The hourly F and T Ratings for the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.

2. Firestop System - The firestop system shall consist of the following:

A. Fill Void or Cavity Material* - Putty - Min 1/2 in. (13 mm) thickness of putty formed to a min 1 in. (25 mm) width applied within annulus at all corners of opening and extending a min 1 in. (25 mm) in both directions from each corner, flush with both surfaces of wall.

3M COMPANY - MPS-2+

B. Fill Void or Cavity Material* - Pillows - Max 9 in. (229 mm) long by 6 in. (152 mm) wide by 2 and 3 in. (51 and 76 mm) thick plastic covered pillows packed into opening to a min compression of 33 percent. Pillows installed with 9 in. (229 mm) dimension projecting through wall and centered within the opening.

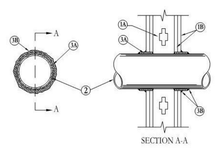
3M COMPANY - Fire Barrier Pillow or Fire Barrier Sealant Self-Locking Pillows

Penetration Seal with No Pentrating Items	N.T.S.	23

System No. W-L-5001

May 19, 2005

F Ratings - 1 and 2 Hr (See Item 1)
T Ratings - 3/4, 1 and 1-1/2 Hr (See Item 1)
L Rating At Ambient - 2 CFM/sq ft
L Rating At 400 F - less than 1 CFM/sq ft



1. Wall Assembly - The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400 or V400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC with nom 2 by 4 in. (51 by 102 mm) lumber end plates and cross braces. Steel studs to be min 3-5/8 in. (92 mm) wide and spaced max 24 in. (610 mm) OC.

B. Gypsum Board* - Nom 5/8 in. (16 mm) thick, 4 ft (122 cm) wide with square or tapered edges. The gypsum board type, number of layers and sheet orientation shall be as specified in the individual U300, U400 or V400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 17-1/2 in. (79 mm).

The hourly F Rating of the firestop system is 1 hr when installed in a 1 hr fire rated wall and 2 hr when installed in a 2 hr fire rated wall.

2. Through Penetrants - One nonmetallic pipe or conduit to be centered in the through opening. The annular space between pipe or conduit and periphery of opening shall be min 1/4 in. (6 mm) and max 3/8 in. (10 mm). Pipe or conduit to be rigidly supported on both sides of the floor-ceiling assembly. The following types and sizes of nonmetallic pipes or conduits may be used:

A. Polyvinyl Chloride (PVC) Pipe - Nom 2 in. (51 mm) diam (or smaller) Schedule 40 solid core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.

B. Rigid Nonmetallic Conduit++ - Nom 2 in. (51 mm) diam (or smaller)(Schedule 40 or 80) PVC conduit installed in accordance with the National electric Code (NFPA No. 70).

C. Chlorinated Polyvinyl Chloride (CPVC) Pipe - Nom 2 in. (51 mm) diam (or smaller) SDR13.5 CPVC pipe for use in closed (process or supply) piping systems.

D. Cellular Core Polyvinyl Chloride (ccPVC) Pipe - Nom 2 in. (51 mm) diam (or smaller) Schedule 40 cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.

E. Acrylonitrile Butadiene Styrene (ABS) Pipe - Nom 2 in. (51 mm) diam (or smaller) Schedule 40 solid core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

F. Cellular Core Acrylonitrile Butadiene Styrene (ccABS) Pipe - Nom 2 in. (51 mm) diam (or smaller) Schedule 40 cellular core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

3. Firestop System - Installed symmetrically on both sides of wall assembly. The hourly F and T Ratings for the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed. The details of the firestop system shall be as follows.

A. Fill, Void or Cavity Materials* - Wrap Strip - Nom 1/4 in. (6 mm) thick intumescent elastomeric material faced on one side with aluminum foil, supplied in 2 in. (51 mm) wide strips. Nom 2 in. (51 mm) wide strip tightly wrapped around nonmetallic pipe (foil side out) with seam butted. Wrap strip layer securely bound with steel wire or aluminum foil tape and slid into annular space approx 1-1/4 in. (32 mm) such that approx 3/4 in. (19 mm) of the wrap strip protrudes from the wall surface.

3M COMPANY - FS-195+

B. Fill, Void or Cavity Materials* - Caulk, Sealant or Putty - Min 5/8 in. (16 mm) thickness of caulk or putty applied into annular space between wrap strip and periphery of opening. A nom 1/4 in. (6 mm) diam bead of caulk or putty to be applied to the wrap strip/wall interface and to the exposed edge of the wrap strip layers approx 3/4 in. (19 mm) from the wall surface.

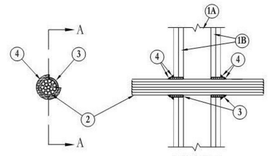
3M COMPANY - CP 25WB+ caulk or MP+ Stix putty, IC 15WB+ caulk, FireDam 150+ caulk or FB-3000 WT sealant. (Note: L Ratings apply only when Type CP 25WB+ Caulk or Type FB-3000 WT Sealant is used.)

Penetration Seal at Non-metalic Pipes and Conduit	N.T.S.	26

System No. W-L-3030

May 19, 2005

F Ratings - 1 and 2 Hr(See Item 1)
T Rating - 1/2 Hr
L Rating At Ambient - 76 CFM/sq ft (See Item 4)
L Rating At 400 F - 7 CFM/sq ft (See Item 4)



1. Wall assembly - The 1 or 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400 or V400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC with nom 2 by 4 in. (51 by 102 mm) lumber end plates and cross braces. Steel studs to be min 3-5/8 in. (92 mm) wide and spaced max 24 in. (610 mm) OC.

B. Gypsum Board* - Nom 5/8 in. (16 mm) thick, 4 ft (122 cm) wide with square or tapered edges. The gypsum board type, number of layers and sheet orientation shall be as specified in the individual Design in the UL Fire Resistance Directory. Max diam of opening is 14-1/2 (368mm) in for wood stud walls and 18 in. (457 mm) for steel stud walls.

The hourly F Rating of the firestop system is 1 hr when installed in a 1 hr fire rated wall and 2 hr when installed in a 2 hr fire rated wall.

2. Through Penetrants - One metallic pipe or tubing to be centered within the firestop system. Pipe or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes or tubing may be used:

A. Steel Pipe - Nom 12 in. (305 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. Copper Tubing - Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.

C. Copper Pipe - Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.

3. Pipe Covering* - Nom 1 or 2 in. (25 or 51 mm) thick hollow cylindrical heavy density (min 3.5 pcf or 56 kg/m3) glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints sealed with metal fasteners or with butt strip tape supplied with the product. When nom 1 in. (25 mm) thick pipe covering is used, the annular space between the pipe covering and the circular cutout in the gypsum wallboard layers on each side of the wall shall be min 1/2 in. (13 mm) to max 3/4 in. (19 mm).

See Pipe and Equipment Covering Materials (BRGU) category in Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.

The hourly T Rating of the firestop system is 3/4 hr when nom 1 in. (25 mm) thick pipe covering is used. The hourly T Rating of the firestop system is 1 hr and 1-1/2 hr when nom 2 in. (52 mm) thick pipe covering is used with 1 hr and 2 hr fire rated walls, respectively.

4. Firestop System - Installed symmetrically on both sides of wall assembly. The details of the firestop system shall be as follows:

A. Fill, Void or Cavity Materials* - Wrap Strip - Nom 1/4 in. (6 mm) thick intumescent elastomeric material faced on one side with aluminum foil, supplied in 2 in. (51 mm) wide strips. Nom 2 in. (51 mm) wide strip tightly wrapped around pipe covering (foil side out) with seam butted. Wrap strip layer securely bound with steel wire or aluminum foil tape and slid into annular space approx 1-1/4 in. (32 mm) such that approx 3/4 in. (19 mm) of the wrap strip protrudes from the wall surface. One layer of wrap strip is required when nom 1 in. (25 mm) thick pipe covering is used. Two layers of wrap strip are required when nom 2 in. (51 mm) thick pipe covering is used.

3M COMPANY - FS-195+

B. Fill, Void or Cavity Materials* - Caulk or Sealant - Min 1/4 in. (6 mm) diam continuous bead applied to the wrap strip/wall interface and to the exposed edge of the wrap strip layer approx 3/4 in. (19 mm) from the wall surface.

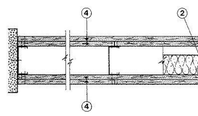
3M COMPANY - CP 25WB+, IC 15WB+, FireDam 150+ caulk or FB-3000 WT sealant

Penetration Seal at Insulated Pipe	N.T.S.	21

Design No. U411

December 23, 2008

Nonbearing Wall Rating - 2 HR.



1. Floor, Side and Ceiling Runners — "I" - shaped runner, min 2-1/2 in. deep (min 4 in. deep when System C is used), with unequal legs of 1 in. and 2 in., fabricated from min 24 MSG (min 20 MSG when item 4A, 4B or 7 are used) galv steel. Runners positioned with short leg toward finished side of wall. Runners attached to structural supports with steel fasteners located not greater than 2 in. from ends and not greater than 24 in. OC. "E" - shaped studs (Item 2A) may be used as side runners in place of "I" - shaped runners.

2. Steel Studs — "C-H" - shaped studs, min 2-1/2 in. deep (min 4 in. deep when System C is used), fabricated from min 25 MSG (min 20 MSG when items 2D, 4A, 4B or 7 is used) galv steel, min 2-1/2 in. deep (min 4 in. deep when System C is used), with one leg 1 in. long and two legs 3/4 in. long. Shorter legs 1 in. apart to engage gypsum liner panels. Cut to lengths 3/8 to 1/2 in. less than floor-to-ceiling height and spaced 24 in. or 600 mm OC.

2A. Steel Studs — (Not Shown) — "E" - shaped studs installed back to back in place of "C-H" - shaped studs (Item 2) "E" - shaped studs secured together with steel screws spaced a maximum 12 in. OC. Fabricated from min 25 MSG (min 20 MSG when Item 2D, 4A, 4B or 7 is used) galv steel, min 2-1/2 in. deep (min 4 in. deep when System C is used), with one leg 1 in. long and two legs 3/4 in. long. Shorter legs 1 in. apart to engage gypsum liner panels. Cut to lengths 3/8 to 1/2 in. less than floor to ceiling heights.

2B. Furring Channels — (Optional, not shown) — For use with single or double layer systems. Resilient furring channels fabricated from min 25MSG corrosion protected steel, installed horizontally, and spaced vertically a max 24 in. OC. Flange portion of channel attached to each intersecting "C-H" or "E" stud on side of stud opposite the 1 in. liner panels with 1/2 in. long Type S or S-12 pan-head steel screws. When furring channels are used, wallboard to be installed vertically only. Not to be used with Type FRX-G gypsum wallboard, Type RB-LBG (Item 4A), Type Nelco (Item 4B) or cementitious backer units (Item 7).

2D. Steel Framing Members* — (Optional, not shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum wallboard, Type RB-LBG (Item 4A), Type Nelco (Item 4B) or cementitious backer units (Item 7):

a. Furring Channels — Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item 3.

b. Steel Framing Members* — Used to attach furring channels (Item 2DA) to studs (Item 2 or 2A). Clips spaced max. 24 in. OC., and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, 5-12 steel screw through the center grommet. Furring channels are friction fitted into clips.

PAC INTERNATIONAL INC — Type RSIC-1.

3. Gypsum Board* — Gypsum liner panels, nom 1 in. thick, 24 in. or 600 mm (for metric spacing) wide. Panels cut 1 in. less in length than floor to ceiling height. Vertical edges inserted in "H" portion of "C-H" studs or the gap between the two 3/4 in. legs of the "E" studs. Free edge of end panels attached to long leg of vertical "J" - runners with 1-5/8 in. long Type S steel screws spaced not greater than 12 in. OC. When wall height exceeds liner panel length, liner panel may be butted to extend to the full height of the wall. Horizontal joints need not be backed by steel framing. In System I, butt joints in liner panels are staggered min 36 in. Butt joints backed with 6 in. by 22 in. strips of 3/4 in. thick gypsum wallboard (Item 4). Wallboard strips centered over butt joints and secured to liner panels with six 1-1/2 in. long Type G steel screws, three screws along the 22 in. dimension at the top and bottom of the strips.

CANADIAN GYPSUM COMPANY — Type SLX

UNITED STATES GYPSUM CO — Type SLX

USG MEXICO S A DE C V — Type SLX

4. Gypsum Board* —
System A - 1 Hr

Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached to studs with 1 in. long Type S steel screws spaced 12 in. when installed vertically or 8 in OC when installed horizontally. Horizontal joints need not be backed by steel framing.

CANADIAN GYPSUM COMPANY — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC, WRX

UNITED STATES GYPSUM CO — Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC, WRX, USGX.

USG MEXICO S A DE C V — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC, WRX

System B - 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally in two layers. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in. OC when installed horizontally. Outer or face layer attached to studs with 1-5/8 in. long Type S steel screws spaced 12 in. OC when installed vertically and staggered 12 in. from base layer screws or 8 in. OC when installed horizontally and staggered 8 in. from base layer screws. Horizontal joints between inner and outer layers staggered a min of 12 in. Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in.

CANADIAN GYPSUM COMPANY — 1/2 in. Type C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC, WRX

UNITED STATES GYPSUM CO — 1/2 in. Types C, IP-X2, IPC-AR, or WRC; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC, WRX, USGX

USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC, WRX

4A. Gypsum Board* — (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) - Nom 5/8 in. or ¼ in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 1, 2, 2A, 2B and 2D. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 9) or Lead Discs or Tabs (see item 10).

RAY-BAR ENGINEERING CORP — Type RB-LBG

4B. Gypsum Board* — (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) - Nominal 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over stud cavity and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 for #6 by 1-1/4 in. long bugle head fine driller) steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field.

NEW ENGLAND LEAD BURNING CO INC, DBA

NELCO — Nelco

5. Joint Tape and Compound — (Not Shown)
Systems A, B, C, E, F, G, H, I

Joints on outer layers of gypsum boards (Item 4 and 4A) covered with paper tape and joint compound. Paper tape and joint compound may be omitted when gypsum boards are supplied with square edges. Exposed screw heads covered with joint compound.

6. Batts and Blankets* —
Systems A, B, E, F, G, H, I

(Optional) — Mineral wool or glass fiber batts partially or completely filling stud cavity. Any mineral wool or glass fiber batt mineral bearing the UL Classification Marking as to Fire Resistance.

9. Lead Batten Strips — (Not Shown, For Use With Item 4A) - Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips centered behind vertical joints of lead backed gypsum wallboard (Item 4A) and optional at remaining stud locations. Required behind vertical joints.

10. Lead Discs or Tabs — (Not Shown, For Use With Item 4A) - Used in lieu of or in addition to the lead batten strips (Item 9) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 4A) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

11. Lead Batten Strips — (Not Shown, For Use With Item 4B) Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.142 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4B) and optional at remaining stud locations.

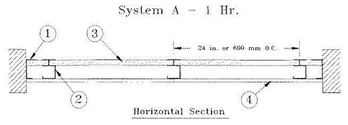
12. Lead Tabs — (Not Shown, For Use With Item 4B) 2 in. wide, 5 in. long with a max thickness of 0.142 in. Tabs friction-fit around front face of stud, the stud folded back flange, and the back face of the stud. Tabs required at each location where a screw (that secures the gypsum boards, Item 4B) will penetrate the steel stud. Lead tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead tabs may be held in place with standard adhesive tape if necessary.

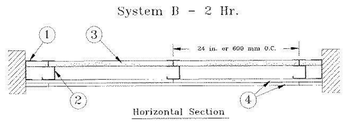
UL Design No. U411	N.T.S.	16

Design No. U415

November 15, 2010

Nonbearing Wall Ratings — 1 or 2 Hr





1. Floor and Ceiling Runner - (Not Shown) - Min. 25 MSG galv steel 1 in. high, return legs 2-1/2 in. wide (min), attached to floor and ceiling with fasteners 24 in. OC.

2. Steel Studs - Min 2-1/2 in. wide, 1-1/4 in. legs, 3/8 in. return, formed of min 25 MSG galv steel max stud spacing 24 in. OC. Studs to be cut 3/4 in. less than assembly height.

3. Batts and Blankets* - (Optional) - Mineral wool or glass fiber batts partially or completely filling stud cavity. Fasten each batt to wallboard base layer with a min 9/16 in. long staple. Use five staples for each 4 ft piece. Drive one staple in the center of each piece and a staple at each corner, approx 3 in. from edges.

See Batts and Blankets (BZJZ) category for names of manufacturers.

3A. Fiber, Sprayed* - As an alternate to Batts and Blankets (Item 3) - Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 3.0 lb/ft3. Alternate application method: The fiber is applied with U.S. Greenfiber LLC Type AD100 hot melt adhesive at a nominal ratio of one part adhesive to 6.6 parts fiber to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 2.5 lb/ft3.

U S GREENFIBER L L C - - Cocoon2 Stabilized or Cocoon-FRM (Fire Rated Material)

3B. Fiber, Sprayed* - As an alternate to Batts and Blankets (Item 3) and Item 3A - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft.

NU-WOOL CO INC - Cellulose Insulation

4. Gypsum Board* - 5/8 in. thick, 4 ft wide, attached to steel studs and floor and ceiling track with 1 in. long, Type S steel screws spaced 8 in. OC. along edges of board and 12 in. OC in the field of the board. Joints oriented vertically and staggered on opposite sides of the assembly. When attached to item 6 (resilient channels) or 6A (furring channels), wallboard is screw attached to furring channels with 1 in. long, Type S steel screws spaced 12 in. OC.

- AMERICAN GYPSUM CO - Types AG-C, AGX-1
- BEIJING NEW BUILDING MATERIALS PUBLIC
- LTD CO - Type DBX-1.
- CANADIAN GYPSUM COMPANY - Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.
- CERTAINTEED GYPSUM INC - Types I, FRYC, EGRG, ProRoc Type X or ProRoc Type C.
- CERTAINTEED GYPSUM CANADA INC - ProRoc Type C, ProRoc Type X or ProRoc Type Abuse-Resistant.
- CANADIAN GYPSUM COMPANY - Type AR, C, FCV, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.
- GEORGIA-PACIFIC GYPSUM L L C - Types 5, 9, C, DAP, DD, DA, DAPC, DGG, DS, GPF56.
- LAFARGE NORTH AMERICA INC - Types LGFC2, LGFC2A, LGFC3, LGFC6, LGFC6A, LGFC-C, LGFC
- NATIONAL GYPSUM CO - Types FSK-C, FSW, FSW-3, FSW-5, FSW-6, FSW-C, FSW-G, FSWR-C
- PABCO BUILDING PRODUCTS L L C, DBA
- PABCO GYPSUM - Type C, PG-3, PG-5, PG-9, PG-11 or PG-C
- PANEL REY S A - Type PRX, or PRC.
- SIAM GYPSUM INDUSTRY (SARABURI) CO LTD - Type EX-1

TEMPLE-INLAND FOREST PRODUCTS CORP - Types TG-C, Type X, Veneer Plaster Base-Type X, Water Rated-Type X, Sheathing Type-X, Soffit-Type X, GreenGlass Type X.

UNITED STATES GYPSUM CO - Type AR, C, FCV, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.

USG MEXICO S A DE C V - Type AR, C, FCV, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.

4A. Gypsum Board* - (As an alternate to Item 4) - Nom 3/4 in. thick, installed as described in Item 4 with 1-1/4 in. long Type S screws for inner layer and 2-1/4 in. long Type S screws for outer layer.

- CANADIAN GYPSUM COMPANY - Types AR, IP-AR.
- UNITED STATES GYPSUM CO - Types AR, IP-AR.
- USG MEXICO S A DE C V - Types AR, IP-AR.

4B. Gypsum Board* - (As an alternate to Item 4 and 4A) -5/8 in. thick, 24 to 54 in. wide, applied horizontally as the outer layer to one side of the assembly. Horizontal joints need not be backed by steel framing. Secured as described in Item 4 for the steel attached system. When used in widths other than 48 in., gypsum panels to be installed horizontally.

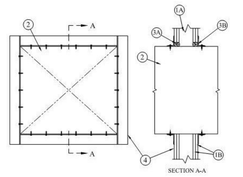
- CANADIAN GYPSUM COMPANY - Type SHX.
- CERTAINTEED GYPSUM INC - ProRoc Type X, ProRoc Type C.
- CERTAINTEED GYPSUM CANADA INC - ProRoc Type X, ProRoc Type C.
- UNITED STATES GYPSUM CO - Type SHX, FRX-G.
- USG MEXICO S A DE C V - Type SHX.

UL Design No. U415	N.T.S.	11

System No. W-L-7008

June 15, 2005

F Rating - 1 & 2 Hr (See Item 1)
T Ratings - 0 Hr



1. Wall Assembly - The 1 and 2 hr fire rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs - Wall framing shall consist of steel channel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC. Additional 3-1/2 in. (89 mm) wide steel studs shall be used to completely frame opening.

B. Gypsum Board* - Thickness, type, number of layers and fasteners as required in the individual Wall and Partition Design. Max size of opening to be 1216 sq in. (189 cm2) with a max dimension of 38 in. (965 mm).

The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. Through-Penetrant - Nom 36 by 30 (914 by 762 mm) (or smaller) No. 24 gauge (or heavier) galv steel duct to be installed either concentrically or eccentrically within the firestop system. An annular space of min 0 in. (0 mm, point contact) to max 2 in. (51 mm) is required within the firestop system. Steel duct to be rigidly supported on both sides of floor or wall assembly.

3. Firestop System - The details of the firestop system shall be as follows:

A. Packing Material (Optional) - Polyethylene backer rod, mineral wool batt insulation or fiberglass batt insulation friction-fit into annular space for 2 hr rated wall assemblies only. Packing material to be recessed from both surfaces of wall to accommodate the required thickness of fill material (Item 3B).

B. Fill, Void or Cavity Material* - Caulk or Sealant - Min 5/8 in. (16 mm) thickness of fill material applied within annulus, flush with both surfaces of wall assembly. At the point contact location between duct and wallboard, a min 1/4 in. (6 mm) diam bead of sealant shall be applied at the wallboard/duct interface on both surfaces of wall assembly.

3M COMPANY - CP-25 WB+ or FB-3000 WT

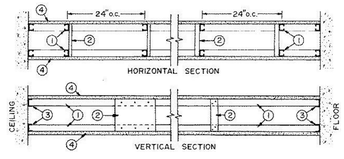
C. Retaining Angles - Min 16 gauge galv steel angles sized to lap duct a min of 2 in. (51 mm) and lap wall surfaces of a min of 1 in. (25 mm). Angles attached to duct on both sides of wall with min 1/2 in. (13 mm) long, No. 10 (or larger) sheet metal screws spaced a max of 1 in. (25 mm) from each end of duct and spaced a max of 6 in. (152 mm) OC.

Penetration Seal at Rectangular Steel Duct	N.T.S.	9

Design No. U420

August 15, 2008

Nonbearing Wall Rating - 1 or 2 HR.



1. Studs - Channel - shaped 1 5/8 in. wide with 1 3/8 in. legs and 1/4 in. stiffening flanges. Fabricated from No. 25 MSG galv steel. Studs to be cut 1/4 in. less than assembly height.

2. Bracing - Cut from the steel runners, min. 4-1/4 in. long, fastened to the studs with two No. 8 by 1/2 in. long self-drilling, self-tapping steel screws in each stud. As an alternate, but limits the stud cavity depth to maximum 9-1/2 in., cut from the gypsum wallboard, 9-1/2 in. long and 12 in. wide, fastened to the studs with three Type S wallboard screws in each stud. Vertical spacing of bracing not to exceed 48 in. OC.

3. Floor and Ceiling Runners - Channel - shaped 1 5/8 in. wide with 1 in. legs, fabricated from No. 25 MSG galv steel. Attached to floor and ceiling with fasteners spaced 24 in. OC.

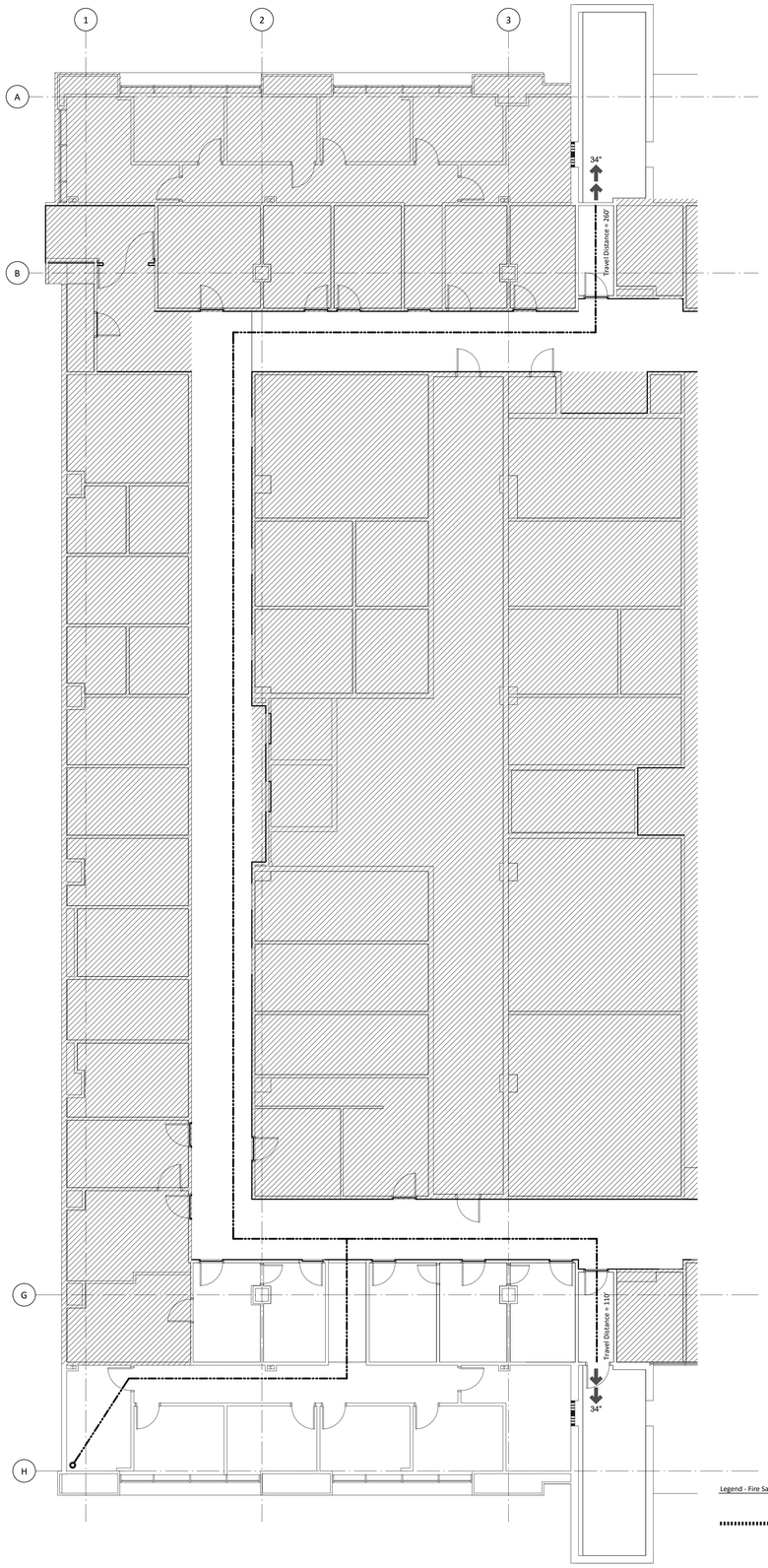
4. Gypsum Board* - Any 5/8 in. thick wallboard for fire resistance Classified with beveled, square, or tapered edges.

For 1 hr Rating - One layer of wallboard to be used. Applied vertically with joints centered over studs. Fastened to studs with 1 in. long, Type S, wallboard screws spaced 8 in. OC at the joints, located 3/8 in. from the edges, and 12 in. OC in the field. Fasteners to be spaced 8 in. OC at the runners.

For 2 hr Rating - Two layers of wallboard to be used. The inner layer to be applied in the same manner as for the 1 Hr Rating. The outer layer to be fastened to the studs (through the inner layer) using 1 5/8 in. long, Type S, wallboard screws spaced 8 in. OC at the joints, located 3/8 in. from the edges and 12 in. OC in the field.

- Fasteners to be spaced 8 in. OC at the runners. Joints to be staggered 24 in. from the inner layer.
- See Gypsum Board (CKNX) category for names of manufacturers.

4A. Gypsum Board* - (As alternate to Item 4) - Nom 5/8 in. thick gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (2-hr system) staggered one stud cavity.



Legend - Fire Safety

Non-rated separation wall to structure with self-closing doors (Storage rooms greater than 50 s.f. and less than 100 s.f. per NFPA101). Partition types C, H, K, M, N, R, T, W

32" Building exit, clear exit width in inches

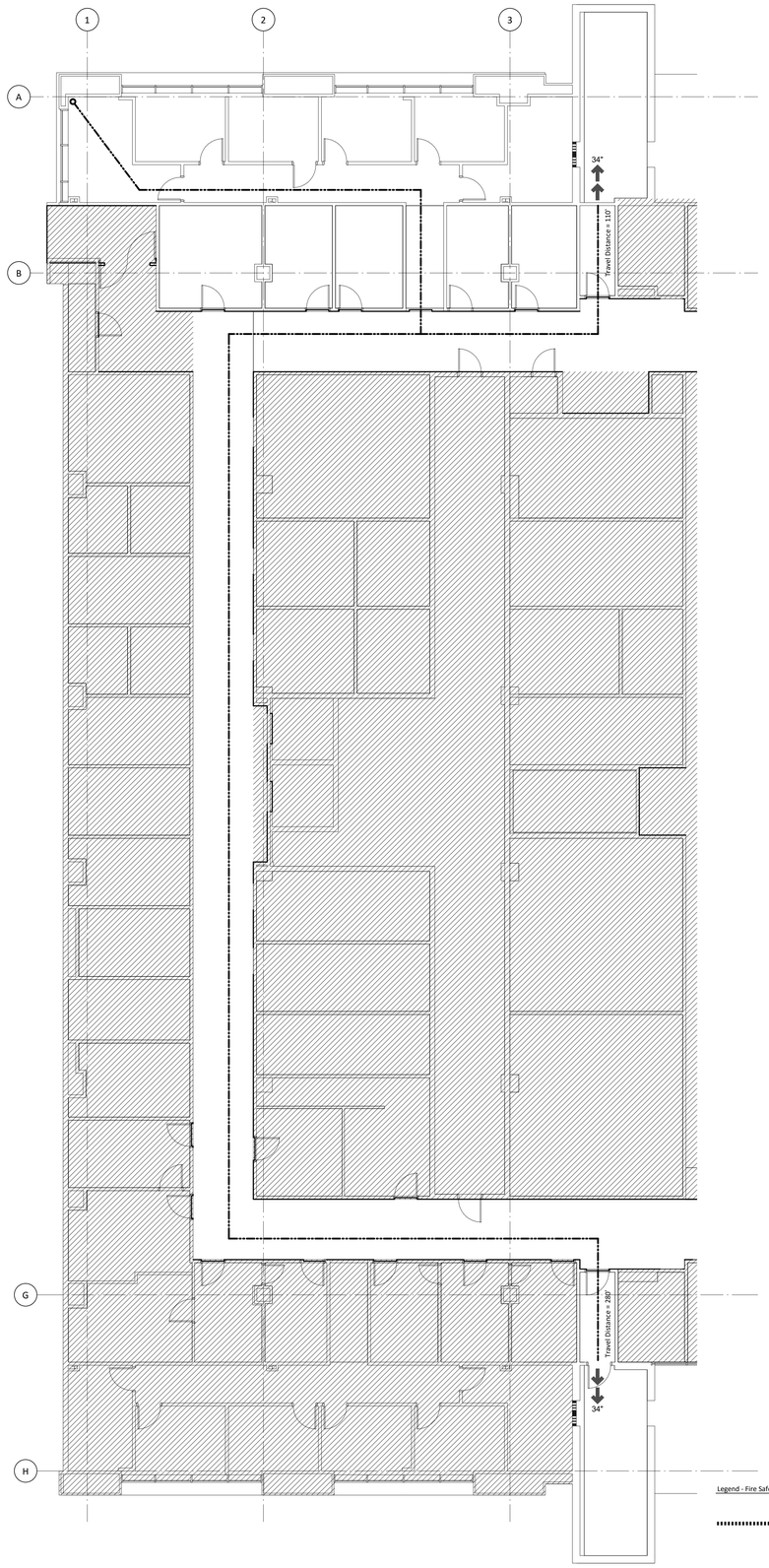
FE-1 Fire extinguisher cabinet location

Longest travel= ---' Path of longest exit travel

xx Door and frame fire rating in minutes

Plan North

Fire Safety Plan - Level 1 West | 1/8" = 1'-0" | 16



Legend - Fire Safety

Non-rated separation wall to structure with self-closing doors (Storage rooms greater than 50 s.f. and less than 100 s.f. per NFPA101). Partition types C, H, K, M, N, R, T, W

32" Building exit, clear exit width in inches

FE-1 Fire extinguisher cabinet location

Longest travel= ---' Path of longest exit travel

xx Door and frame fire rating in minutes

Plan North

Fire Safety Plan - Level 1 East | 1/8" = 1'-0" | 1

C:\Users\dsandoval\Documents\LRC Infill 3&4 (Central)_dsandoval.rvt

Philo Wilke Partnership
11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

REGISTERED ARCHITECT
Cathryn E. Horan
STATE OF TEXAS
07/08/2016

Consultants

Structural Engineer
Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer
E&C Engineers and Consultants
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

Issues / Revisions

No.	Date	Description
	07/08/2016	Issue for Construction

Project

MSB 1st Floor Infill LRC 3 & 4

UTHealth
The University of Texas
Health Science Center at Houston

Drawing Name

Fire Safety Plan

Copyright (C) 2016 by PhiloWilke Partnership. All rights reserved.

This document and the information herein is the property of PhiloWilke Partnership. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by PhiloWilke Partnership. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by PhiloWilke Partnership.

Print Date / Time: 7/11/2016 2:02:16 PM

P&W Commission Number	Sheet Number
214-198R	G-110

I. DESIGN CRITERIA

A. GENERAL BUILDING CODE

1. THE CONSTRUCTION DOCUMENTS ARE BASED ON THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE 2006 WITH HOUSTON AMENDMENTS TO THE 2006 INTERNATIONAL BUILDING CODE.

B. DEAD LOADS

1. HANGING CEILING AND MECHANICAL LOADS: AN ALLOWANCE OF 10 PSF HAS BEEN MADE FOR HANGING CEILING AND MECHANICAL EQUIPMENT LOADS SUCH AS DUCT WORK AND SPRINKLER PIPES.

C. LIVE LOADS

1. DESIGN LIVE LOADS ARE BASED ON THE MORE RESTRICTIVE OF THE UNIFORM LOAD LISTED BELOW OR THE CONCENTRATED LOAD LISTED ACTING OVER AN AREA 2.5 FEET SQUARE.
   a. NEW INFILL FLOOR 100 PSF, 2000 LBS

II. REINFORCED CONCRETE

A. CLASSES OF CONCRETE

1. ALL CONCRETE SHALL CONFORM TO THE REQUIREMENTS AS SPECIFIED IN THE TABLE BELOW UNLESS NOTED OTHERWISE ON THE DRAWINGS.

USAGE	28 DAY COMP. STRENGTH (PSI)	CONC. TYPE	MAX. AGG. SIZE	REMARKS
SLAB ON METAL DECK	3500	LW	3/4"	

B. HORIZONTAL CONSTRUCTION JOINTS IN CONCRETE POURS

1. THERE SHALL BE NO HORIZONTAL CONSTRUCTION JOINTS IN ANY CONCRETE POURS UNLESS SHOWN ON THE DRAWINGS. THE ARCHITECT/ENGINEER SHALL APPROVE ALL DEVIATIONS OR ADDITIONAL JOINTS IN WRITING.

C. REINFORCING STEEL

1. ALL REINFORCING STEEL SHALL BE ASTM A 615 GRADE 60 UNLESS NOTED OTHERWISE ON THE DRAWINGS OR IN THESE NOTES.

D. REINFORCING STEEL COVERAGE

1. COVER IN STRUCTURAL MEMBERS NOT SPECIFIED IN THE DETAILS SHALL CONFORM TO THE REQUIREMENTS OF ACI 318 UNLESS SPECIFIED OTHERWISE ON THE DRAWINGS.

III. STRUCTURAL STEEL

A. MATERIAL

1. HOT ROLLED STRUCTURAL MEMBERS: ALL HOT ROLLED STEEL PLATES, SHAPES, SHEET PILING, AND BARS SHALL BE NEW STEEL CONFORMING TO ASTM SPECIFICATION A 6.
2. ASTM SPECIFICATION AND GRADE: CLEARLY MARK THE GRADE OF STEEL ON EACH PIECE, WITH A DISTINGUISHING MARK VISIBLE FROM FLOOR SURFACES, FOR THE PURPOSE OF FIELD INSPECTION OF PROPER GRADE OF STEEL. UNLESS NOTED OTHERWISE ON THE DRAWINGS, STRUCTURAL STEEL SHALL BE AS FOLLOWS:
   a. W-SHAPE BEAMS: ASTM A 992.
   b. L-SHAPES: ASTM A 36.
   c. CONNECTION MATERIAL:
      1) ALL CONNECTION MATERIAL, EXCEPT AS NOTED OTHERWISE HEREIN OR ON THE DRAWINGS, INCLUDING BEARING PLATES, GUSSET PLATES, STIFFENER PLATES, FILLER PLATES, ANGLES, ETC. SHALL CONFORM TO ASTM A 36 UNLESS A HIGHER GRADE OF STEEL IS REQUIRED BY STRENGTH AND PROVIDED THE RESULTING SIZES ARE COMPATIBLE WITH THE CONNECTED MEMBERS.
   d. OTHER STEEL: ANY OTHER STEEL NOT INDICATED OTHERWISE SHALL CONFORM TO ASTM A 36.

B. CONNECTIONS

1. CONNECTION DETAILS NOT COMPLETELY DETAILED ON THE DRAWINGS INCLUDING MATERIAL GRADE AND SIZES, WELD SIZES, AND NUMBER OF BOLTS SHALL BE DESIGNED BY THE CONTRACTOR PER THE SPECIFICATIONS. CONCEPTUAL CONNECTION DETAILS WITH THE REQUIRED MEMBER DESIGN FORCES ARE SHOWN ON THE DRAWINGS AND ARE APPLICABLE TO ALL CONNECTIONS NOT DESIGNED AND FULLY DETAILED ON THE DRAWINGS. THE CONCEPTUAL DETAILS ARE PROVIDED ONLY TO INDICATE THE CONNECTION TYPE REQUIRED AND MAY NOT FULLY REPRESENT THE COMPLEXITY OF THE CONNECTION AS REQUIRED BY THE FINAL CONNECTION DESIGN FOR THE FORCES THEY MUST RESIST. ADDITIONAL CONNECTION ELEMENTS MAY NOT BE SPECIFICALLY SHOWN IN THE CONCEPTUAL DETAILS BUT MAY BE REQUIRED BY THE FINAL CONNECTION DESIGN, SUCH AS STIFFENER PLATES, DOUBLER PLATES, SUPPLEMENT/ REINFORCING PLATES OR OTHER CONNECTION MATERIAL. THE FABRICATOR IS RESPONSIBLE FOR ENGAGING THE SERVICES OF A CONNECTION SPECIALTY ENGINEER TO PREPARE A FINAL CONNECTION DESIGN FOR SUBMISSION THAT MEETS THE REQUIREMENTS OF THE CONCEPTUAL CONNECTION DETAILS AND RESISTS THE INDICATED DESIGN FORCES.
2. REACTIONS NOTED ON THE PLANS ARE BASED ON FACTORED LOADS AND ARE INTENDED FOR USE WITH THE LOAD AND RESISTANCE FACTOR DESIGN METHOD.

C. STRUCTURAL BOLTS AND THREADED FASTENERS

1. A 325 BOLTS: ALL BOLTS IN STRUCTURAL CONNECTIONS SHALL CONFORM TO ASTM A 325 TYPE 1, UNLESS INDICATED OTHERWISE ON THE DRAWINGS.

D. WELDING

1. UNLESS NOTED OTHERWISE, ELECTRODES FOR WELDING SHALL CONFORM TO E70XX (SMAW), F7XX-EXXX (SAW), ER70S-X (GMAW), OR E7XT-X (FCAW).

IV. STEEL DECKS

A. COMPOSITE DECK

1. SCHEDULE:

DEPTH OF DECK	DESIGN GAGE THICKNESS	SP IN^3	MINIMUM SN IN^3	I IN^4	MAXIMUM UNSHORED DECK SPAN (TWO-SPAN)	(THREE-SPAN)
2"	20	0.334	0.305	0.401	7'- 5"	7'- 8"

   NOTES:
   SP = POSITIVE SECTION MODULUS, INCHES^3
   SN = NEGATIVE SECTION MODULUS, INCHES^3
   I = MOMENT OF INERTIA, INCHES^4
2. ALL DECK SHALL BE 40 KSI UNLESS NOTED OTHERWISE.
3. ATTACHMENT OF DECK:
   a. MINIMUM ATTACHMENT AT SUPPORTS: STEEL DECK UNITS SHALL BE WELDED TO THE SUPPORT MEMBERS WITH 5/8" DIAMETER PUDDLE WELDS AT EACH END OF SHEET AND EACH INTERMEDIATE SUPPORT AT EACH LOW FLUTE, UNLESS NOTED OTHERWISE. AT MEMBERS PARALLEL TO DECK SPAN, SPACING OF PUDDLE WELDS SHALL BE 12". A SHEAR CONNECTOR WELDED THROUGH THE DECK CAN REPLACE A REQUIRED DECK WELD.
   b. MINIMUM ATTACHMENT AT SIDE LAPS: SIDE LAPS OF ADJACENT UNITS SHALL BE FASTENED BY WELDING, SHEET METAL SCREWS, OR BUTTON PUNCHING AT A MAXIMUM OF ONE-HALF THE SPAN OR 36", WHICHEVER IS LESS, UNLESS NOTED OTHERWISE.

V. SUBMITTALS

A. SUBMITTAL LIST AND SCHEDULE

1. THE GENERAL CONTRACTOR SHALL PREPARE A DETAILED LIST AND SCHEDULE OF ALL SUBMITTAL ITEMS TO BE SENT TO THE STRUCTURAL ENGINEER PRIOR TO THE START OF CONSTRUCTION. THIS LIST SHALL BE UPDATED AND REVISED AND KEPT CURRENT AS THE JOB PROGRESSES. THE SUBMITTAL LIST SHALL BE ORGANIZED AS SHOWN BELOW:
   a. SHOP DRAWINGS
   b. DESIGN CALCULATIONS
   c. PRODUCT DATA, CERTIFICATES, REPORTS, AND OTHER LITERATURE

B. SUBMITTALS TO BE PROVIDED TO STRUCTURAL ENGINEER

1. STRUCTURAL SUBMITTALS: IN ADDITION TO THE SUBMITTALS REQUIRED BY THE STRUCTURAL SPECIFICATIONS, THE FOLLOWING SUBMITTALS SHALL BE PROVIDED:
   a. LAYOUT OF MECHANICAL, ELECTRICAL, AND PLUMBING OPENINGS IN SLABS.
2. DEFERRED SUBMITTALS:
   a. THE FOLLOWING ITEMS ARE CONSIDERED DEFERRED SUBMITTALS BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE:
3. STRUCTURAL STEEL CONNECTIONS (S&S)

   NOTES:
   a. (S&S) ITEMS MARKED THUS SHALL HAVE THE SHOP DRAWINGS AND DELEGATED DESIGN SUBMITTALS (INCLUDING CALCULATIONS) SEALED PER THE PROJECT SPECIFICATIONS BY AN ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED.
   b. DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE REGISTERED DESIGN PROFESSIONAL AND SHALL BE FORWARDED TO THE BUILDING OFFICIAL.
   c. DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.
4. SUBMITTAL REQUIREMENTS:
   a. ALL SHOP DRAWINGS MUST BE REVIEWED AND ELECTRONICALLY STAMPED BY THE GENERALCONTRACTOR PRIOR TO SUBMITTAL.
   b. CONTRACTOR SHALL SUBMIT THREE SETS OF PRINTS FOR ALL SHOP DRAWINGS SPECIFIED TO BE RETURNED BY THE ENGINEER.
   c. CONTRACTOR SHALL PROVIDE THE SUBMITTAL IN ELECTRONIC PORTABLE DOCUMENT FORMAT (PDF) PER THE SPECIFICATIONS.
   d. THE OMISSION FROM THE SHOP DRAWINGS OF ANY MATERIALS REQUIRED BY THE CONTRACT DOCUMENTS TO BE FURNISHED SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF FURNISHING AND INSTALLING SUCH MATERIALS, REGARDLESS OF WHETHER THE SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED.

C. REPRODUCTION

1. THE USE OF ELECTRONIC FILES OR REPRODUCTIONS OF THESE CONTRACT DOCUMENTS BY ANY CONTRACTOR, SUBCONTRACTOR, ERECTOR, FABRICATOR, OR MATERIAL SUPPLIER IN LIEU OF PREPARATION OF SHOP DRAWINGS SIGNIFIES THEIR ACCEPTANCE OF ALL INFORMATION SHOWN HEREON AS CORRECT, AND OBLIGATES THEMSELVES TO ANY JOB EXPENSE, REAL OR IMPLIED, ARISING DUE TO ANY ERRORS THAT MAY OCCUR HEREON.

VI. MISCELLANEOUS

A. CONTRACT DOCUMENTS

1. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO OBTAIN ALL CONTRACT DOCUMENTS AND LATEST ADDENDA AND TO SUBMIT SUCH DOCUMENTS TO ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS PRIOR TO THE SUBMITTAL OF SHOP DRAWINGS, FABRICATION OF ANY STRUCTURAL MEMBERS, AND ERECTION IN THE FIELD.
2. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, AND, EXCEPT WHERE SPECIFICALLY SHOWN, DO NOT INDICATE THE METHOD OR MEANS OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, AND SEQUENCE.
3. OPENINGS THROUGH FLOORS FOR DUCTS, PIPING, AND/OR CONDUIT SHALL BE COORDINATED BY THE CONTRACTOR. CONTRACTOR SHALL VERIFY SIZES AND LOCATIONS OF HOLES AND OPENINGS WITH THE MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS AND THE RESPECTIVE SUBCONTRACTORS.
4. REFER TO DRAWINGS OTHER THAN STRUCTURAL FOR COMPLETE INFORMATION INCLUDING: OPENINGS IN STRUCTURAL FLOORS REQUIRED BY ARCHITECTURAL AND MEP FEATURES.
5. IF CERTAIN FEATURES ARE NOT FULLY SHOWN OR SPECIFIED ON THE DRAWINGS OR IN THE SPECIFICATIONS, THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS SHOWN OR SPECIFIED IN SIMILAR CONDITIONS.

B. DRAWING CONFLICTS

1. THE GENERAL CONTRACTOR SHALL COMPARE THE ARCHITECTURAL AND STRUCTURAL DRAWINGS AND REPORT ANY DISCREPANCY BETWEEN EACH SET OF DRAWINGS AND WITHIN EACH SET OF DRAWINGS TO THE ARCHITECT AND ENGINEER PRIOR TO THE FABRICATION AND INSTALLATION OF ANY STRUCTURAL MEMBERS.

C. CONFLICTS IN STRUCTURAL REQUIREMENTS

1. WHERE CONFLICT EXISTS AMONG THE VARIOUS PARTS OF THE STRUCTURAL CONTRACT DOCUMENTS, STRUCTURAL DRAWINGS, GENERAL NOTES, AND SPECIFICATIONS, THE STRICTEST REQUIREMENTS, AS INDICATED BY THE ENGINEER, SHALL GOVERN.

D. EXISTING CONDITIONS

1. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS OF THE EXISTING BUILDING AT THE JOB SITE AND REPORT ANY DISCREPANCIES FROM ASSUMED CONDITIONS SHOWN ON THE DRAWINGS TO THE ARCHITECT AND ENGINEER PRIOR TO THE FABRICATION AND ERECTION OF ANY MEMBERS.
2. WORK SHOWN ON THE DRAWINGS IS NEW, UNLESS NOTED AS EXISTING.
3. EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS WAS OBTAINED FROM EXISTING CONSTRUCTION DOCUMENTS AND LIMITED SITE OBSERVATION. THESE DRAWINGS OF EXISTING CONSTRUCTION ARE AVAILABLE FOR CONTRACTOR USE. HOWEVER, THE AVAILABLE DRAWINGS OF EXISTING CONSTRUCTION ARE NOT NECESSARILY COMPLETE. THE CONTRACTOR SHALL FIELD VERIFY ALL PERTINENT INFORMATION.
4. DEMOLITION, CUTTING, DRILLING, ETC. OF EXISTING WORK SHALL BE PERFORMED WITH GREAT CARE SO AS NOT TO JEOPARDIZE THE STRUCTURAL INTEGRITY OF THE EXISTING BUILDING. IF ANY ARCHITECTURAL, STRUCTURAL, OR MEP MEMBERS NOT DESIGNATED FOR REMOVAL INTERFERE WITH THE NEW WORK, THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY AND APPROVAL OBTAINED PRIOR TO REMOVAL OF THOSE MEMBERS.
5. THE CONTRACTOR SHALL SAFELY SHORE EXISTING CONSTRUCTION WHEREVER EXISTING SUPPORTS ARE REMOVED TO ALLOW THE INSTALLATION OF NEW WORK. ALL SHORING METHODS AND SEQUENCING OF DEMOLITION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND HIS ENGINEER.
6. THE CONTRACTOR SHALL REPAIR ALL DAMAGE CAUSED DURING CONSTRUCTION WITH SIMILAR MATERIALS AND WORKMANSHIP TO RESTORE CONDITIONS TO LEVELS ACCEPTABLE TO THE ARCHITECT.

E. RESPONSIBILITY OF THE CONTRACTOR FOR CONSTRUCTION LOADS

1. THE STRUCTURE HAS BEEN DESIGNED FOR THE LOADS IDENTIFIED WITHIN THESE STRUCTURAL DRAWINGS THAT ARE ANTICIPATED TO BE APPLIED TO THE FINAL STRUCTURE ONCE COMPLETED AND OCCUPIED. THE CONTRACTOR SHALL NOT OVERLOAD THE STRUCTURE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING THE ADEQUACY OF THE STRUCTURE TO SUPPORT ANY APPLIED CONSTRUCTION LOADS, INCLUDING THOSE DUE TO CONSTRUCTION VEHICLES OR EQUIPMENT, MATERIAL HANDLING OR STORAGE, SHORING OR RESHORING, OR ANY OTHER CONSTRUCTION ACTIVITY. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE TO DESIGN OR CHECK THE STRUCTURE FOR LOADS APPLIED TO THE STRUCTURE FOR ANY CONSTRUCTION ACTIVITY.

F. CONTRACTOR SUBSTITUTIONS

1. ANY MATERIALS OR PRODUCTS SUBMITTED FOR APPROVAL THAT ARE DIFFERENT FROM THE MATERIAL OR PRODUCTS SPECIFIED IN THE STRUCTURAL CONTRACT DOCUMENTS WILL BE APPROVED ONLY IF THE FOLLOWING CRITERIA ARE SATISFIED:
   a. A COST SAVINGS TO THE OWNER IS DOCUMENTED AND SUBMITTED WITH THE REQUEST.
   b. THE MATERIAL OR PRODUCT HAS BEEN APPROVED BY THE INTERNATIONAL CODE COUNCIL (ICC) AND THE ICC REPORT IS SUBMITTED WITH THE REQUEST.
      1) THE ICC ESR THAT IS SUBMITTED MUST REFERENCE THE BUILDING CODE UNDER WHICH THE PROJECT IS PERMITTED.
      2) ICC REPORTS THAT HAVE BEEN DISCONTINUED AT THE TIME OF PRODUCT INSTALLATION WILL NOT BE ACCEPTED.
2. SUBMITTALS NOT SATISFYING THE ABOVE CRITERIA WILL NOT BE CONSIDERED.

G. THE STRUCTURAL ENGINEER'S ROLE DURING CONSTRUCTION

1. THE ENGINEER SHALL NOT HAVE CONTROL NOR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES, FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSION OF THE CONTRACTOR, SUBCONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
2. PERIODIC SITE OBSERVATION BY FIELD REPRESENTATIVES OF WALTER P. MOORE AND ASSOCIATES IS SOLELY FOR THE PURPOSE OF BECOMING GENERALLY FAMILIAR WITH THE PROGRESS AND QUALITY OF THE WORK COMPLETED AND DETERMINING, IN GENERAL, IF THE WORK OBSERVED IS BEING PERFORMED IN A MANNER INDICATING THAT THE WORK, WHEN FULLY COMPLETED, WILL BE IN ACCORDANCE WITH THE STRUCTURAL CONTRACT DOCUMENTS. THIS LIMITED SITE OBSERVATION SHOULD NOT BE CONSTRUED AS EXHAUSTIVE OR CONTINUOUS TO CHECK THE QUALITY OR QUANTITY OF THE WORK, BUT RATHER PERIODIC IN AN EFFORT TO GUARD THE OWNER AGAINST DEFECTS OR DEFICIENCIES IN THE WORK OF THE CONTRACTOR.

VII. DRAWING INTERPRETATION

A. DRAWING VIEWS LABELED AS "TYPICAL"

1. PARTIAL PLANS, ELEVATIONS, SECTIONS, DETAILS, OR SCHEDULES LABELED WITH "TYPICAL" AT THE BEGINNING OF THEIR TITLE SHALL APPLY TO ALL SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY SHOWN. THE APPLICABILITY OF THE CONTENT OF THESE VIEWS TO LOCATIONS ON THE PLAN CAN BE DETERMINED FROM THE TITLE OF THE VIEWS. SUCH VIEWS SHALL APPLY WHETHER OR NOT THEY ARE KEYED IN AT EACH LOCATION. DECISIONS REGARDING APPLICABILITY OF THESE "TYPICAL" VIEWS SHALL BE DETERMINED BY THE STRUCTURAL ENGINEER.

P:\S03\2015\15022-00 UTHSC-H MSB L1 Infill NE & SW\3-Documentation\Drawings\AutoCAD

Philo Wilke Partnership
11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

Walter P. Moore and Associates, Inc.
TBPE Firm Registration No. 1856
STATE OF TEXAS
J. F. BALDRIDGE, III
51650
LICENSED PROFESSIONAL ENGINEER
07/08/2016

Consultants

Structural Engineer
Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer
E&C Engineers and Consultants
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

Issues / Revisions

No.	Date	Description
1	07/08/2016	ISSUE FOR CONSTRUCTION

Project

MSB
1st Floor Infill
LRC 3 & 4

UTHealth™
The University of Texas Health Science Center at Houston

Drawing Name

GENERAL NOTES

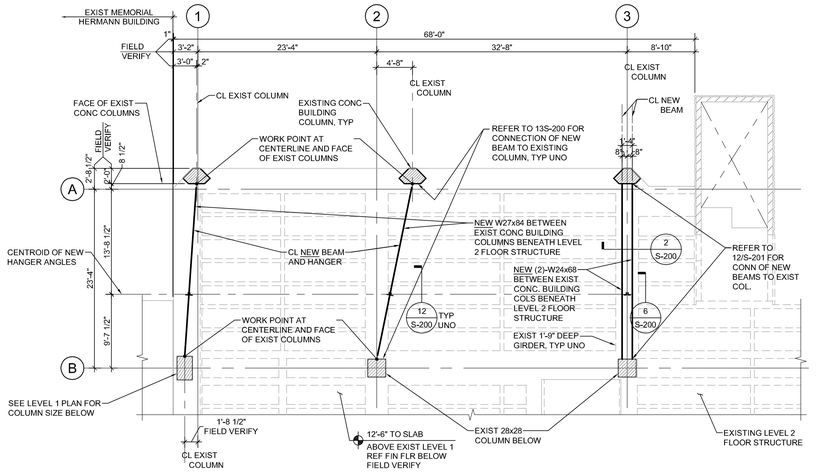
Copyright (C) 2015 by PhiloWilke Partnership. All rights reserved.

This document and the information herein is the property of PhiloWilke Partnership. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by PhiloWilke Partnership. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by PhiloWilke Partnership.

Print Date / Time: 3/28/2013 9:45:16 AM

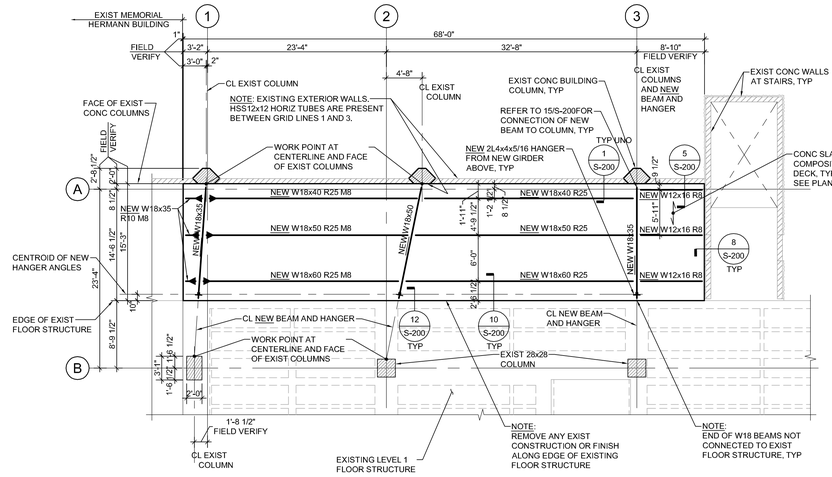
P&W Commission Number	Sheet Number
214-198R	S-000

WPM: S03.16022.00



2 NEW LEVEL 1 FLOOR OPENING INFILL FRAMING - LEVEL 2 NORTH EAST PARTIAL PLAN

1/8" = 1'-0"



1 NEW LEVEL 1 FLOOR OPENING INFILL FRAMING - LEVEL 1 NORTH EAST PARTIAL PLAN

1/8" = 1'-0"

NEW LEVELS 1 AND 2 PLAN NOTES:

1. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, ELEVATIONS, AND DIMENSIONS INDICATED ON THE PLANS AND DETAILS PRIOR TO BEGINNING THE WORK OR SUBMITTING SHOP DRAWINGS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH THE WORK. THE NEW FRAMING MAY NEED TO BE REVISED BASED UPON ACTUAL EXISTING CONDITIONS. THE ACTUAL SIZES, POSITIONS, AND ELEVATIONS OF THE EXISTING FRAMING MEMBERS MAY BE DIFFERENT THAN WHAT IS SHOWN ON THE PLAN AND ASSOCIATED DETAILS.

2. THE TOP OF THE NEW LEVEL 1 FLOOR SLAB SHALL ALIGN WITH THE TOP OF THE EXISTING LEVEL 1 FLOOR OF THE BUILDING.

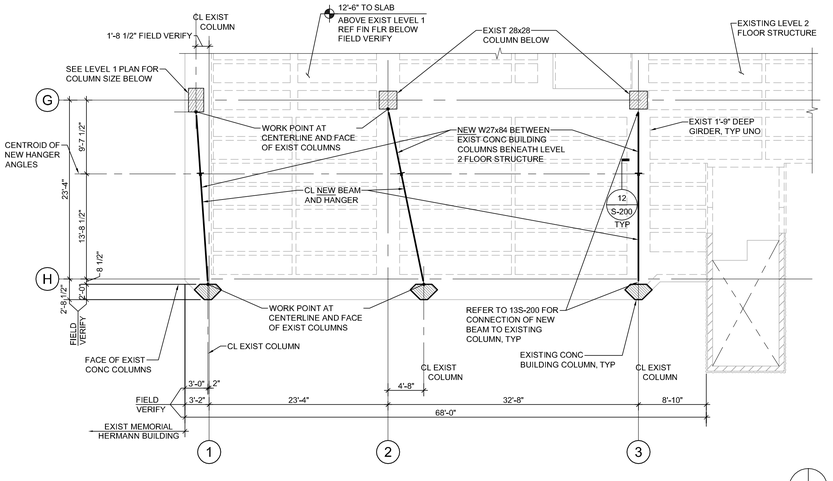
3. THE NEW LEVEL 1 CONCRETE SLAB ON COMPOSITE METAL DECK SHALL CONSIST OF A 2" DEEP, 20 GAGE, GALVANIZED METAL COMPOSITE DECK (I min = 0.430 in4/ft, S min = 0.369 in3/ft) WITH A 3-1/2" THICK LIGHTWEIGHT CONCRETE TOPPING SLAB (5-1/2" TOTAL SLAB THICKNESS) REINFORCED WITH #3@12" ON-CENTERS EACH WAY AND AS INDICATED IN THE GENERAL NOTES AND ON THE TYPICAL DETAILS. THE LIGHTWEIGHT CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS (f'c) OF 3500 PSI.

4. NOTATION THUS: W18x50 R25 INDICATES: 1) THE BEAM SIZE (W18x50), AND 2) THE FACTORED END REACTION FOR THE BEAM (REACTION IS THE SAME AT BOTH ENDS IF ONLY ONE VALUE IS GIVEN (R25)) IN UNITS OF KIPS, NOTATION THUS: ▶ AND M8 INDICATES A FULL CAPACITY BEAM TO BEAM MOMENT CONNECTION WITH A FACTORED MOMENT OF 8 KIP-FEET.

5. THE NEW STEEL FRAMING MEMBERS, INCLUDING ALL CONNECTIONS AND HANGERS, AT BOTH LEVELS 1 AND 2 FOR THE NEW FLOOR STRUCTURE SHALL BE COVERED WITH A SPRAYED-ON FIREPROOFING IN ORDER TO PROVIDE A MINIMUM TWO HOUR FIRE RATING.

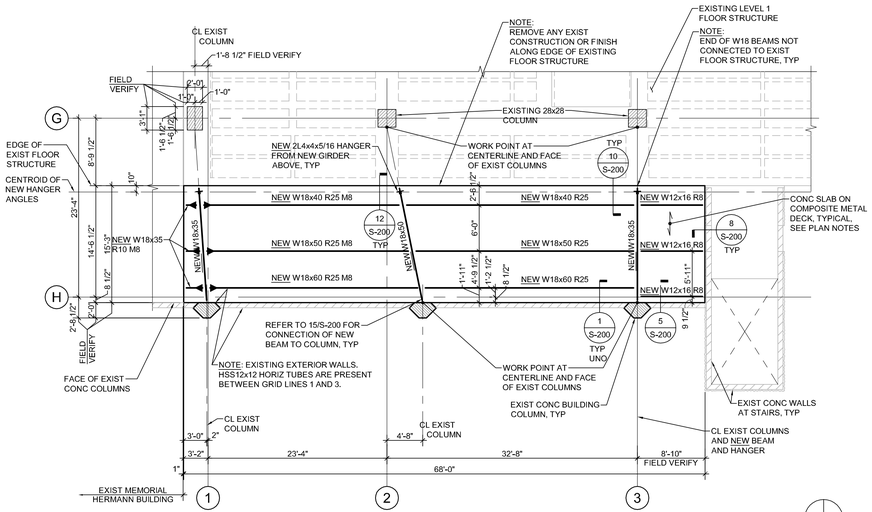
6. REFER TO THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION AND DETAILS. COORDINATE THE NUMBER, SIZES, AND LOCATIONS OF ALL NEW PENETRATIONS REQUIRED THROUGH THE NEW FLOOR SLAB WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS. REFER TO THE TYPICAL DETAILS FOR NEW FRAMING AT THE PENETRATIONS.

7. REFER TO THE TYPICAL DETAILS, GENERAL NOTES, AND SPECIFICATIONS FOR ADDITIONAL DETAILS AND INFORMATION.



4 NEW LEVEL 1 FLOOR OPENING INFILL FRAMING - LEVEL 2 NORTH WEST PARTIAL PLAN

1/8" = 1'-0"



3 NEW LEVEL 1 FLOOR OPENING INFILL FRAMING - LEVEL 1 NORTH WEST PARTIAL PLAN

1/8" = 1'-0"

Philo Wilke Partnership

11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

Walter P. Moore and Associates, Inc.
TBPE Firm Registration No. 1856

STATE OF TEXAS
J. F. BALDRIDGE, III
51650
REGISTERED PROFESSIONAL ENGINEER

07/08/2016

Consultants

Structural Engineer

Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer

E&C Engineers and Consultants
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

Issues / Revisions

No.	Date	Description
1	07/08/2016	ISSUE FOR CONSTRUCTION

Project

MSB
1st Floor Infill
LRC 3 & 4

UTHealth
The University of Texas Health Science Center at Houston

Drawing Name

LEVEL 1 AND LEVEL 2 NEW FLOOR INFILL FRAMING

Copyright (C) 2015 by Philo Wilke Partnership. All rights reserved.

This document and the information herein is the property of Philo Wilke Partnership. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by Philo Wilke Partnership. Any Person, firm, or corporation receiving this document, however obtained, shall, by its acceptance hereof, be deemed to have agreed to the foregoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by Philo Wilke Partnership.

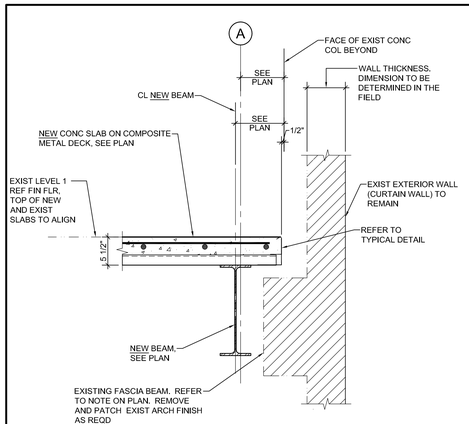
Print Date / Time: 3/28/2013 9:45:16 AM

PEW Commission Number: 214-198R

Sheet Number: S-100

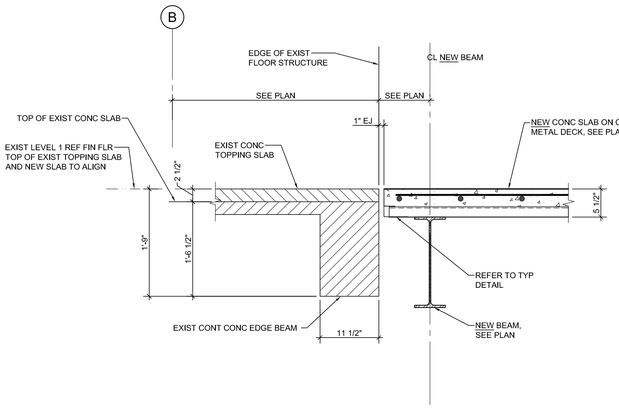
P:\503\2013\16022.00 UTHSC-H MSB L1 Infill ME & StW\3-Documentation\Drawings\AutoCAD

WPM: 503.16022.00

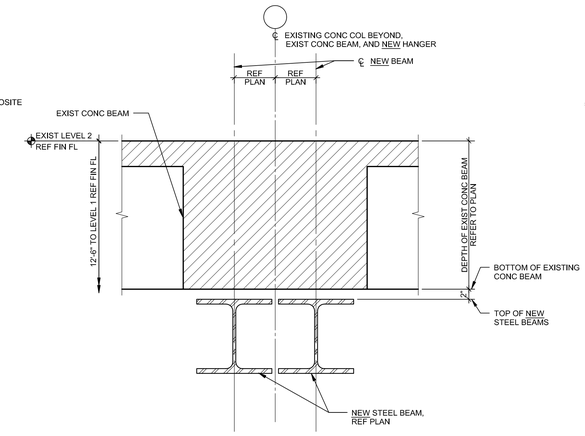


NOTE:
POSITION OF NEW BEAM AND EDGE OF SLAB MAY NEED TO BE REVISED BASED UPON EXISTING CONDITIONS AND DIMENSIONS.

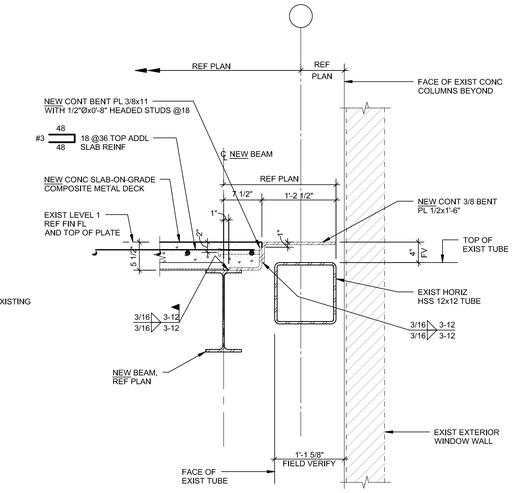
5 SECTION
1" = 1'-0"



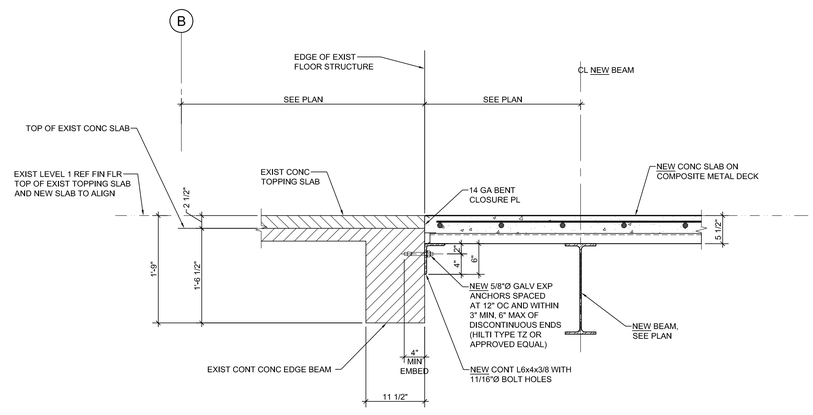
4 SECTION
1" = 1'-0"



2 SECTION
1" = 1'-0"

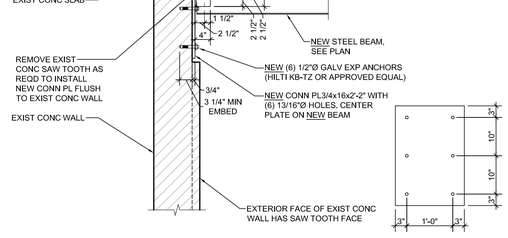


1 SECTION
1" = 1'-0"



NOTE:
COVER CONT L6x4 AND EXP ANCHORS WITH SPRAYED ON FIREPROOFING TO ACHIEVE A 2 HOUR MINIMUM FIRE RATING.

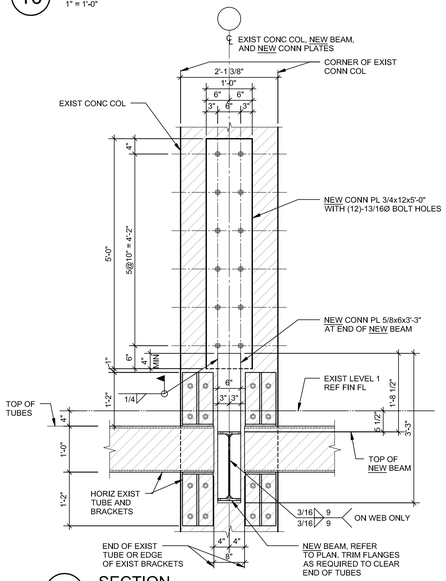
10 SECTION
1" = 1'-0"



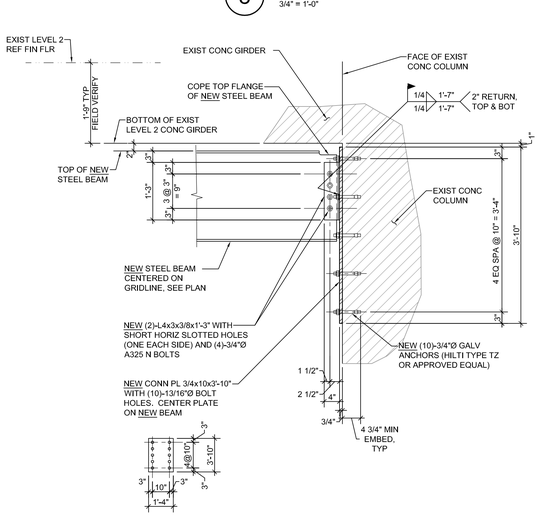
NOTE:
REFER TO NOTE ON 13/S2-00

8 SECTION - LEVEL 1 STEEL BEAM CONN AT STAIRWELL
3/4" = 1'-0"

6 SECTION
1" = 1'-0"

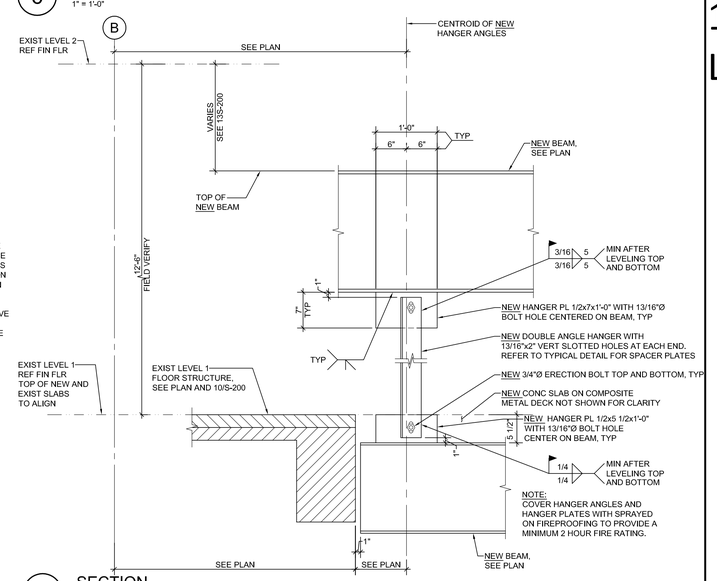


15 SECTION
3/4" = 1'-0"



NOTE:
PRIOR TO FABRICATING THE CONNECTION PLATE. THE CONTRACTOR SHALL USE AN "R" METER OR SIMILAR DEVICE TO DETERMINE THE LOCATION OF THE EXISTING REINFORCING BARS IN THE EXISTING CONCRETE STRUCTURE IN THE VICINITY OF THE EXPANSION ANCHOR LOCATIONS TO DETERMINE IF THE BARS INTERFERE WITH THE PLACEMENT OF THE EXPANSION ANCHORS. IN ADDITION SMALL DIAMETER PILOT HOLES MAY NEED TO BE DRILLED AT THE EXPANSION ANCHOR LOCATIONS. FILL IN ALL ABANDONED PILOT HOLES WITH A NON-SHRINK HIGH STRENGTH EPOXY GROUT. THE CONTRACTOR SHALL SUBMIT A DRAWING SHOWING THE LOCATION OF REINFORCING BARS RELATIVE TO EXPANSION ANCHOR LOCATIONS IF CONFLICTS EXIST. THE CONNECTION PLATE SIZE, NUMBER OF EXPANSION ANCHORS AND LOCATION OR BOLT HOLE PATTERN MAY NEED TO BE REVISED BY THE ENGINEER IF CONFLICTS EXIST. CONNECTION PLATE SHALL NOT BE FABRICATED UNTIL IT HAS BEEN DETERMINED FOR CERTAIN THAT THERE ARE NO CONFLICTS BETWEEN THE EXPANSION ANCHOR LOCATIONS AND THE EXISTING REINFORCING BARS. MODIFICATIONS TO THE CONNECTION PLATE WILL NOT BE ALLOWED IN THE FIELD. DRILL HOLES FOR EXPANSION ANCHORS USING EITHER THE ACTUAL CONNECTION PLATE OR A STEEL TEMPLATE.

13 SECTION - LEVEL 2 STEEL BEAM TO CONCRETE COLUMN
3/4" = 1'-0"



12 SECTION
1" = 1'-0"

Philo Wilke Partnership
11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

Walter P. Moore and Associates, Inc.
TBPE Firm Registration No. 1856

07/08/2016

Consultants

Structural Engineer
Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer
E&C Engineers and Consultants
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

Issues / Revisions

No.	Date	Description
1	07/08/2016	ISSUE FOR CONSTRUCTION

Project

MSB
1st Floor Infill
LRC 3 & 4

UTHealth™
The University of Texas Health Science Center at Houston

Drawing Name

SECTIONS AND DETAILS

Copyright (C) 2015 by PhiloWilke Partnership. All rights reserved.

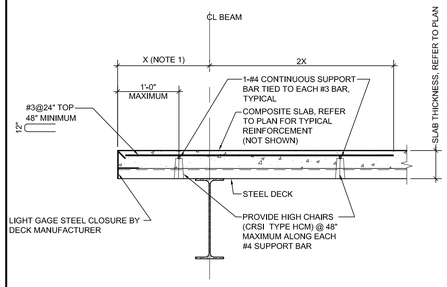
This document and the information herein is the property of PhiloWilke Partnership. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by PhiloWilke Partnership. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by PhiloWilke Partnership.

Print Date / Time: 3/28/2013 9:45:16 AM

P&W Commission Number	Sheet Number
214-198R	S-200

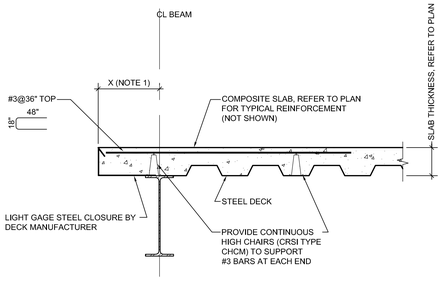
P:\S03\2016\16022-00 UTHSC-H MSB L1 Infill ME & SW\3-Documentation\Drawings\ArchiCAD

WPM: S03.16022.00



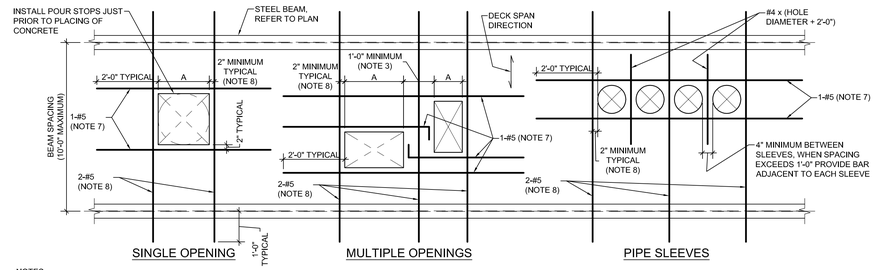
NOTES:
1. REFER TO PLAN FOR SLAB EDGE DIMENSIONS. THIS DETAIL DOES NOT APPLY WHEN DISTANCE "X" EXCEEDS 3'-0".

5 TYPICAL DETAIL COMPOSITE SLAB EDGE CONDITION
NO SCALE



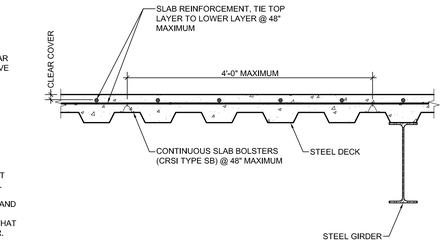
NOTES:
1. REFER TO PLAN FOR SLAB EDGE DIMENSIONS. THIS DETAIL DOES NOT APPLY WHEN DISTANCE "X" EXCEEDS 12" FOR SLABS 6 1/2" THICK OR LESS OR WHEN DISTANCE "X" EXCEEDS 10" FOR SLABS GREATER THAN 6 1/2" AND UP TO 8" THICK.

4 TYPICAL DETAIL COMPOSITE SLAB EDGE CONDITION
NO SCALE



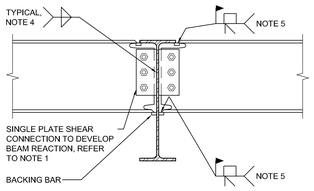
NOTES:
1. COORDINATE OPENING SIZES AND LOCATIONS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
2. "A" IS THE OPENING DIMENSION IN THE DIRECTION PERPENDICULAR TO THE DECK SPAN. THIS DETAIL IS APPLICABLE FOR A MAXIMUM "A" DIMENSION OF 4'-0". REFER TO PLAN OR OTHER DETAILS FOR FRAMING OF OPENINGS GREATER THAN 4'-0".
3. WHEN SPACING BETWEEN MULTIPLE OPENINGS IS 2'-0" OR GREATER, REINFORCEMENT SHALL BE PLACED AS SHOWN FOR SINGLE OPENING CONDITIONS.
4. SLAB REINFORCEMENT SHALL BE CUT AROUND SLAB OPENINGS AND SHALL EXTEND TO WITHIN 2" OF OPENINGS ON ALL SIDES.
5. OPENINGS OR GROUPS OF OPENINGS 10" AND SMALLER DO NOT REQUIRE ADDITIONAL REINFORCEMENT.
6. FIELD-CUT OPENINGS IN DECK AFTER CONCRETE SLAB HAS BEEN PLACED AND HAS ATTAINED AT LEAST 75% OF ITS SPECIFIED 28-DAY COMPRESSIVE STRENGTH. DO NOT FIELD-CUT DECK UNTIL IMMEDIATELY BEFORE OPENING IS NEEDED.
7. REINFORCEMENT PERPENDICULAR TO DECK SPAN SHALL BE PLACED ON TOP OF DECK FLUTES AND SHALL BE CHAIRED TO PROVIDE ADEQUATE COVER.
8. REINFORCEMENT PARALLEL TO DECK SPAN SHALL BE PLACED IN THE NEAREST LOWER FLUTE THAT PROVIDES AT LEAST 2" EDGE DISTANCE AND SHALL BE CHAIRED TO PROVIDE ADEQUATE COVER.
9. THIS DETAIL SHOWS TYPICAL CONDITIONS. VERIFY REINFORCING STEEL PLACEMENT WITH ENGINEER FOR SPECIAL CASES OR WHEN DIMENSIONS EXCEED MAXIMUM DIMENSIONS SHOWN IN THIS DETAIL.
10. PROVIDE REINFORCEMENT AS SHOWN FOR SQUARE, RECTANGULAR, OR ROUND OPENINGS.

3 TYPICAL OPENINGS IN COMPOSITE SLAB (A <= 4'-0")
NO SCALE



1 TYPICAL REINFORCEMENT PLACEMENT FOR COMPOSITE SLABS
NO SCALE

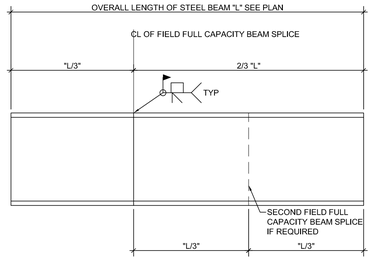
2013-02-15



NOTES:
1. BOLTS IN WEB CONNECTION MAY BE SNUG-TIGHTENED OR PRETENSIONED A325 OR A490 BOLTS WITH HORIZONTAL SHORT-SLOTTED HOLES IN PLATE. IF BOLTS ARE TO BE PRETENSIONED, SNUG-TIGHTEN BOLTS PRIOR TO WELDING FLANGES AND PRETENSION AFTER WELDING FLANGES.
2. REFER TO SPECIFICATIONS FOR CONNECTION DESIGN CRITERIA.
3. PROVIDE PREDESIGNED SHEAR CONNECTIONS AS SHOWN IN AMERICAN INSTITUTE OF STEEL CONSTRUCTION LRFD MANUAL WHERE APPLICABLE.
4. MINIMUM FILLET WELD SIZE FOR SINGLE PLATE SHEAR CONNECTIONS SHALL BE 5/8 TIMES THE PLATE THICKNESS.
5. IF MOMENT IS SHOWN ON DRAWINGS, PARTIAL PENETRATION WELD TO DEVELOP MOMENT CAN BE USED IN LIEU OF COMPLETE JOINT PENETRATION WELD. FOR THIS CASE, WELD SHALL BE REQUIRED TO DEVELOP THE BEAM FLANGE FORCE COMPUTED AS FOLLOWS: Pu = (Mu)/(0.95D), WHERE: Mu = DESIGN MOMENT (KIP-FEET).
D = BEAM DEPTH (INCHES),
Pu = BEAM FLANGE FORCE (KIPS),

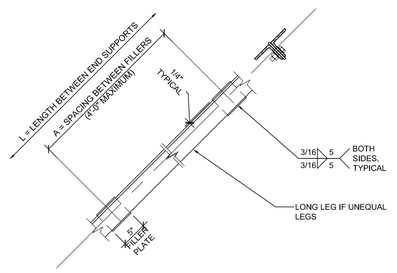
9 TYPICAL BEAM-TO-BEAM MOMENT CONNECTION
NO SCALE

GT:\DLC\Pw\BIM\AIA\E
© COPYRIGHT WALTER P. MOORE AND ASSOCIATES, INC. 2015



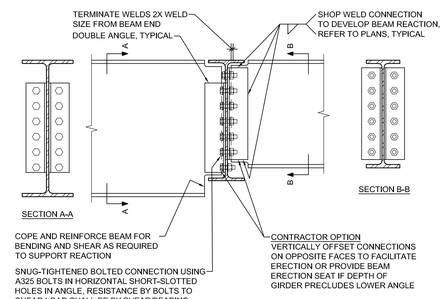
NOTES:
1. THIS DETAIL APPLIES WHERE A NEW STEEL BEAM MUST BE SHIPPED TO THE JOB SITE IN SECTIONS FOR HANDLING PURPOSES AND WELDED TOGETHER IN THE FIELD PRIOR TO ERECTION.
2. ALL FIELD WELDING SHALL BE OBSERVED AND TESTED BY THE OWNER'S TESTING LABORATORY.

8 TYPICAL FIELD SPLICING OF STEEL BEAMS FOR ERECTION PURPOSES
1 1/2" = 1'-0"



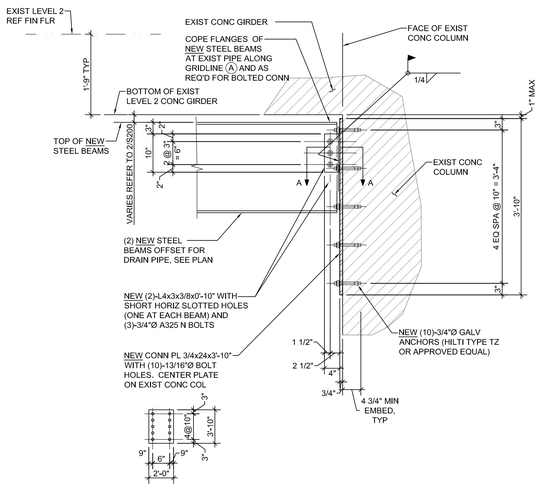
NOTES:
1. THICKNESS OF FILLER PLATES SHALL BE THE SAME AS THAT OF THE PLATES AT THE END CONNECTION.
2. THE SPACING BETWEEN THE FILLER PLATES SHALL BE SUCH THAT THE GOVERNING LOCAL SLENDERNESS RATIO (A/R) OF THE SINGLE ANGLES, BETWEEN THE FILLER, IS LESS THAN 75% OF THE GOVERNING SLENDERNESS RATIO (L/R) OF THE DOUBLE ANGLES BETWEEN END SUPPORTS. PROVIDE A MINIMUM OF (2) INTERMEDIATE FILLER PLATES PER DOUBLE ANGLE.
3. R = RADIUS OF GYRATION.

7 FILLER PLATE SPACING CRITERIA FOR DOUBLE ANGLES
NO SCALE

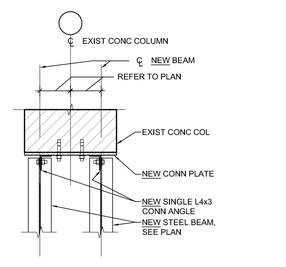


NOTES:
1. REFER TO SPECIFICATIONS FOR CONNECTION DESIGN CRITERIA.
2. PROVIDE PREDESIGNED CONNECTIONS AS SHOWN IN AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL WHERE APPLICABLE.

6 TYPICAL BEAM-TO-BEAM SHEAR CONNECTION
NO SCALE



NOTE:
PRIOR TO FABRICATING THE CONNECTION PLATE. THE CONTRACTOR SHALL USE AN "R" METER OR SIMILAR DEVICE TO DETERMINE THE LOCATION OF THE EXISTING REINFORCING BARS IN THE EXISTING CONCRETE STRUCTURE IN THE VICINITY OF THE EXPANSION ANCHOR LOCATIONS TO DETERMINE IF THE BARS INTERFERE WITH THE PLACEMENT OF THE EXPANSION ANCHORS. IN ADDITION SMALL DIAMETER PILOT HOLES MAY NEED TO BE DRILLED AT THE EXPANSION ANCHOR LOCATIONS. FILL IN ALL ABANDONED PILOT HOLES WITH A NON-SHRINK HIGH STRENGTH EPOXY GROUT. THE CONTRACTOR SHALL SUBMIT A DRAWING SHOWING THE LOCATION OF REINFORCING BARS RELATIVE TO EXPANSION ANCHOR LOCATIONS IF CONFLICTS EXIST. THE CONNECTION PLATE SIZE, NUMBER OF EXPANSION ANCHORS AND LOCATION OR BOLT HOLE PATTERN MAY NEED TO BE REVISED BY THE ENGINEER IF CONFLICTS EXIST. CONNECTION PLATE SHALL NOT BE FABRICATED UNTIL IT HAS BEEN DETERMINED FOR CERTAIN THAT THERE ARE NO CONFLICTS BETWEEN THE EXPANSION ANCHOR LOCATIONS AND THE EXISTING REINFORCING BARS. MODIFICATIONS TO THE CONNECTION PLATE WILL NOT BE ALLOWED IN THE FIELD. DRILL HOLES FOR EXPANSION ANCHORS USING EITHER THE ACTUAL CONNECTION PLATE OR A STEEL TEMPLATE.



12 SECTION - LEVEL 2 STEEL BEAM TO CONCRETE COLUMN
3/4" = 1'-0"

Philo Wilke Partnership
11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

Walter P. Moore and Associates, Inc.
TBPE Firm Registration No. 1856

STATE OF TEXAS
J. F. BALDRIDGE, III
51650
LICENSED PROFESSIONAL ENGINEER
07/08/2016

Consultants

Structural Engineer
Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer
E&C Engineers and Consultants
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

Issues / Revisions

No.	Date	Description
1	07/08/2016	ISSUE FOR CONSTRUCTION

Project

MSB
1st Floor Infill
LRC 3 & 4

UTHealth™
The University of Texas Health Science Center at Houston

Drawing Name

TYPICAL DETAILS

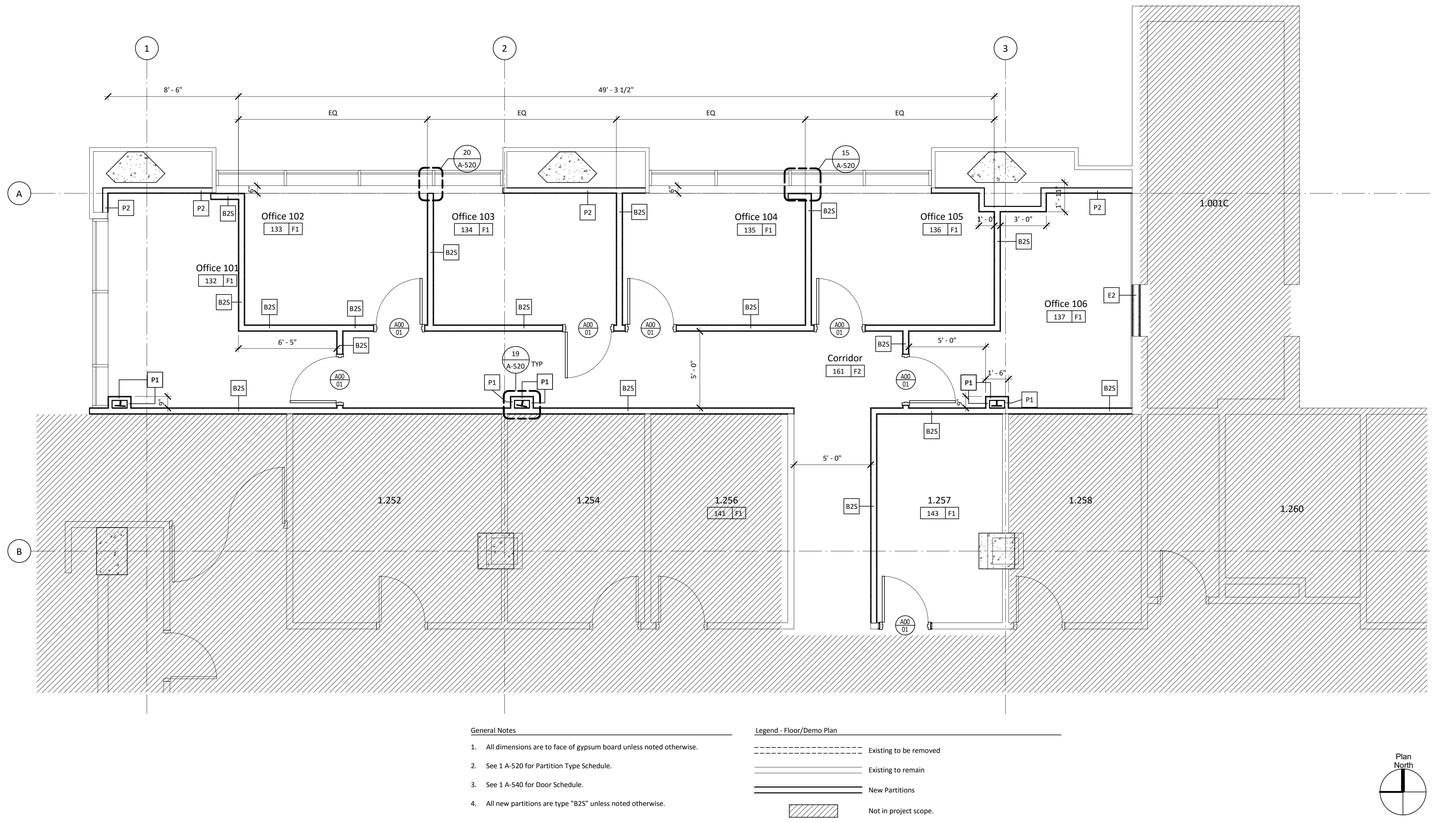
Copyright (C) 2015 by PhiloWilke Partnership. All rights reserved.

This document and the information herein is the property of PhiloWilke Partnership. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by PhiloWilke Partnership. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by PhiloWilke Partnership.

Print Date / Time: 3/28/2013 9:45:16 AM

P&W Commission Number: 214-198R

Sheet Number: S-201



General Notes

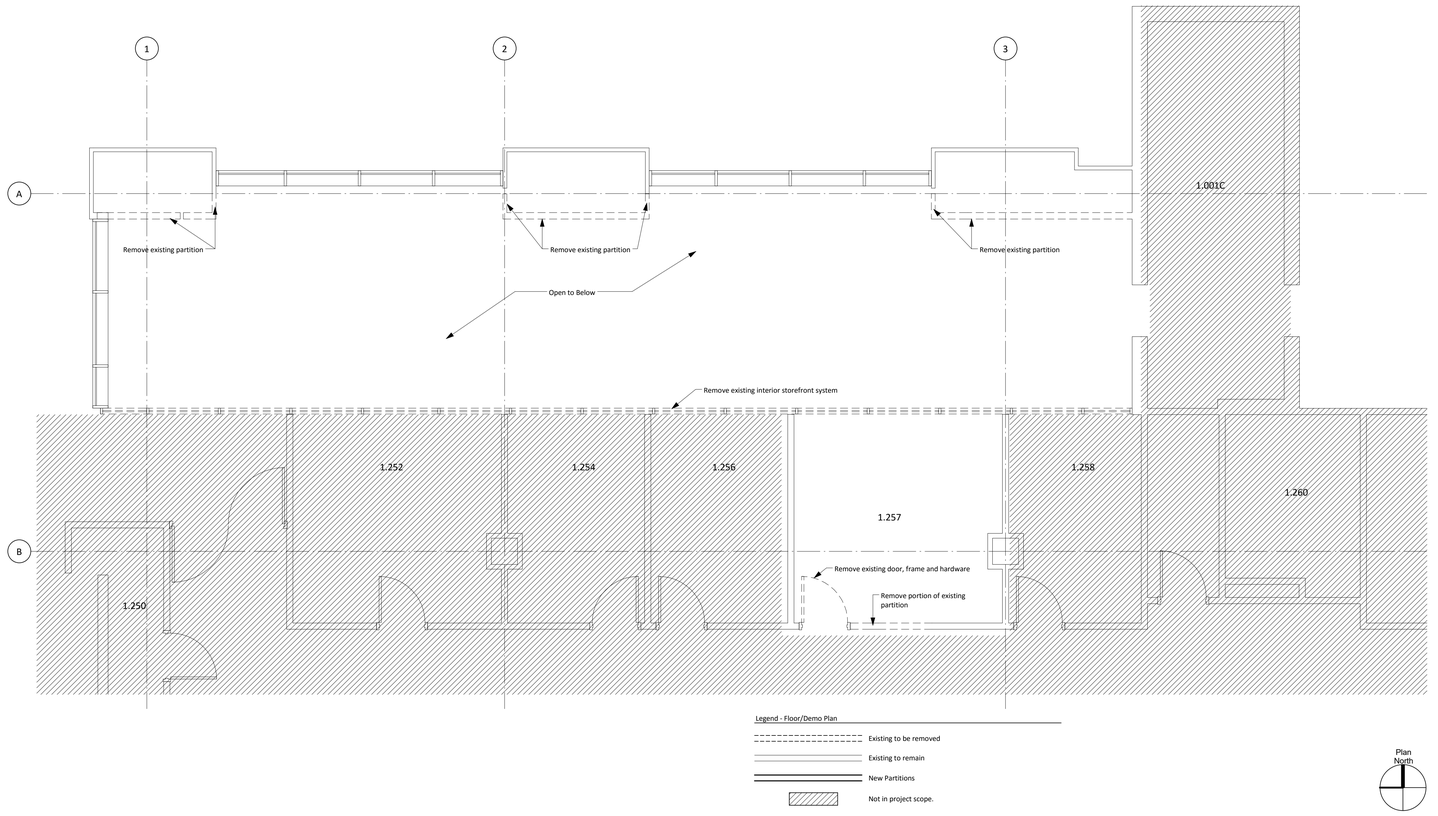
1. All dimensions are to face of gypsum board unless noted otherwise.
2. See 1 A-520 for Partition Type Schedule.
3. See 1 A-540 for Door Schedule.
4. All new partitions are type "B2S" unless noted otherwise.

Legend - Floor/Demo Plan

- Existing to be removed
- Existing to remain
- New Partitions
- Not in project scope.

Plan North

Level 1 Floor Plan - East | 1/4" = 1'-0" | **2**



Legend - Floor/Demo Plan

- Existing to be removed
- Existing to remain
- New Partitions
- Not in project scope.

Plan North

Demolition First Level - East | 1/4" = 1'-0" | **1**

Philo Wilke Partnership

11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

REGISTERED ARCHITECT — CALVIN L. HORAN — 19265 — STATE OF TEXAS

07/08/2016

Consultants

Structural Engineer

Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer

E&C Engineers and Consultants
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

Issues / Revisions

No.	Date	Description
	07/08/2016	Issue for Construction

Project

MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas Health Science Center at Houston

Drawing Name

Floor Plan East

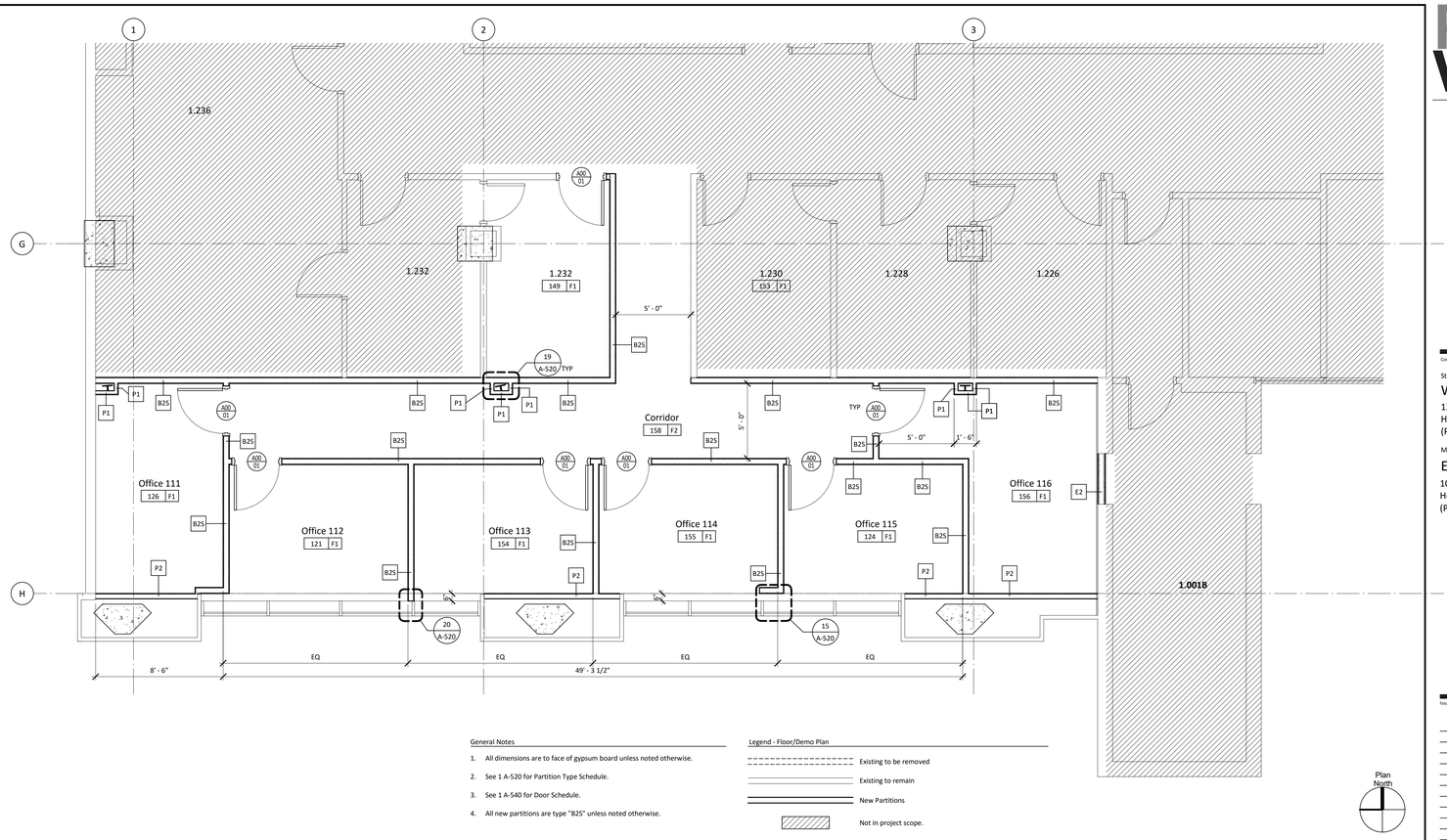
Copyright (C) 2016 by PhiloWilke Partnership. All rights reserved.

This document and the information herein is the property of PhiloWilke Partnership. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by PhiloWilke Partnership. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by PhiloWilke Partnership.

Print Date / Time: 7/11/2016 2:19:28 PM

PBW Commission Number	Sheet Number
214-198R	A-110

C:\Users\jbondow\Documents\LRC Infill 3&4 (Central)_dianabond.rvt



General Notes

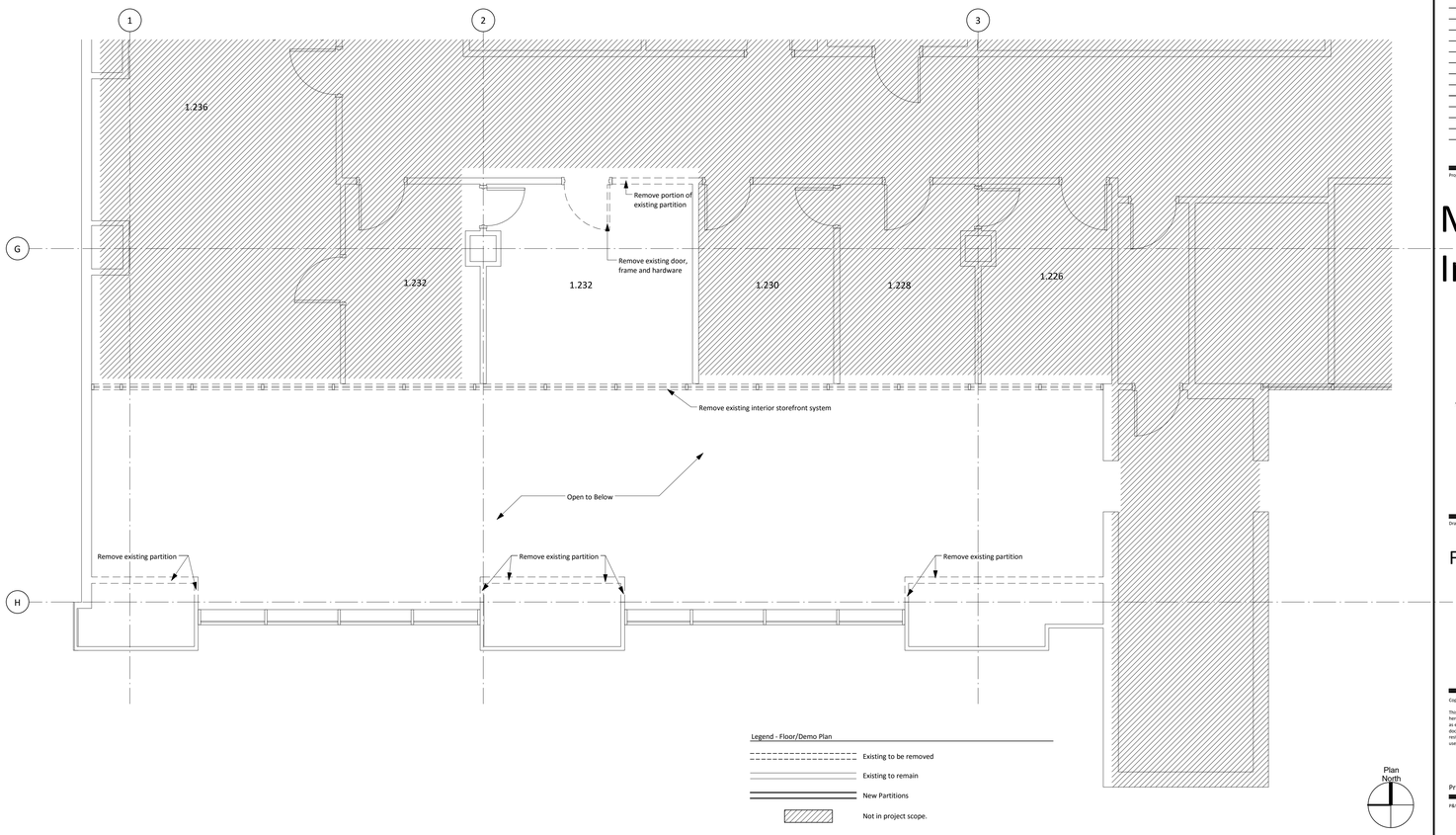
1. All dimensions are to face of gypsum board unless noted otherwise.
2. See 1 A-520 for Partition Type Schedule.
3. See 1 A-540 for Door Schedule.
4. All new partitions are type "B25" unless noted otherwise.

Legend - Floor/Demo Plan

- Existing to be removed
- Existing to remain
- New Partitions
- Not in project scope.

Plan North

Level 1 Floor Plan - West | 1/4" = 1'-0" | 3



Legend - Floor/Demo Plan

- Existing to be removed
- Existing to remain
- New Partitions
- Not in project scope.

Plan North

Demolition First Level - West | 1/4" = 1'-0" | 1

Philo Wilke Partnership
11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

REGISTERED ARCHITECT STATE OF TEXAS 07/08/2016

Consultants

Structural Engineer
Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer
E&C Engineers and Consultants
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

Issues / Revisions

No.	Date	Description
	07/08/2016	Issue for Construction

Project

MSB 1st Floor Infill LRC 3 & 4

UTHealth
The University of Texas
Health Science Center at Houston

Drawing Name

Floor Plan West

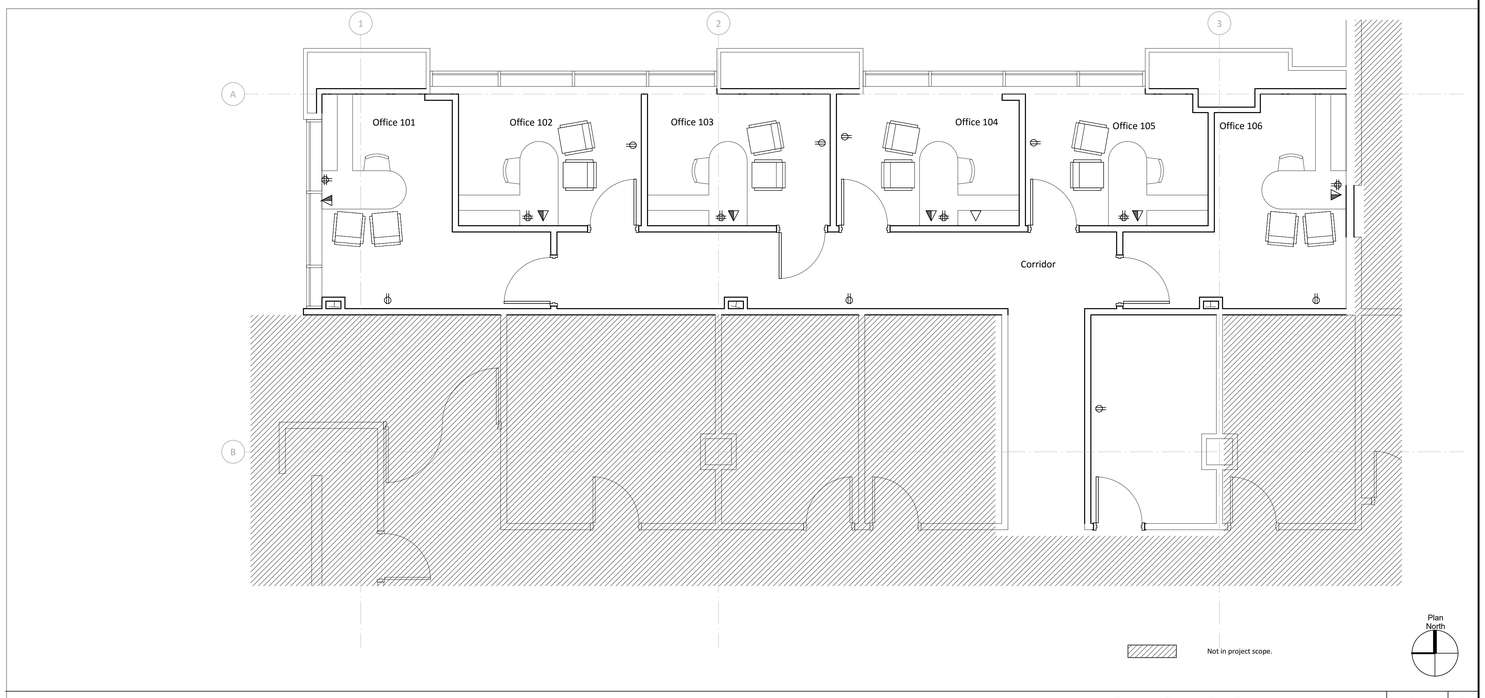
Copyright (C) 2016 by PhiloWilke Partnership. All rights reserved.

This document and the information herein is the property of PhiloWilke Partnership. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by PhiloWilke Partnership. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by PhiloWilke Partnership.

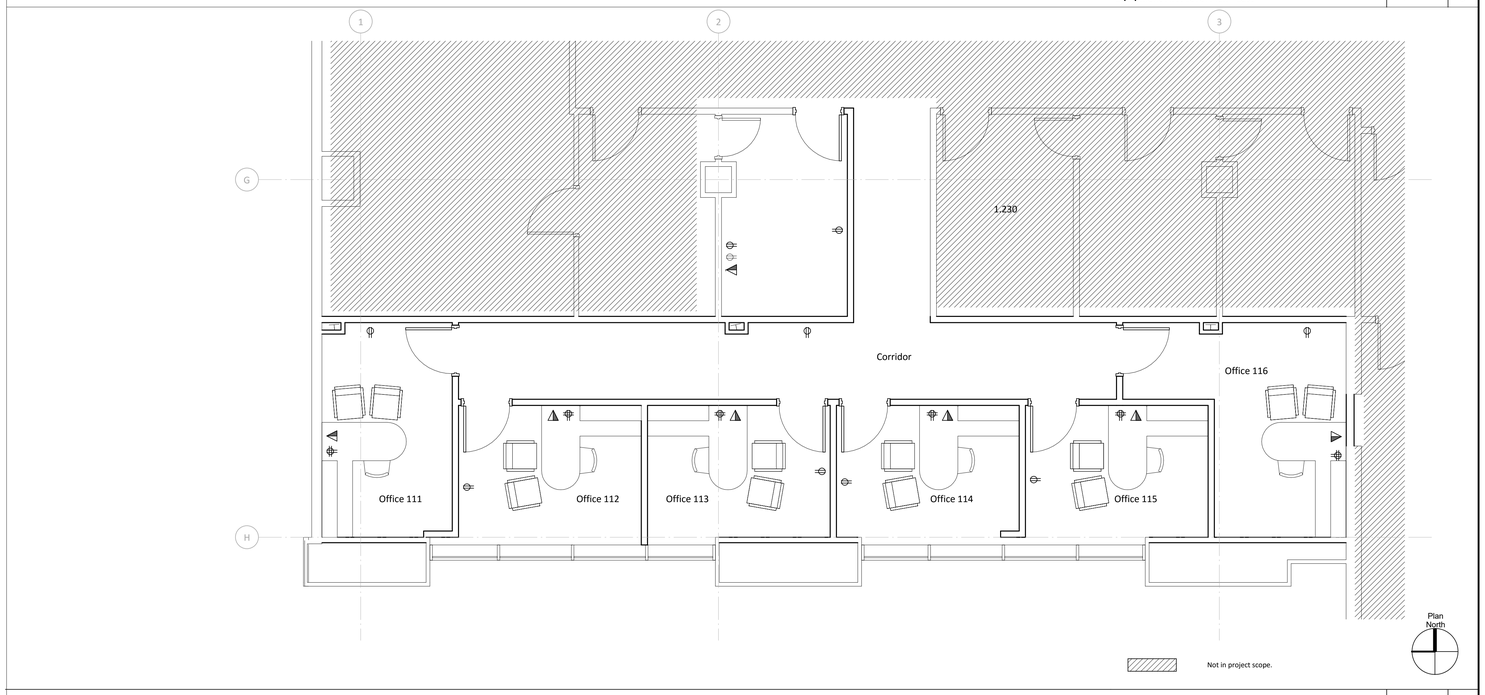
Print Date / Time: 7/11/2016 2:31:42 PM

P&W Commission Number	Sheet Number
214-198R	A-111

C:\Users\dsandoval\Documents\LRC Infill 3&4 (Central)_dsandoval.rvt



Equipment First Level Plan - East | 1/4" = 1'-0" | 3



Equipment First Level Plan - West | 1/4" = 1'-0" | 1

Philo Wilke Partnership
11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

REGISTERED ARCHITECT
Cathryn E. Horan
12265
STATE OF TEXAS
07/08/2016

Consultants

Structural Engineer
Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer
E&C Engineers and Consultants
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

Issues / Revisions

No.	Date	Description
	07/08/2016	Issue for Construction

Project

MSB 1st Floor Infill LRC 3 & 4

UTHealth
The University of Texas
Health Science Center at Houston

Drawing Name

Equipment and Furniture Plan

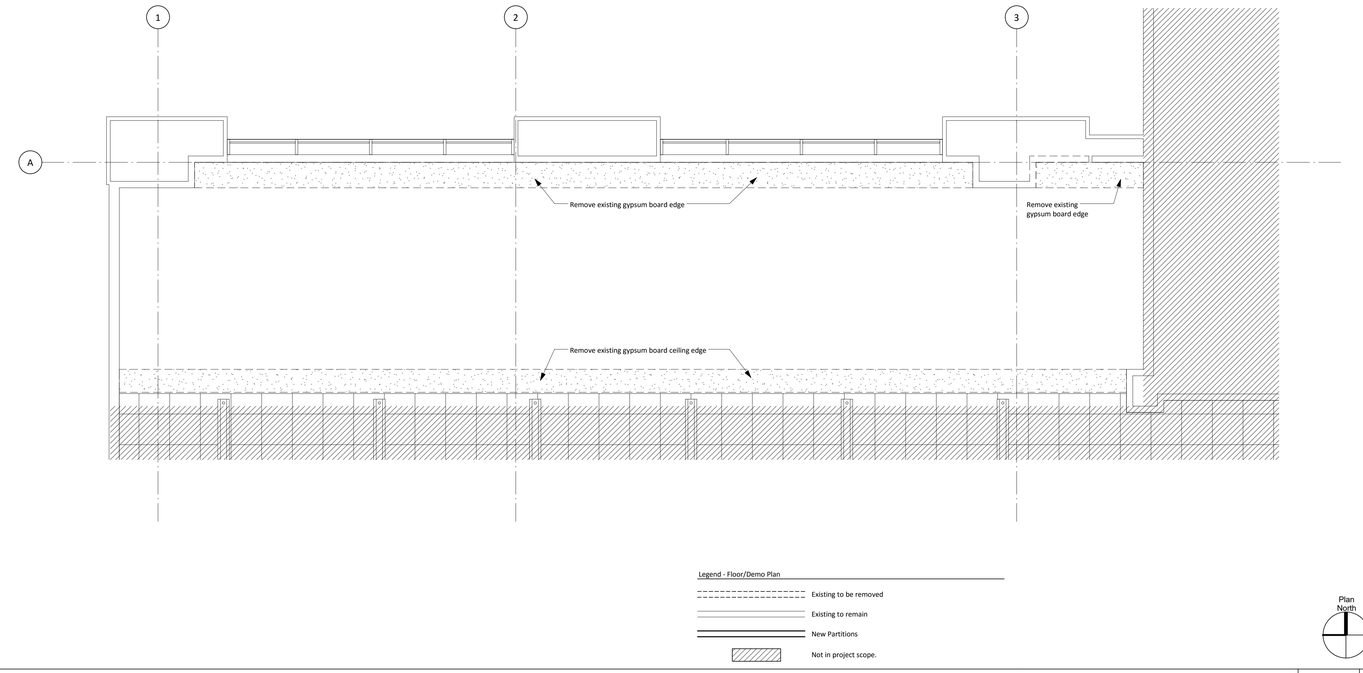
Copyright (C) 2016 by PhiloWilke Partnership. All rights reserved.

This document and the information herein is the property of PhiloWilke Partnership. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by PhiloWilke Partnership. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by PhiloWilke Partnership.

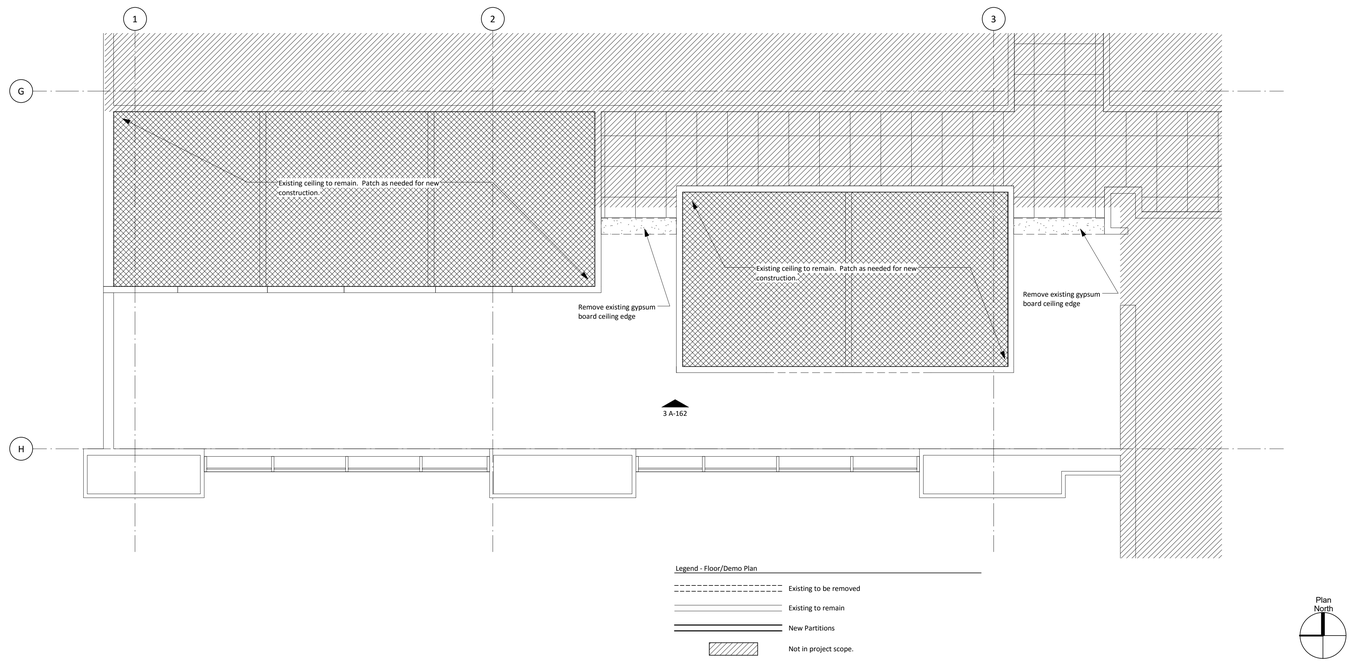
Print Date / Time: 7/11/2016 2:32:58 PM

P&W Commission Number	Sheet Number
214-198R	A-130

C:\Users\dsandoval\Documents\LRC Infill 3&4 (Central)_dsandoval.rvt



Demolition Ground Floor - RCP - East | 1/4" = 1'-0" | 2



Demolition Ground Floor - RCP - West | 1/4" = 1'-0" | 1

Philo Wilke Partnership
11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

REGISTERED ARCHITECT
STATE OF TEXAS
19258

07/08/2016

Consultants

Structural Engineer

Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer

E&C Engineers and Consultants
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

Issues / Revisions

No.	Date	Description

Project

MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas
Health Science Center at Houston

Drawing Name

Demolition Reflected Ceiling Plan - Ground Level

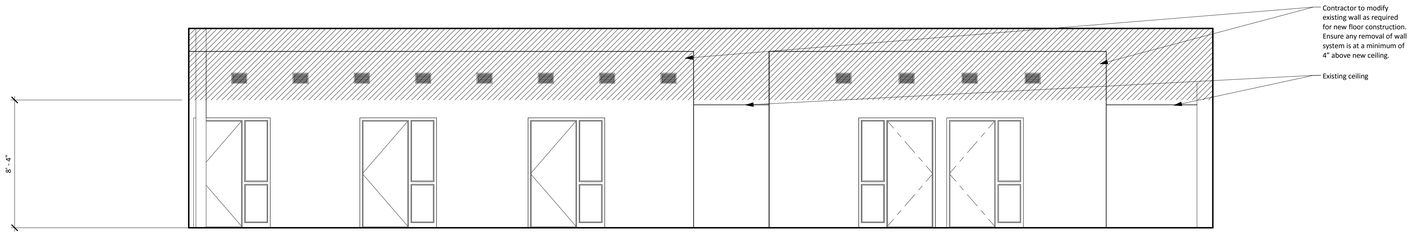
Copyright (C) 2016 by PhiloWilke Partnership. All rights reserved.

This document and the information herein is the property of PhiloWilke Partnership. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by PhiloWilke Partnership. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by PhiloWilke Partnership.

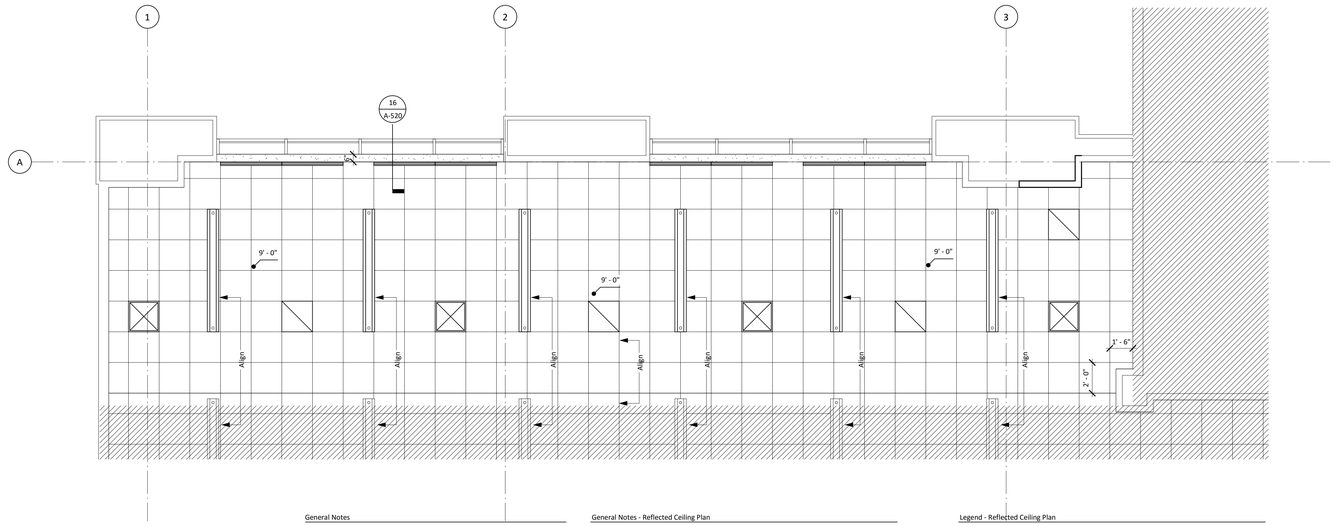
Print Date / Time: 7/11/2016 2:34:39 PM

PBW Commission Number	Sheet Number
214-198R	A-161

C:\Users\bkandevel\Documents\LRC Infill 3&4 (Central)_dkandevel.rvt



Study Lounge - Existing Elevation | 1/4" = 1'-0" | 3



General Notes

General Notes - Reflected Ceiling Plan

1. All new ceilings to be 9'-0" a.f.f., unless noted otherwise. See Finish Schedule for types.
2. Center all sprinkler heads and ceiling mounted devices in center of ceiling tile, unless noted otherwise.

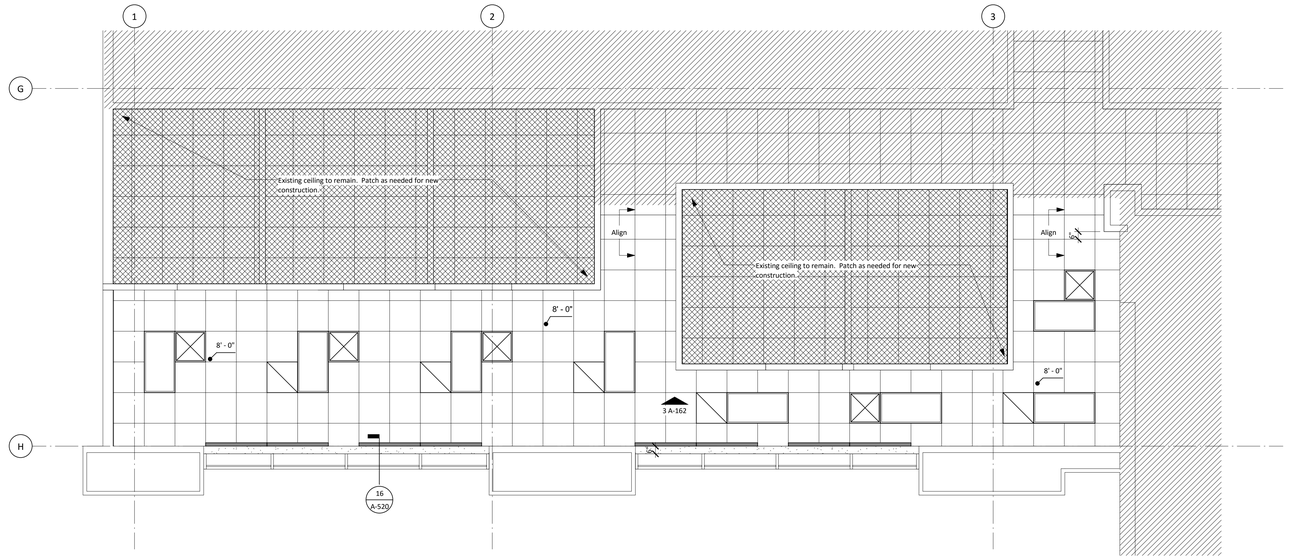
Legend - Reflected Ceiling Plan

New partition to structure. See 1 A-520 for partition schedule.

Not in project scope.

Plan North

Ground Floor - RCP - East | 1/4" = 1'-0" | 2



General Notes - Reflected Ceiling Plan

1. All new ceilings to be 9'-0" a.f.f., unless noted otherwise. See Finish Schedule for types.
2. Center all sprinkler heads and ceiling mounted devices in center of ceiling tile, unless noted otherwise.

Legend - Reflected Ceiling Plan

New partition to structure. See 1 A-520 for partition schedule.

Not in project scope.

Plan North

Ground Floor - RCP - West | 1/4" = 1'-0" | 1

Philo Wilke Partnership
11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

REGISTERED ARCHITECT STATE OF TEXAS 07/08/2016

Consultants

Structural Engineer
Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer
E&C Engineers and Consultants
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

Issues / Revisions

No.	Date	Description
	07/08/2016	Issue for Construction

Project

MSB 1st Floor Infill LRC 3 & 4

UTHealth
The University of Texas
Health Science Center at Houston

Drawing Name

Reflected Ceiling Plans -Ground Level

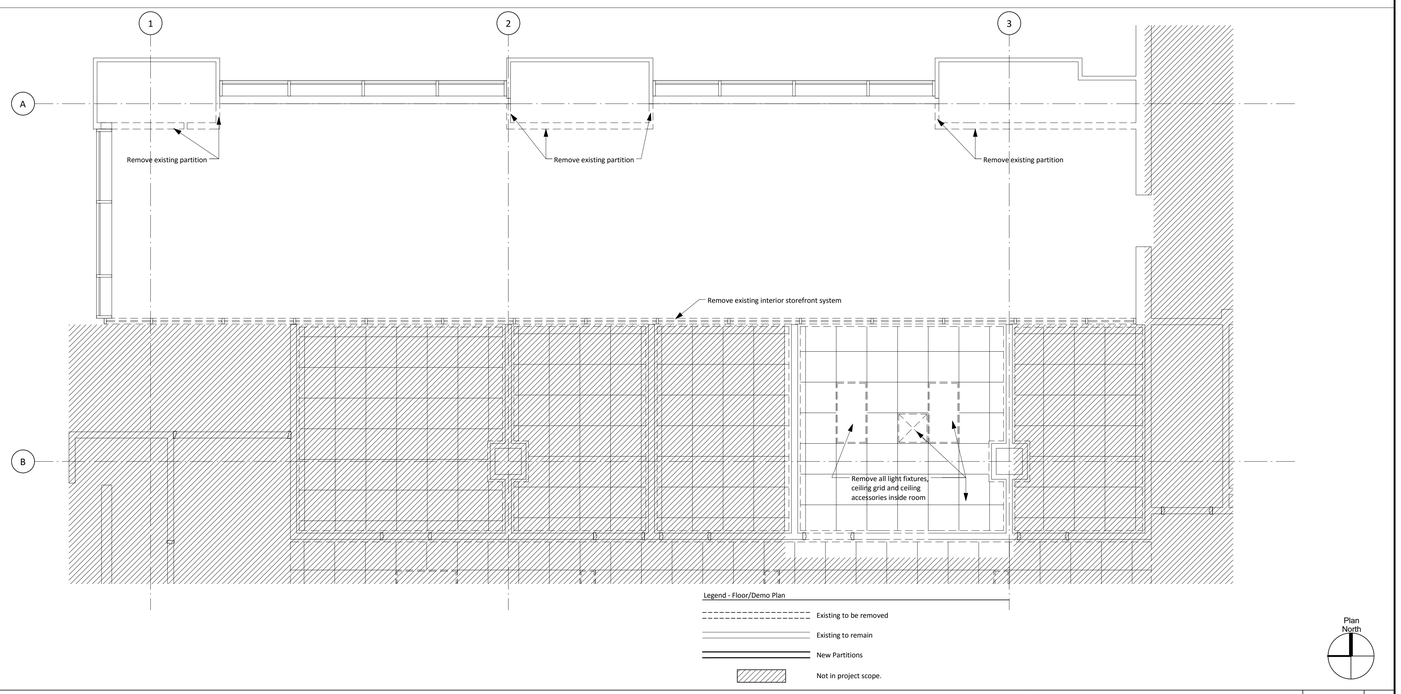
Copyright (C) 2016 by PhiloWilke Partnership. All rights reserved.

This document and the information herein is the property of PhiloWilke Partnership. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by PhiloWilke Partnership. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the foregoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by PhiloWilke Partnership.

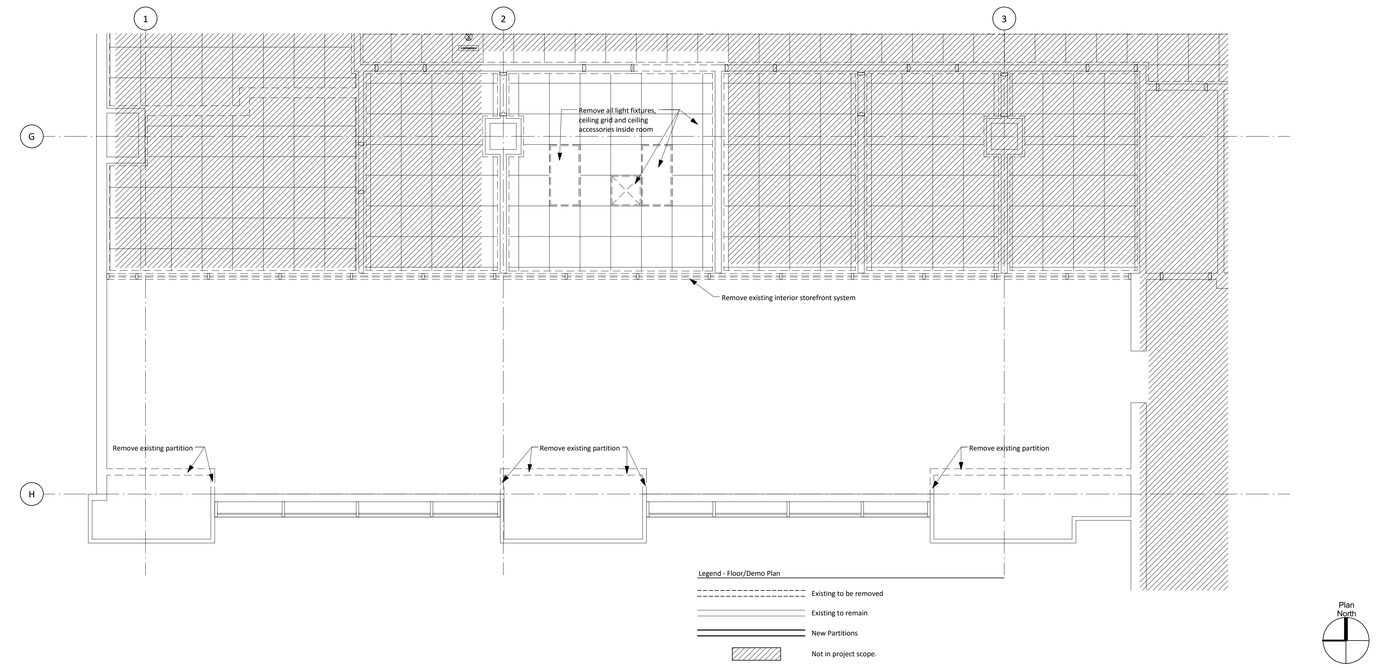
Print Date / Time: 7/11/2016 2:36:08 PM

P&W Commission Number	Sheet Number
214-198R	A-162

C:\Users\dsandoval\Documents\LRC Infill 3&4 (Central)_dsandoval.rvt



Level 1 - Reflected Ceiling Plan - East | 1/4" = 1'-0" | **2**



Level 1 - Reflected Ceiling Plan - West | 1/4" = 1'-0" | **1**

Philo Wilke Partnership
11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

REGISTERED ARCHITECT 19258 STATE OF TEXAS

07/08/2016

Consultants

Structural Engineer

Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer

E&C Engineers and Consultants
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

Issues / Revisions

No.	Date	Description

Project

MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas Health Science Center at Houston

Drawing Name

Demolition Reflected Ceiling Plan - Level 1

Copyright (C) 2016 by PhiloWilke Partnership. All rights reserved.

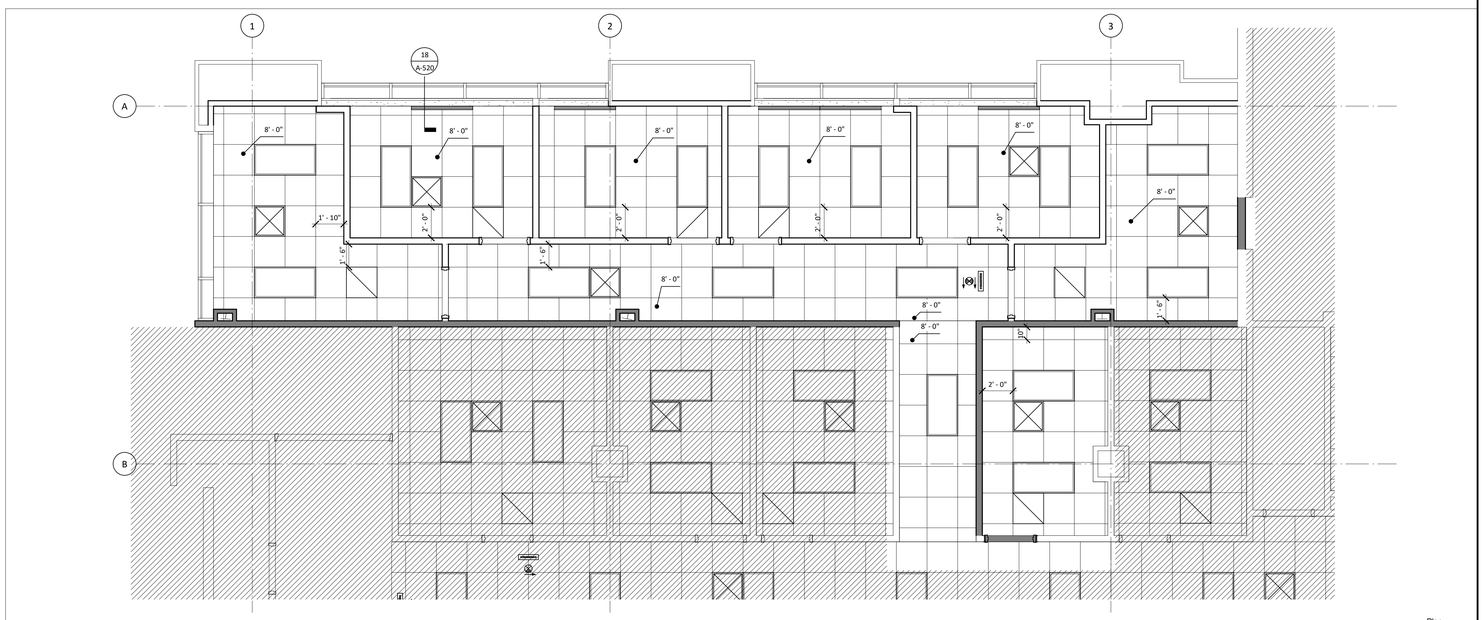
This document and the information herein is the property of PhiloWilke Partnership. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by PhiloWilke Partnership. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by PhiloWilke Partnership.

Print Date / Time: 7/11/2016 2:37:39 PM

P&W Commission Number: 214-198R

Sheet Number: A-163

C:\Users\bdavidson\Documents\LRC Infill 3&4 (Central)_dsandoval.rvt



General Notes - Reflected Ceiling Plan

1. All new ceilings to be 9'-0" a.f.f., unless noted otherwise. See Finish Schedule for types.
2. Center all sprinkler heads and ceiling mounted devices in center of ceiling tile, unless noted otherwise.

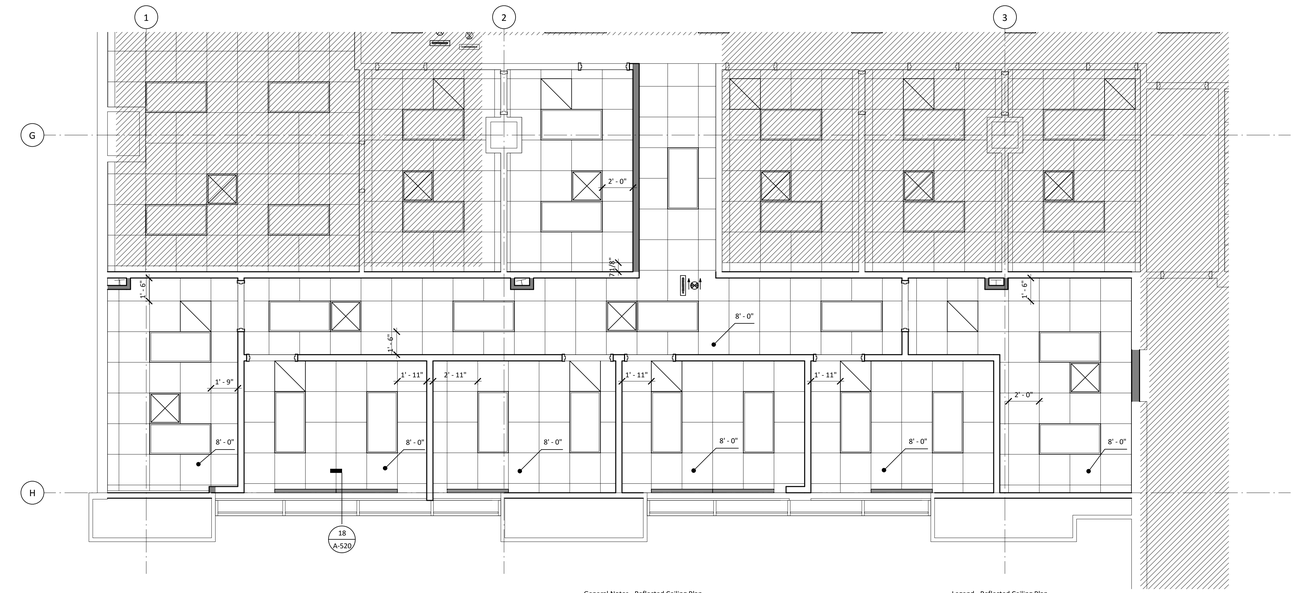
Legend - Reflected Ceiling Plan

New partition to structure. See 1 A-520 for partition schedule.

Not in project scope.

Plan North

Level 1 - Reflected Ceiling Plan - East | 1/4" = 1'-0" | 2



General Notes - Reflected Ceiling Plan

1. All new ceilings to be 9'-0" a.f.f., unless noted otherwise. See Finish Schedule for types.
2. Center all sprinkler heads and ceiling mounted devices in center of ceiling tile, unless noted otherwise.

Legend - Reflected Ceiling Plan

New partition to structure. See 1 A-520 for partition schedule.

Not in project scope.

Plan North

Level 1 - Reflected Ceiling Plan - West | 1/4" = 1'-0" | 1

Philo Wilke Partnership
11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

REGISTERED ARCHITECT
Kathryn E. Horan
STATE OF TEXAS
07/08/2016

Consultants

Structural Engineer
Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer
E&C Engineers and Consultants
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

Issues / Revisions

No.	Date	Description
	07/08/2016	Issue for Construction

Project

MSB 1st Floor Infill LRC 3 & 4

UTHealth
The University of Texas
Health Science Center at Houston

Drawing Name

Reflected Ceiling Plans - Level 1

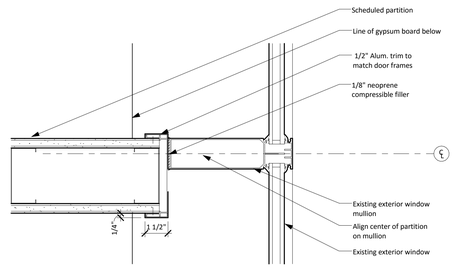
Copyright (C) 2016 by PhiloWilke Partnership. All rights reserved.

This document and the information herein is the property of PhiloWilke Partnership. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by PhiloWilke Partnership. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by PhiloWilke Partnership.

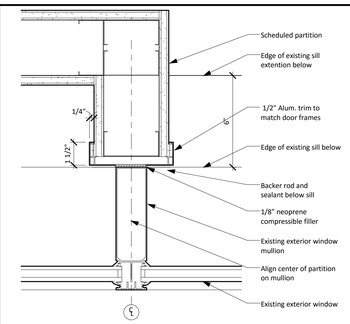
Print Date / Time: 8/5/2016 10:02:33 AM

P&W Commission Number	Sheet Number
214-198R	A-164

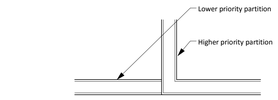
C:\Users\dsandoval\Documents\LRC Infill 3&4 (Central)_dsandoval.rvt



Partition at Mullion Detail | 3" = 1'-0" | **20**

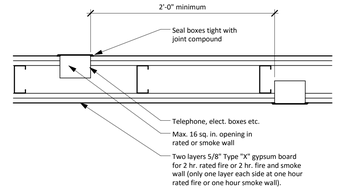


Partition at Mullion Detail | 3" = 1'-0" | **15**



Wall Priority Legend	
2-hour fire and smoke barrier wall:	Priority 1 (Highest)
2-hour fire wall:	Priority 2
1-hour fire and smoke barrier wall:	Priority 3
1-hour fire wall:	Priority 4
Non-rated wall:	Priority 5 (Lowest)

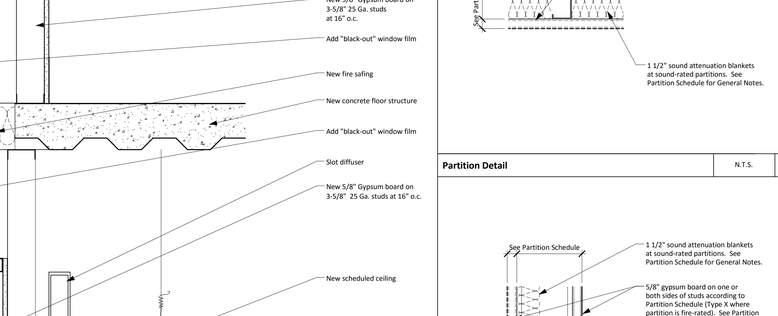
Wall Priority Legend | N.T.S. | **10**



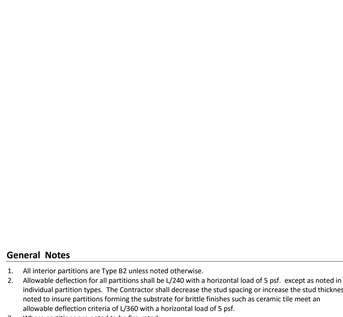
Note:

For all one hour rated partitions, two hour rated partitions and smoke partitions, the surface area of individual metallic outlet or switch boxes shall not exceed 100 square inches per 100 square feet. Boxes located on opposite sides of rated fire or smoke partitions shall be separated by a horizontal distance of 24 inches minimum.

Metallic Boxes in Smoke and Fire-Rated Walls | N.T.S. | **5**

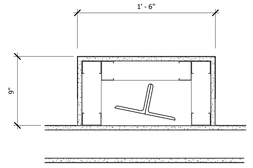


Partition at Ceiling | N.T.S. | **14**

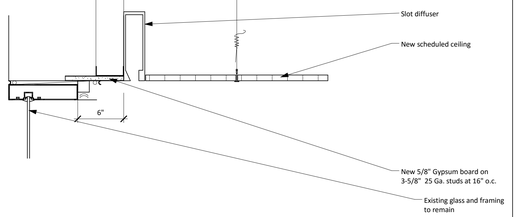


Gypsum Board Partitions at Fluted Metal Deck | N.T.S. | **9**

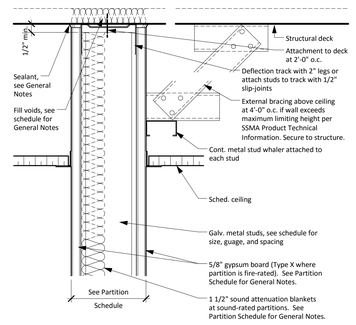
Typical Partition Details | N.T.S. | **4**



Enlarged Plan - Wall/Wall Expansion Joint Detail | 1 1/2" = 1'-0" | **19**



New Ceiling at Existing Curtain Wall | 1 1/2" = 1'-0" | **18**



Partition at Ceiling/Structural Deck | N.T.S. | **13**

Paint the following identification above the ceiling, at four-foot intervals, on both sides of all fire-rated walls, demising walls, area separation walls, and smoke compartment walls. Typeface shall be in 2" high letters in bright orange or red paint. Substitute the the hour-rating of the partition for the letter "X" shown below. Omit the words "AND SMOKE" for partitions that are fire barriers only. Stenciling is acceptable:

X-HOUR
FIRE AND SMOKE BARRIER
PROTECT ALL OPENINGS

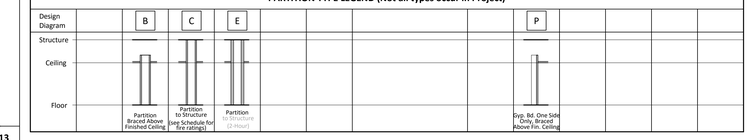
Labeling for Smoke and Fire Walls | **3**

New Floor at Existing Curtainwall Detail -West | 1 1/2" = 1'-0" | **16**

Partition Detail | N.T.S. | **12**

Partition at Floor | N.T.S. | **11**

PARTITION TYPE LEGEND (Not all types occur in Project)



Partition Type Schedule

Type Mark	Description	Thickness	Stud/ Block Size	Stud Thickness (mil)	Stud Spacing	Limiting Height	Fire Rating			Details				Notes
							Rating	Design No.	STC	Section at Floor	Plan	Ceiling/ Structure	Design Test	
B2S	Partition to 4" above ceiling	4 7/8"	3 5/8"	18	2' - 0"	13' - 5"	-	-	47	11 A-520	12 A-520	15 A-520	-	
C	Stud Wall to structure	5"												
C2	Partition to structure (non-rated)	4 7/8"	3 5/8"	18	2' - 0"	13' - 5"	-	-	40	11 A-520	12 A-520	13 A-520	-	
C2S	Partition to structure (non-rated)	4 7/8"	3 5/8"	18	2' - 0"	13' - 5"	-	-	47	11 A-520	12 A-520	13 A-520	-	
E2	Partition to structure (2-Hour rated)	6 1/8"	3 5/8"	30	1' - 4"	15' - 8"	2-Hour	UL U411	48	21 A-520	22 A-520	23 A-520	16 G-102	
P1	One-sided partition to 4" above ceiling	3 1/8"	2 1/2"	18	1' - 4"	0"	-	-	N/A	11 A-520	12 A-520	15 A-520	-	
P2	One-sided partition to 4" above ceiling	4 1/4"	3 5/8"	18	2' - 0"	0"	-	-	N/A	11 A-520	12 A-520	15 A-520	-	

General Notes

1. All interior partitions are Type B2 unless noted otherwise.
2. Allowable deflection for all partitions shall be L/240 with a horizontal load of 5 psf. except as noted in individual partition types. The Contractor shall decrease the stud spacing or increase the stud thickness noted to insure partitions forming the substrate for brittle finishes such as ceramic tile meet an allowable deflection criteria of L/360 with a horizontal load of 5 psf.
3. Where partitions are noted to be fire-rated:
   a. Provide 5/8" Type X fire-resistive gypsum board.
   b. Where partitions meet fluted metal deck or similarly irregular surfaces, seal the partition with safing insulation and sealant as shown in detail 9 A-520 and in accordance with the reference design.
4. Sound-Rated Partitions:
   a. Sound-rated partitions and partitions with thermal insulation are indicated with a the suffix "S" (Example: A1S). Refer to the floor plans for locations.
   b. Provide 1-1/2" thick, glass-fiber sound attenuation blankets unless noted otherwise.
   c. Fill all deck voids or similarly irregular surfaces, with insulation and sealant as shown in detail 9 A-520.
   d. Seal partition perimeter and all penetrations with acoustical sealant or tape and insulation to fill voids.
   e. Arrange back-boxes for electrical, data, telephone, and other outlets as shown in detail 4 A-520.
   f. Where sound-rated partitions are also fire-rated, seal partition and fill voids as required for fire rating.
5. Nails shall comply with ASTM F 547 or ASTM C514. Screws shall meet the requirements of ASTM C 1002 or ASTM C 954.
6. Unless otherwise required by reference designs for fire-rated partitions, fasteners shall be spaced 8" o.c. along at vertical joints and 12" o.c. at floor and ceiling runners and intermediate studs. Space all fasteners in panels that are substrates for brittle finishes, such as ceramic tile or stone, a maximum of 8" o.c..
7. Joints in multi-layer gypsum board partitions shall be staggered 24" on each side and on opposite sides.
8. Metallic outlet boxes shall be permitted to be installed in walls or partitions classified as having a fire-resistance of two-hours or less. The surface area of individual boxes shall not exceed 16 square inches. The aggregate surface area of the boxes shall not exceed 100 square inches in any 100 square feet. Boxes located on opposite sides of walls or partitions shall be separated by a minimum horizontal distance of 24 inches. See detail 5 A-520.
9. Fiberglass-mat faced, siliconized gypsum-core boards shall be installed over or as part of the fire-resistance rated system in shower and tub areas to receive brittle finishes such as ceramic tile or plastic finished wall panels. When fire or sound ratings are indicated, the gypsum board required for the rating shall extend down to the floor behind fixtures.
10. Label all fire-rated and smoke compartment walls or partitions above finished ceiling as shown on detail 3 A-520.
11. Install penetration seals at all penetrations through fire-rated and smoke compartment walls or partitions in accordance with Specifications Section 07 84 00. See details 16, 17, 19, 21, 23, 26, and 28 G-102 for reference designs of penetration seal systems based upon the penetrating element.
12. Accurately align new and existing partitions in the same plane when shown on the Floor Plans. See detail 4 A-520.
13. Maintain the fire or sound rating of partitions at all intersections. Maintain the construction of the highest rated partition where partitions of two different ratings meet. See the Wall Priority Legend - detail 10 A-520.

Partition Type Legend and Schedule | **1**

Philo Wilke Partnership
11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

REGISTERED ARCHITECT — CATHERINE A. HORA — 19265 — STATE OF TEXAS

07/08/2016

Consultants

Structural Engineer

Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer

E&C Engineers and Consultants
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

Issues / Revisions

No.	Date	Description
	07/08/2016	Issue for Construction

Project

MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas Health Science Center at Houston

Drawing Name

Partition Types and Interior Construction Details

Copyright (C) 2016 by PhiloWilke Partnership. All rights reserved.

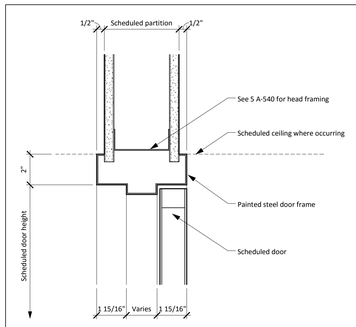
This document and the information herein is the property of PhiloWilke Partnership. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by PhiloWilke Partnership. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by PhiloWilke Partnership.

Print Date / Time: 8/8/2016 11:04:33 AM

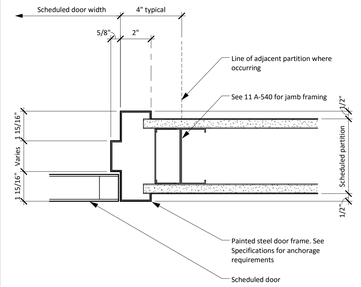
PW# Commission Number: 214-198R

Sheet Number: A-520

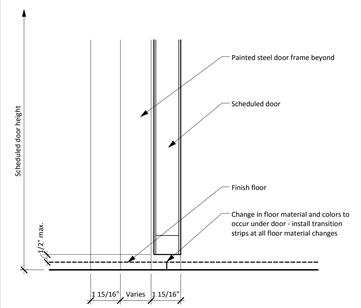
C:\Users\jdandova\Documents\LRC infill 3&4 (Central)_dandova.rvt



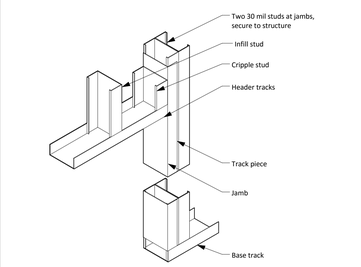
Head at Interior Steel Door Frame | 3" = 1'-0" | **14**



Jamb at Interior Steel Door Frame | 3" = 1'-0" | **13**



Sill at Interior Steel Door Frame | 3" = 1'-0" | **12**



Typical Framing at Opening | N.T.S. | **11**

Finish Material Schedule

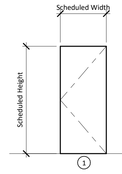
Type Mark	Description	Manufacturer	Pattern/Line	Color	Notes
Floors					
CPT1	Carpet	Shaw	57342 Connect	40150 Necessities	
VCT1	Vinyl composition tile	Mannington	Essentials		
Base					
RBC	Rubber base, cove	Roppe		P193 Black/Brown	
Walls					
PT1	Paint	Shewin Williams	Eggshell	SW7012 Creamy	
Ceilings					
ACT1	Acoustical ceiling tile, 2' X 2'	Eurostone		8602-91	
ACT2	Acoustical ceiling tile, 2' X 4'	Armstrong		763d	
Misc/Trim					
-	NO MATERIAL				
Millwork					
-	NO MATERIAL				
Doors					
WV	Wood Veneer	VT Industries	Red Oak Veneer	Alpine AL07	
Frames					
FPT1	Paint (frame)	Match color of existing door frame paint		Match color of existing door frame paint	

Finish Material Schedule | **3**

Room Finish Type Schedule

Finish Type Mark	Floor	Base	Wall	Ceiling	Misc/Trim	Door	Frame	Notes
F1	CPT1	RBC	PT1	ACT2	-	WV	FPT1	
F2	VCT1	RBC	PT1	ACT2	-	-	-	

Room Finish Type Schedule | **2**



Door Type Schedule

Type	Description	Door Width	Door Height	Door Thick.	Door Elev. No.	Door Mat'l	Door Finish	Frame Mat'l	Frame Finish	Frame Sill Detail	Frame Jamb Detail(s)	Frame Head Detail	Fire Rating (min.)	Notes
A00	Interior flush door	3' - 0"	7' - 0"	1 3/4"	1	Wood	DPL1	Steel	FPT1	11 A-540	13 A-540	12 A-540	-	

General Notes

1. See detail 11 A-540 for stud framing around door opening.

HW SET: 01 Office
Each to have:

-3 EA	Hinge	4 1/2"x4 1/2" TA2714	652	MCK
-1 EA	Entrance Lock	93K7AB14D53-626		BES
-1 EA	FSIC Core Only			
-1 EA	Door Stop	406	630	RCK
-3 EA	Silencers	609	Grey	RCK

Door Type Schedule | **1**

Philo Wilke Partnership
11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

REGISTERED ARCHITECT — CATHRYN E. HORAN — 12258 — STATE OF TEXAS

07/08/2016

Consultants

Structural Engineer

Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer

E&C Engineers and Consultants
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

Issues / Revisions

No.	Date	Description
	07/08/2016	Issue for Construction

Project

MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas Health Science Center at Houston

Drawing Name

Door and Window Details

Copyright (C) 2016 by PhiloWilke Partnership. All rights reserved.

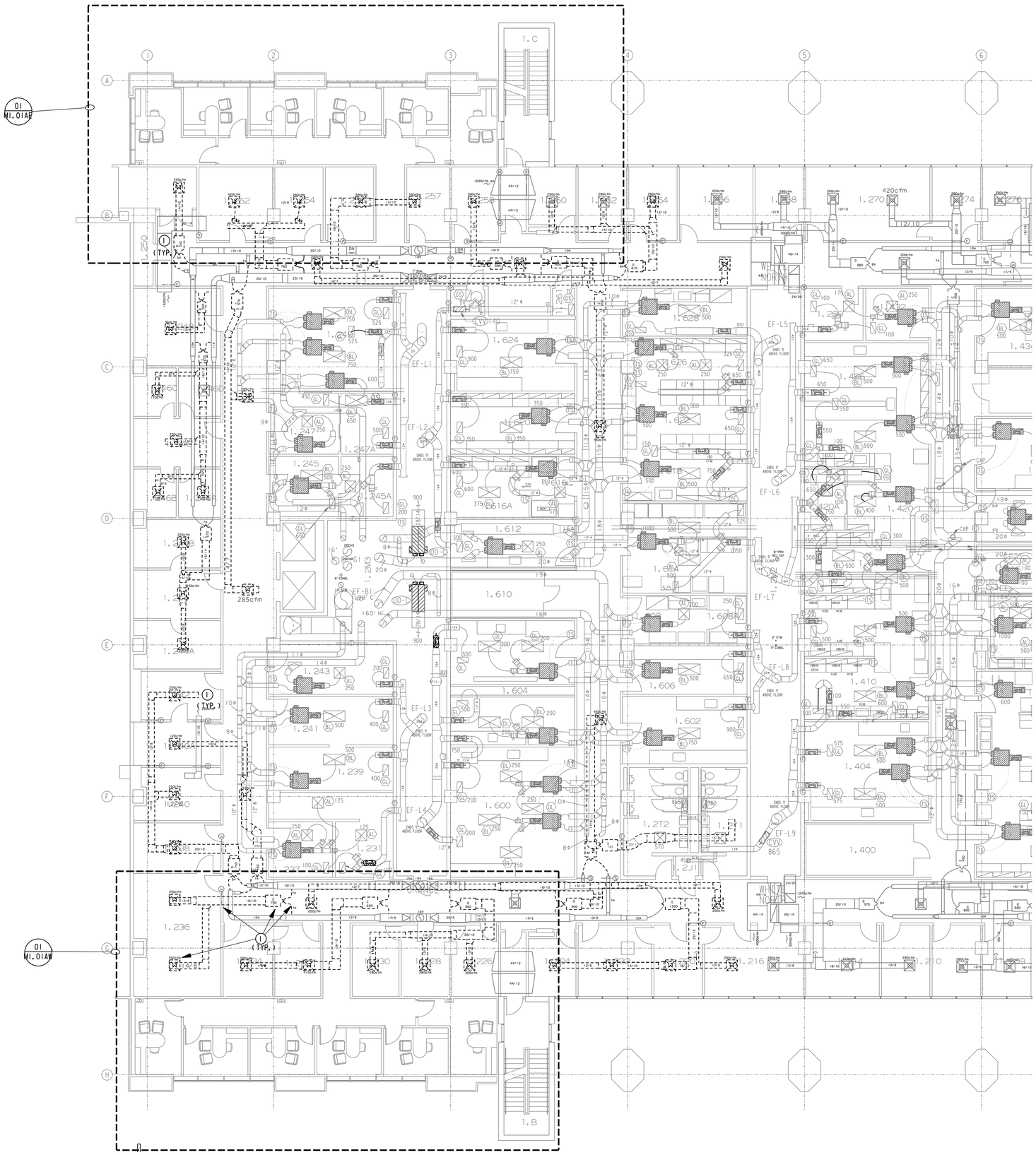
This document and the information herein is the property of PhiloWilke Partnership. No part hereof shall be copied, duplicated, disclosed or used to any extent whatsoever except as expressly authorized by PhiloWilke Partnership. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by PhiloWilke Partnership.

Print Date / Time: 8/8/2016 10:44:23 AM

P&W Commission Number: 214-198R

Sheet Number: A-540

C:\Users\bjandrow\Documents\LRC Infill 3&4 (Central)_bjandrow.rvt



GENERAL NOTES:

A. RE: MEP0.0 FOR ADDITIONAL GENERAL NOTES.

B. COORDINATE EXACT DEMOLITION SCOPE WITH EXISTING CONDITIONS AND NOTIFY THE ENGINEER FOR DIRECTION IF EXISTING CONDITIONS DIFFER SIGNIFICANTLY FROM THOSE SHOWN ON THE DRAWINGS.

C. TEMPORARILY CAP EXISTING DUCTWORK DURING DEMOLITION AS REQUIRED TO ALLOW THE OFFICE AIR HANDLING UNITS TO REMAIN IN OPERATION.

DRAWING NOTES:

(1) REMOVE EXISTING DASHED HOT AND COLD DUCT CONNECTIONS, DOUBLE DUCT TERMINAL UNIT, SUPPLY DUCT AND AIR DEVICES. EXISTING HOT AND COND TRUNK DUCT TAPS SHALL BE REUSED TO SERVE NEW REPLACEMENT DOUBLE DUCT TERMINAL UNITS, RE: 01/M1.01A, NOTE 1.

01 FIRST FLOOR - MECHANICAL ALTERATION PLAN

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

Philo Wilke Partnership

11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

Consultants

Structural Engineer
Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer
E&C Engineers and Consultants
TX Firm Registration No. F-003068
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

STATE OF TEXAS
WILLIAM C CLIFFORD
44368
REGISTERED
PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY

William C. Clifford
2016.07.08
11:24:42 -05'00'

E&C Engineers & Consultants Inc.
Texas Firm Registration No: F-003068

Issues / Revisions

No.	Date	Description
1	07/08/2016	Issue for Construction

Project

UT Health MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas
Health Science Center at Houston

Drawing Name

Mechanical
Demolition Plan
First Floor

Copyright (C) 2015 by E&C Engineers. All rights reserved.

This document and the information herein is the property of E&C Engineers. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by E&C Engineers. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by E&C Engineers.

Print Date / Time: 7/8/2016 9:06:57 AM

P&W Commission Number	Sheet Number
3339.00	DM1.01A

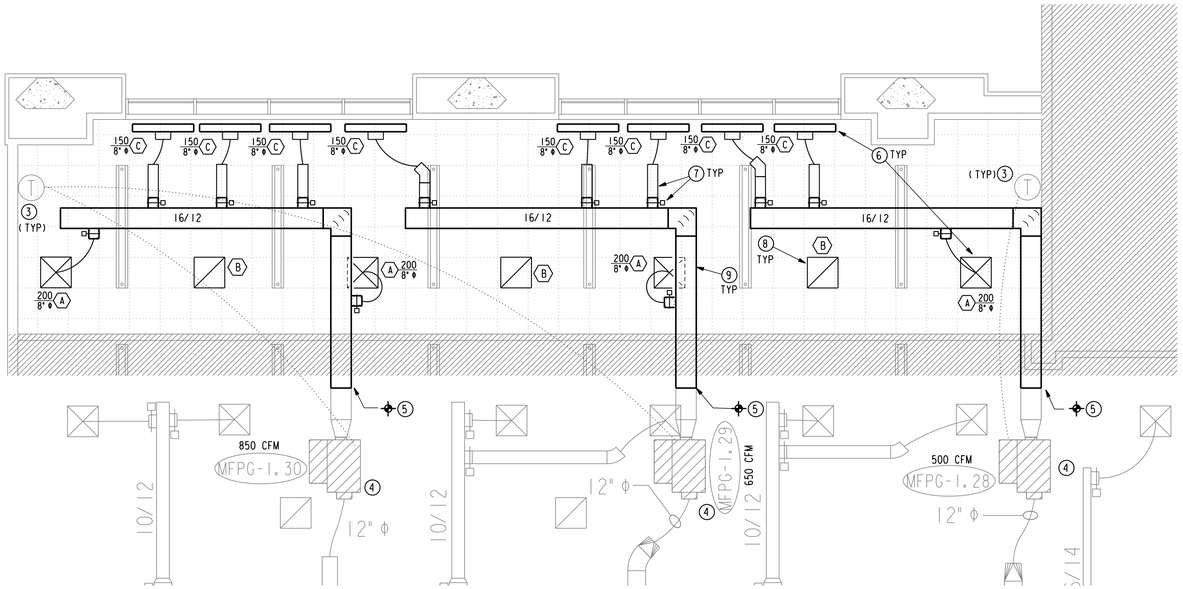
I:\3300\3339\M\Mech\3339 DM1.01A.dgn
7/8/2016 9:06:57 AM

GENERAL NOTES:

A. RE: MEP0.0 FOR ADDITIONAL GENERAL NOTES.

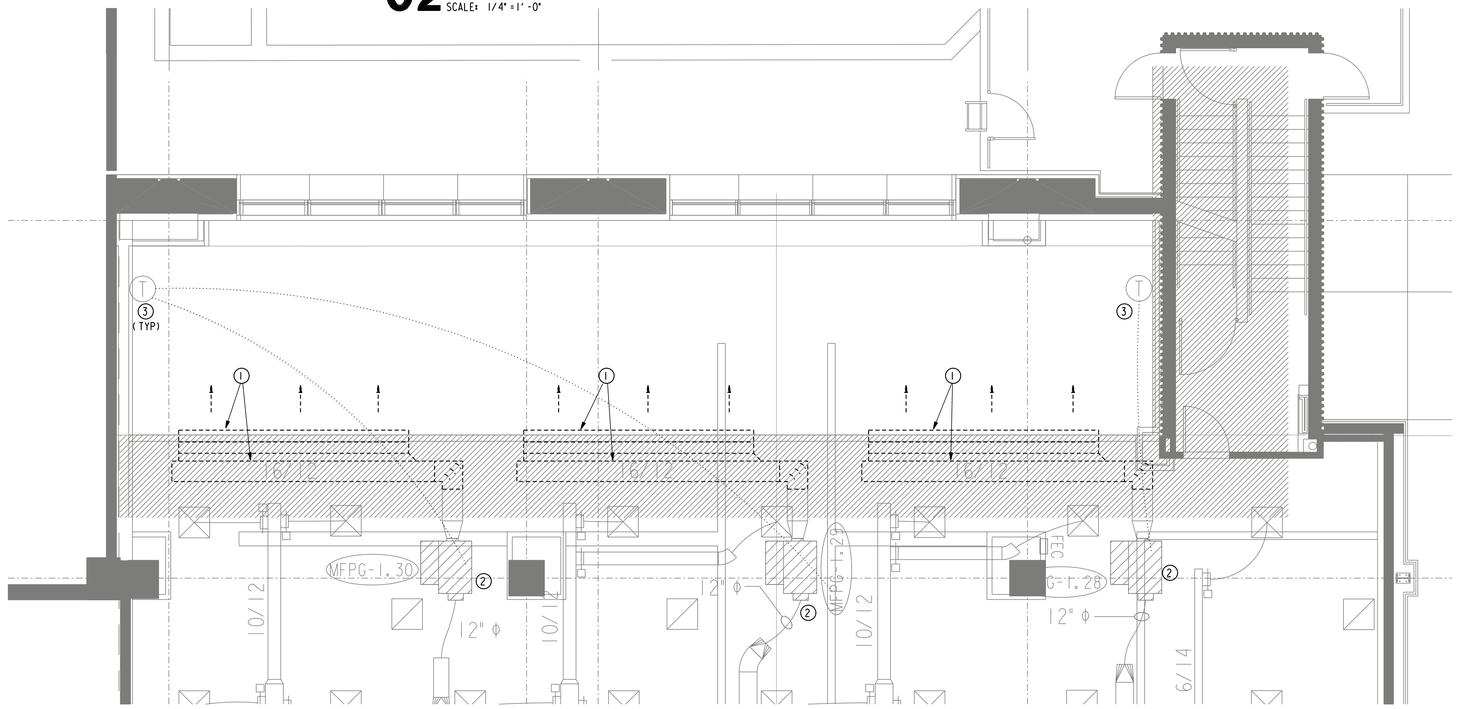
DRAWING NOTES:

1. REMOVE EXISTING SIDEWALL SUPPLY GRILL AND ASSOCIATED TAP BACK TO EXISTING SUPPLY DUCT. RE: 02/M1.0GAE NOTE 5 FOR NEW SUPPLY DUCT CONNECTION TO EXISTING SUPPLY DUCT.
2. EXISTING OPEN AREA DOUBLE DUCT HVAC TERMINAL UNIT TO REMAIN AND BE REUSED.
3. EXISTING DOUBLE DUCT TERMINAL UNIT SPACE TEMPERATURE SENSOR TO REMAIN AND BE REUSED.
4. REBALANCE EXISTING OPEN AREA DOUBLE DUCT HVAC TERMINAL UNIT TO NEW AIRFLOW INDICATED.
5. CONNECT NEW EXTERNALLY INSULATED SHEET METAL SUPPLY DUCTWORK, TO EXISTING AND EXTEND AS SHOWN.
6. NEW SUPPLY AIR SLOT/GRILL, TYPE AS INDICATED. BALANCE TO CFM INDICATED.
7. NEW DAMPERED SPIN-IN AND EXTERNALLY INSULATED RIGID ROUND SHEET METAL SUPPLY DUCT AND INSULATED ACOUSTICAL FLEXIBLE DUCT TO NEW SUPPLY SLOT/GRILL.
8. NEW RETURN AIR GRILL, TYPE AS INDICATED.
9. NEW EXTERNALLY INSULATED SHEET METAL SUPPLY DUCTWORK.



02 GROUND FLOOR EAST - MECHANICAL ALTERATION PLAN

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



01 GROUND FLOOR EAST - MECHANICAL DEMOLITION PLAN

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

Philo Wilke Partnership

11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

Consultants

Structural Engineer

Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer

E&C Engineers and Consultants
TX Firm Registration No. F-003068
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY WILLIAM C. CLIFFORD, 44368, REGISTERED PROFESSIONAL ENGINEER, STATE OF TEXAS

William C. Clifford
2016.07.08 11:38:05 -05'00'

E&C Engineers & Consultants Inc.
Texas Firm Registration No: F-003068

Issues / Revisions

No.	Date	Description
1	07/08/2016	Issue for Construction

Project

UT Health MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas Health Science Center at Houston

Drawing Name

Mechanical Demolition and Alteration Plans Ground Floor East

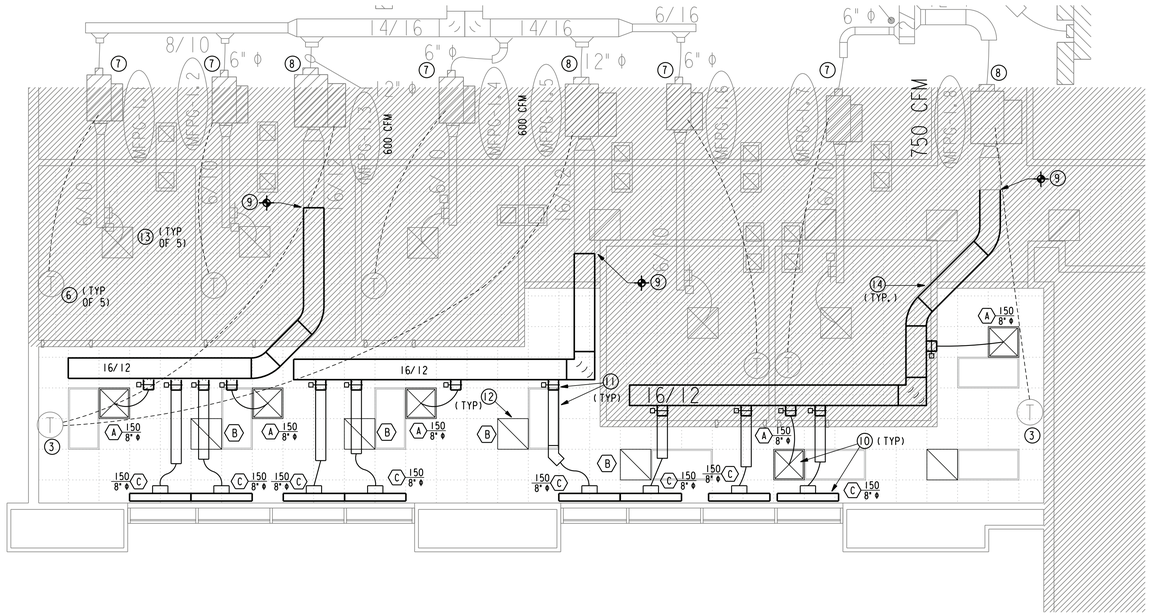
Copyright (C) 2015 by E&C Engineers. All rights reserved.

This document and the information herein is the property of E&C Engineers. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by E&C Engineers. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by E&C Engineers.

Print Date / Time: 7/8/2016 9:06:09 AM

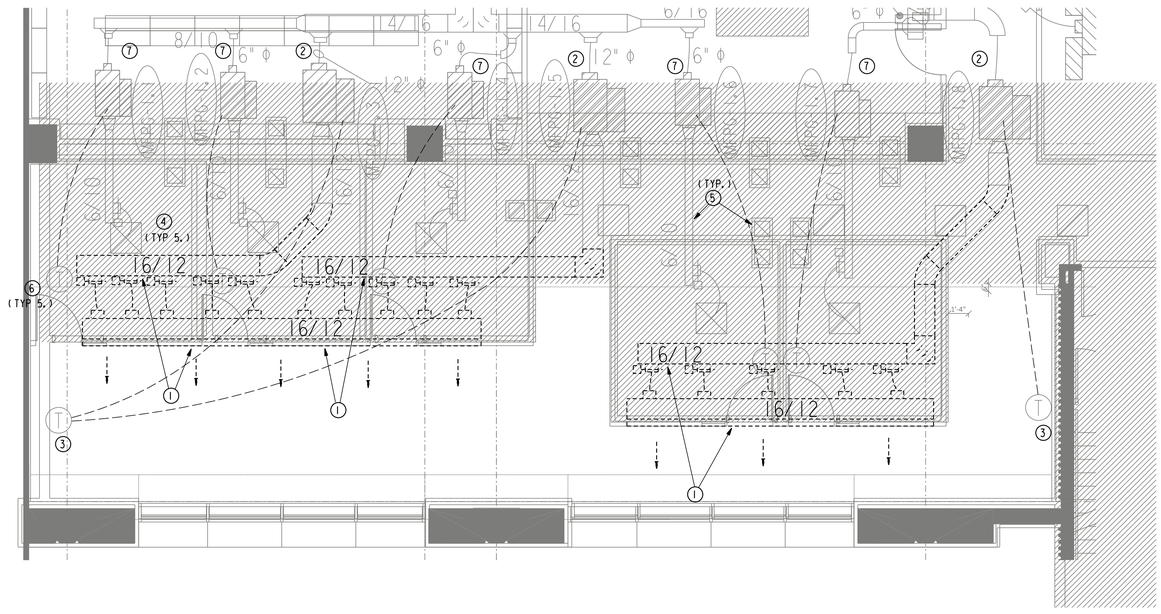
P&W Commission Number	Sheet Number
3339.00	M1.0GAE

I:\3300\3339\MM\Mech\3339 M1.0GAE.dgn
7/8/2016 9:06:09 AM



02 GROUND FLOOR WEST - MECHANICAL ALTERATION PLAN

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



01 GROUND FLOOR WEST - MECHANICAL DEMOLITION PLAN

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

GENERAL NOTES:

A. RE: MEP0.0 FOR ADDITIONAL GENERAL NOTES.

DRAWING NOTES:

1. REMOVE EXISTING SIDEWALL SUPPLY GRILL AND ASSOCIATED TAP BACK TO EXISTING SUPPLY DUCT. RE: 02/MI.0GAE NOTE 8 FOR NEW SUPPLY DUCT CONNECTION TO EXISTING SUPPLY DUCT.
2. EXISTING OPEN AREA DOUBLE DUCT HVAC TERMINAL UNIT TO REMAIN AND BE REUSED.
3. EXISTING OPEN AREA DOUBLE DUCT TERMINAL UNIT SPACE TEMPERATURE SENSOR TO REMAIN AND BE REUSED.
4. REMOVE EXISTING STUDY ROOM SUPPLY GRILL AND FLEXIBLE DUCT. EXISTING SUPPLY DUCTWORK AND DAMPERED SPIN-IN TO REMAIN FOR REUSE. STORE EXISTING SUPPLY GRILL FOR REINSTALLATION. RE: 02/MI.0GAE NOTE 13 FOR SUPPLY GRILL REINSTALLATION.
5. PROTECT EXISTING SUPPLY DUCTWORK AND RETURN AIR BOOTS EXISTING STRUCTURAL CLOSURE REMOVAL AND INFILL STRUCTURE INSTALLATION.
6. EXISTING DOUBLE DUCT TERMINAL UNIT SPACE TEMPERATURE SENSOR TO REMAIN AND BE REUSED. PROTECT EXISTING SENSOR CONTROL WIRING DURING EXISTING STRUCTURAL CLOSURE REMOVAL AND INFILL STRUCTURE INSTALLATION.
7. EXISTING STUDY ROOM DOUBLE DUCT HVAC TERMINAL UNIT TO REMAIN AND BE REUSED.
8. REBALANCE EXISTING OPEN AREA DOUBLE DUCT HVAC TERMINAL UNIT TO NEW AIRFLOW INDICATED.
9. CONNECT NEW EXTERNALLY INSULATED SHEET METAL SUPPLY DUCTWORK, TO EXISTING AND EXTEND AS SHOWN.
10. NEW SUPPLY AIR SLOT/GRILL, TYPE AS INDICATED. BALANCE TO CFM INDICATED.
11. NEW DAMPERED SPIN-IN AND EXTERNALLY INSULATED RIGID ROUND SHEET METAL SUPPLY DUCT AND INSULATED ACOUSTICAL FLEXIBLE DUCT TO NEW SLOT/SUPPLY GRILL.
12. NEW RETURN AIR GRILL, TYPE AS INDICATED.
13. CLEAN AND REINSTALL EXISTING STUDY ROOM SUPPLY GRILL WITH NEW 8" INSULATED FLEXIBLE DUCT CONNECTION TO REUSED EXISTING DAMPERED SPIN-IN.
14. NEW EXTERNALLY INSULATED SHEET METAL SUPPLY DUCTWORK.

Philo Wilke Partnership

11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

Consultants

Structural Engineer

Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer

E&C Engineers and Consultants
TX Firm Registration No. F-003068
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY WILLIAM C. CLIFFORD 2016.07.08 11:38:45 -05'00'

E&C Engineers & Consultants Inc.
Texas Firm Registration No: F-003068

Issues / Revisions

No.	Date	Description
1	07/08/2016	Issue for Construction

Project

UT Health MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas Health Science Center at Houston

Drawing Name

Mechanical Demolition and Alteration Plans Ground Floor West

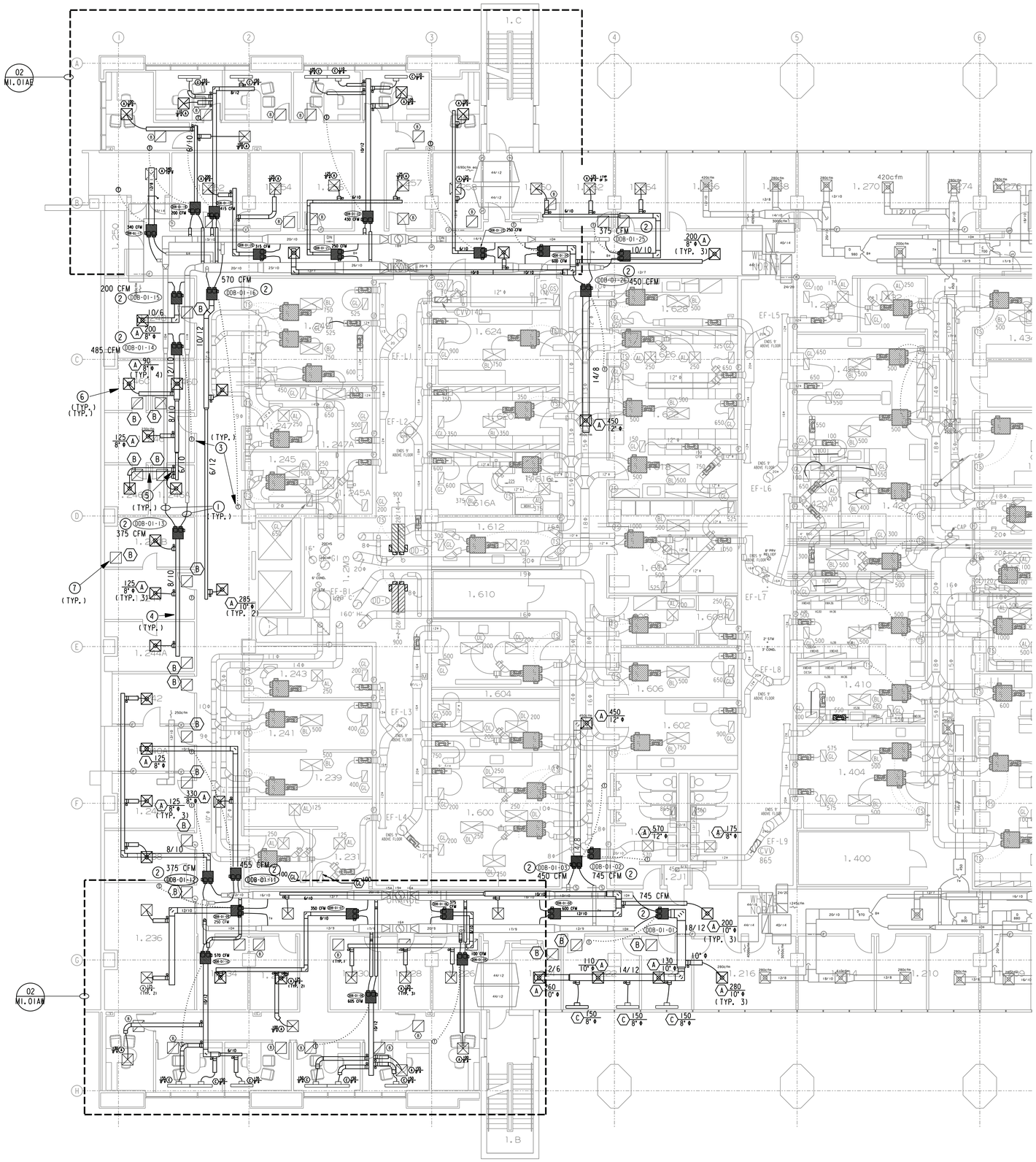
Copyright (C) 2015 by E&C Engineers. All rights reserved.

This document and the information herein is the property of E&C Engineers. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by E&C Engineers. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by E&C Engineers.

Print Date / Time: 7/8/2016 9:06:27 AM

P&W Commission Number	Sheet Number
3339.00	M1.0GAW

I:\3300\3339\MMech\3339 M1.0GAW.dgn
7/8/2016 9:06:27 AM



01 FIRST FLOOR - MECHANICAL ALTERATION PLAN

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

GENERAL NOTES:

A. RE: MEP0.0 FOR ADDITIONAL GENERAL NOTES.

DRAWING NOTES:

1. EXISTING TRUNK DUCT TAPS WHICH SERVED DOUBLE DUCT TERMINAL UNIT WHICH IS BEING REPLACED SHALL BE REUSED TO SERVE THE NEW REPLACEMENT DOUBLE DUCT TERMINAL UNIT. LOCATE REPLACEMENT DOUBLE DUCT TERMINAL UNIT TO MINIMIZE THE FLEXIBLE DUCT LENGTHS TO THE TERMINAL UNIT AND TO THE MAXIMUM EXTENT POSSIBLE TO ALLOW 1-1/2 DUCT DIAMETERS OF EXTERNALLY INSULATED RIGID ROUND DUCT TO BE USED FOR THE FLEXIBLE DUCT CONNECTIONS TO THE TERMINAL UNIT INLETS.
2. NEW REPLACEMENT DDC DOUBLE DUCT TERMINAL UNIT, BALANCE TO AIRFLOW INDICATED.
3. NEW DDC SPACE TEMPERATURE SENSOR WITH CONTROL WIRING TO TERMINAL UNIT INDICATED.
4. NEW EXTERNALLY INSULATED SHEET METAL SUPPLY DUCTWORK.
5. NEW DAMPERED SPIN-IN AND EXTERNALLY INSULATED RIGID ROUND SHEET METAL SUPPLY DUCT AND INSULATED ACOUSTICAL FLEXIBLE DUCT TO NEW SUPPLY GRILL.
6. NEW SUPPLY AIR GRILL, TYPE AS INDICATED. BALANCE TO CFM INDICATED. IF CFM INDICATED DIFFERS FROM FIELD VERIFIED EXISTING CFM, CONTACT ENGINEER FOR DIRECTION.
7. NEW RETURN AIR GRILL, TYPE AS INDICATED.

Philo Wilke Partnership

11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

Consultants

Structural Engineer
Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer
E&C Engineers and Consultants
TX Firm Registration No. F-003068
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY
William C. Clifford
2016.07.08 11:39:30 -05'00'

E&C Engineers & Consultants Inc.
Texas Firm Registration No: F-003068

Issues / Revisions

No.	Date	Description
1	07/08/2016	Issue for Construction

Project

UT Health MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas Health Science Center at Houston

Drawing Name

Mechanical
Alteration Plan
First Floor

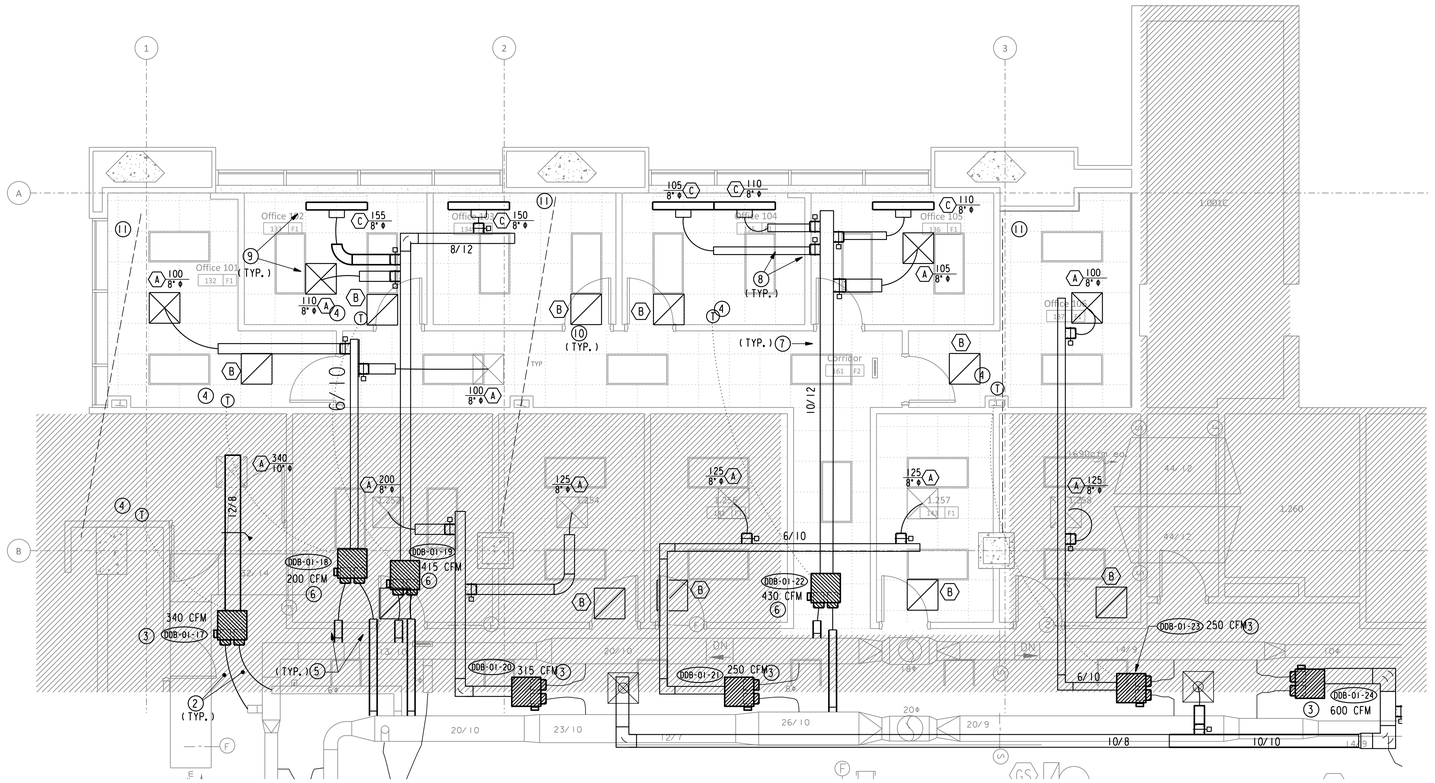
Copyright (C) 2015 by E&C Engineers. All rights reserved.

This document and the information herein is the property of E&C Engineers. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by E&C Engineers. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by E&C Engineers.

Print Date / Time: 7/8/2016 9:07:20 AM

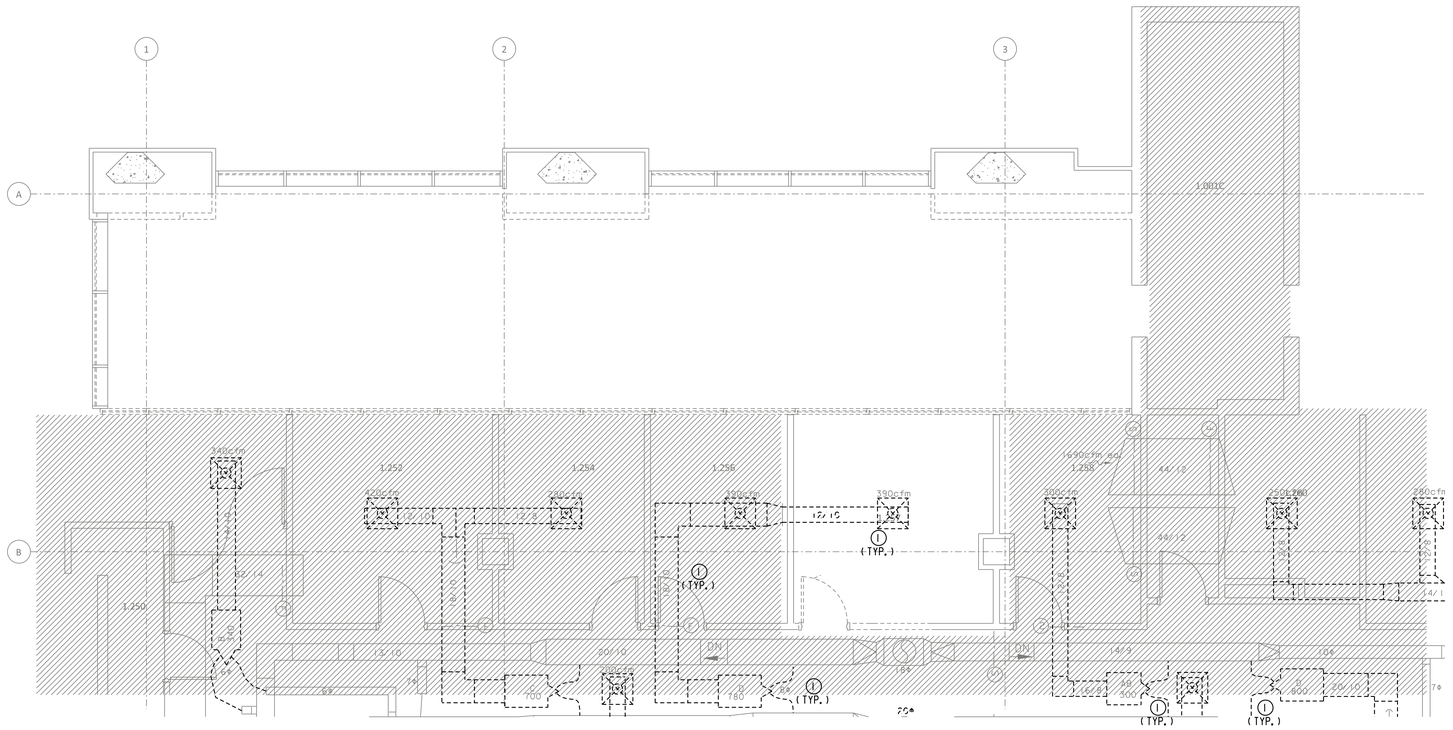
P&W Commission Number	Sheet Number
3339.00	M1.01A

I:\3300\3339\MM\ech\3339 M1.01A.dgn
7/8/2016 9:07:20 AM



02 FIRST FLOOR EAST - MECHANICAL ALTERATION PLAN

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



01 FIRST FLOOR EAST - MECHANICAL DEMOLITION PLAN

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

GENERAL NOTES:

A. RE: MEP0.0 FOR ADDITIONAL GENERAL NOTES.

DRAWING NOTES:

1. REMOVE EXISTING DASHED HOT AND COLD DUCT CONNECTIONS, DOUBLE DUCT TERMINAL UNIT, SUPPLY DUCT AND AIR DEVICES. EXISTING HOT AND COND TRUNK DUCT TAPS SHALL BE REUSED TO SERVE NEW REPLACEMENT DOUBLE DUCT TERMINAL UNITS, RE: 01/M1.01AE, NOTE 2
2. EXISTING HOT AND COLD TRUNK DUCT TAPS WHICH SERVED DOUBLE DUCT TERMINAL UNIT WHICH IS BEING REPLACED SHALL BE REUSED TO SERVE THE NEW REPLACEMENT DOUBLE DUCT TERMINAL UNIT. EXTEND NEW EXTERNALLY INSULATED RIGID ROUND AND INSULATED FLEXIBLE HOT AND COLD DUCTS FROM EXISTING TAPS TO SERVE THE NEW REPLACEMENT DOUBLE DUCT TERMINAL UNIT. LOCATE REPLACEMENT DOUBLE DUCT TERMINAL UNIT TO MINIMIZE THE FLEXIBLE DUCT LENGTHS TO THE TERMINAL UNIT AND TO THE MAXIMUM EXTENT POSSIBLE TO ALLOW 1-1/2 DUCT DIAMETERS OF EXTERNALLY INSULATED RIGID ROUND DUCT TO BE USED FOR THE FLEXIBLE DUCT CONNECTIONS TO THE TERMINAL UNIT INLETS.
3. NEW REPLACEMENT DDC DOUBLE DUCT TERMINAL UNIT, BALANCE TO AIRFLOW INDICATED.
4. NEW DDC SPACE TEMPERATURE SENSOR WITH CONTROL WIRING TO TERMINAL UNIT INDICATED.
5. NEW HOT AND COLD TRUNK DUCT TAPS WITH NEW EXTERNALLY INSULATED RIGID ROUND AND INSULATED FLEXIBLE HOT AND COLD DUCTS TO SERVE THE NEW DOUBLE DUCT TERMINAL UNIT. LOCATE NEW DOUBLE DUCT TERMINAL UNIT TO MINIMIZE THE FLEXIBLE DUCT LENGTHS TO THE TERMINAL UNIT AND TO THE MAXIMUM EXTENT POSSIBLE TO ALLOW 1-1/2 DUCT DIAMETERS OF EXTERNALLY INSULATED RIGID ROUND DUCT TO BE USED FOR THE FLEXIBLE DUCT CONNECTIONS TO THE TERMINAL UNIT INLETS.
6. NEW DDC DOUBLE DUCT TERMINAL UNIT, BALANCE TO CFM INDICATED.
7. NEW EXTERNALLY INSULATED SHEET METAL SUPPLY DUCTWORK.
8. NEW DAMPERED SPIN-IN AND EXTERNALLY INSULATED RIGID ROUND SHEET METAL SUPPLY DUCT AND INSULATED ACOUSTICAL FLEXIBLE DUCT TO NEW SUPPLY GRILL.
9. NEW SUPPLY AIR GRILL, TYPE AS INDICATED. BALANCE TO CFM INDICATED. IF CFM INDICATED DIFFERS FROM FIELD VERIFIED EXISTING CFM, CONTACT ENGINEER FOR DIRECTION.
10. NEW RETURN AIR GRILL, TYPE AS INDICATED.
11. NEW DEEP STRUCTURAL BEAM(S), RE: STRUCTURAL.

Philo Wilke Partnership
11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

Consultants

Structural Engineer
Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer
E&C Engineers and Consultants
TX Firm Registration No. F-003068
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

STATE OF TEXAS · WILLIAM C CLIFFORD · 44368 · REGISTERED · PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY William C. Clifford 2016.07.08 11:39:58 -05'00'

E&C Engineers & Consultants Inc.
Texas Firm Registration No: F-003068

Issues / Revisions

No.	Date	Description
1	07/08/2016	Issue for Construction

Project

UT Health MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas Health Science Center at Houston

Drawing Name

Mechanical Demolition and Alteration Plans First Floor East

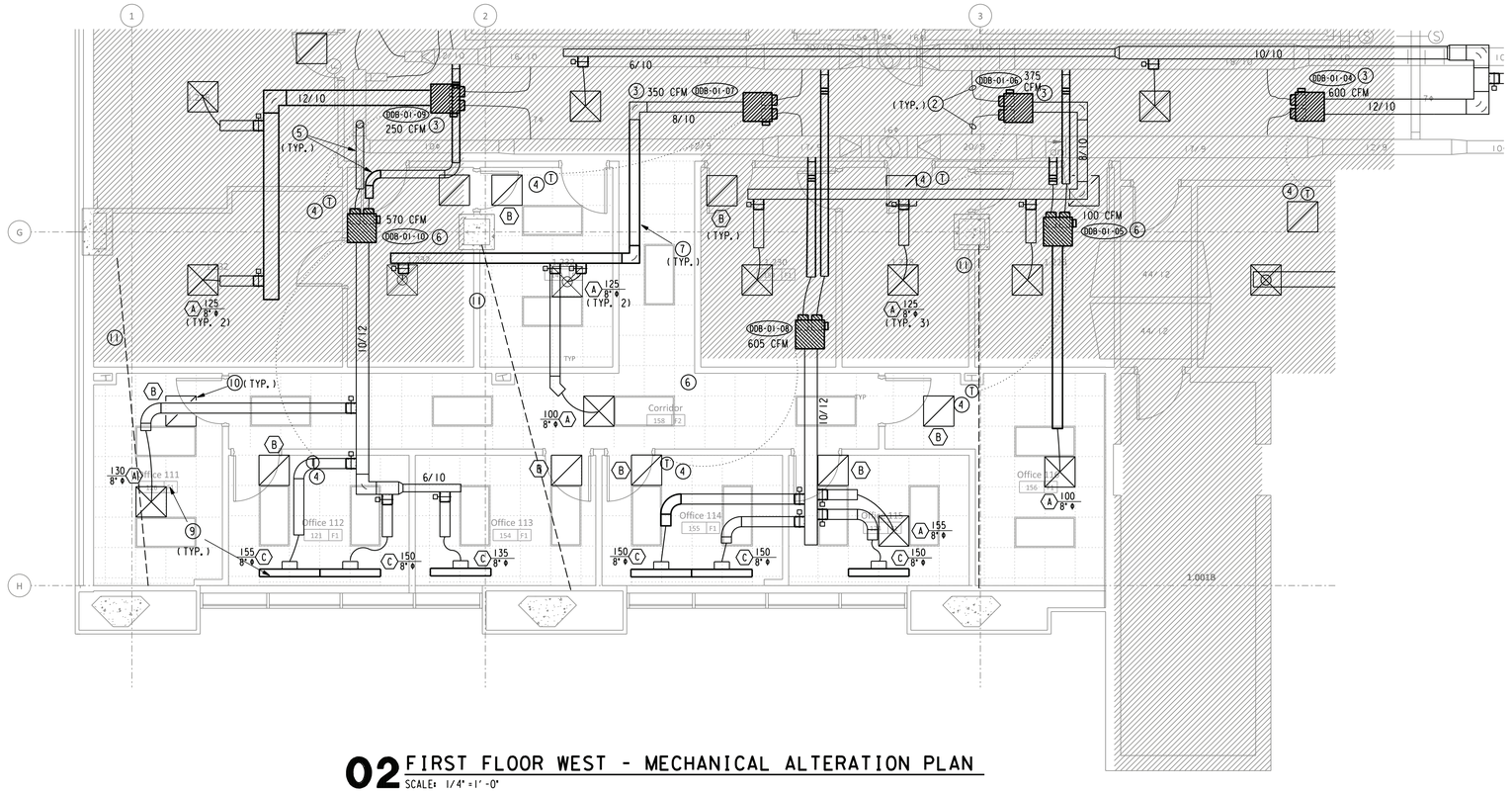
Copyright (C) 2015 by E&C Engineers. All rights reserved.

This document and the information herein is the property of E&C Engineers. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by E&C Engineers. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by E&C Engineers.

Print Date / Time: 7/8/2016 9:07:49 AM

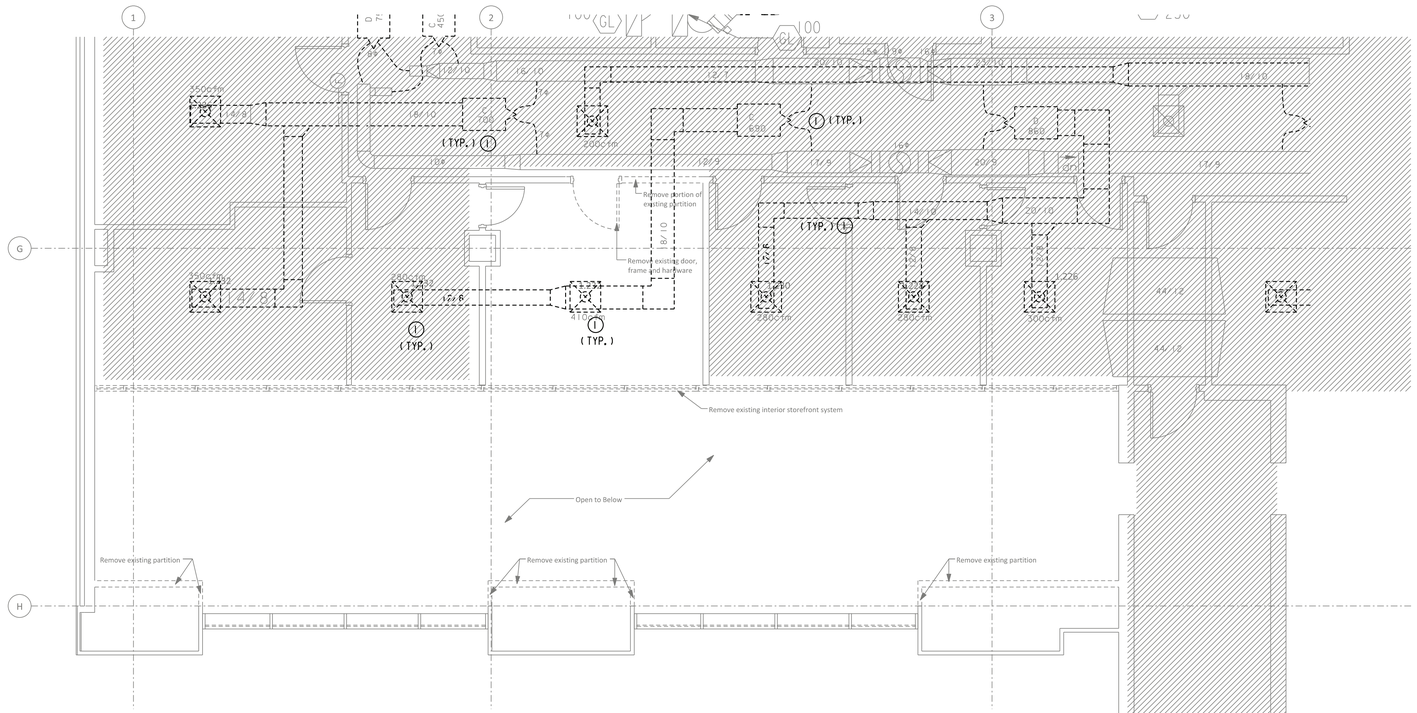
P&W Commission Number	Sheet Number
3339.00	M1.01AE

I:\3300\3339\MMech\3339 M1.01AE.dgn
7/8/2016 9:07:49 AM



02 FIRST FLOOR WEST - MECHANICAL ALTERATION PLAN

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



01 FIRST FLOOR WEST - MECHANICAL DEMOLITION PLAN

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

I:\3300\3339\MMech\3339 M1.01AW.dgn
7/8/2016 9:08:10 AM

GENERAL NOTES:

A. RE: MEP0.0 FOR ADDITIONAL GENERAL NOTES.

DRAWING NOTES:

1. REMOVE EXISTING DASHED HOT AND COLD DUCT CONNECTIONS, DOUBLE DUCT TERMINAL UNIT, SUPPLY DUCT AND AIR DEVICES. EXISTING HOT AND COND TRUNK DUCT TAPS SHALL BE REUSED TO SERVE NEW REPLACEMENT DOUBLE DUCT TERMINAL UNITS, RE: 01/MI.01AW, NOTE 2.

2. EXISTING HOT AND COLD TRUNK DUCT TAPS WHICH SERVED DOUBLE DUCT TERMINAL UNIT WHICH IS BEING REPLACED SHALL BE REUSED TO SERVE THE NEW REPLACEMENT DOUBLE DUCT TERMINAL UNIT. EXTEND NEW EXTERNALLY INSULATED RIGID ROUND AND INSULATED FLEXIBLE HOT AND COLD DUCTS FROM EXISTING TAPS TO SERVE THE NEW REPLACEMENT DOUBLE DUCT TERMINAL UNIT. LOCATE REPLACEMENT DOUBLE DUCT TERMINAL UNIT TO MINIMIZE THE FLEXIBLE DUCT LENGTHS TO THE TERMINAL UNIT AND TO THE MAXIMUM EXTENT POSSIBLE TO ALLOW 1-1/2 DUCT DIAMETERS OF EXTERNALLY INSULATED RIGID ROUND DUCT TO BE USED FOR THE FLEXIBLE DUCT CONNECTIONS TO THE TERMINAL UNIT INLETS.

3. NEW REPLACEMENT DDC DOUBLE DUCT TERMINAL UNIT, BALANCE TO AIRFLOW INDICATED.

4. NEW DDC SPACE TEMPERATURE SENSOR WITH CONTROL WIRING TO TERMINAL UNIT INDICATED.

5. NEW HOT AND COLD TRUNK DUCT TAPS WITH NEW EXTERNALLY INSULATED RIGID ROUND AND INSULATED FLEXIBLE HOT AND COLD DUCTS TO SERVE THE NEW DOUBLE DUCT TERMINAL UNIT. LOCATE NEW DOUBLE DUCT TERMINAL UNIT TO MINIMIZE THE FLEXIBLE DUCT LENGTHS TO THE TERMINAL UNIT AND TO THE MAXIMUM EXTENT POSSIBLE TO ALLOW 1-1/2 DUCT DIAMETERS OF EXTERNALLY INSULATED RIGID ROUND DUCT TO BE USED FOR THE FLEXIBLE DUCT CONNECTIONS TO THE TERMINAL UNIT INLETS.

6. NEW DDC DOUBLE DUCT TERMINAL UNIT, BALANCE TO CFM INDICATED.

7. NEW EXTERNALLY INSULATED SHEET METAL SUPPLY DUCTWORK.

8. NEW DAMPERED SPIN-IN AND EXTERNALLY INSULATED RIGID ROUND SHEET METAL SUPPLY DUCT AND INSULATED ACOUSTICAL FLEXIBLE DUCT TO NEW SUPPLY SLOT/GRILL.

9. NEW SUPPLY AIR SLOT/GRILL, TYPE AS INDICATED. BALANCE TO CFM INDICATED. IF CFM INDICATED DIFFERS FROM FIELD VERIFIED EXISTING CFM, CONTACT ENGINEER FOR DIRECTION.

10. NEW RETURN AIR GRILL, TYPE AS INDICATED.

11. NEW DEEP STRUCTURAL BEAM, RE: STRUCTURAL.

Philo Wilke Partnership

11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

Consultants

Structural Engineer

Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer

E&C Engineers and Consultants
TX Firm Registration No. F-003068
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY WILLIAM C. CLIFFORD 2016.07.08 11:40:25 -05'00'

E&C Engineers & Consultants Inc.
Texas Firm Registration No: F-003068

Issues / Revisions

No.	Date	Description
1	07/08/2016	Issue for Construction

Project

UT Health MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas
Health Science Center at Houston

Drawing Name

Mechanical Demolition and Alteration Plans First Floor West

Copyright (C) 2015 by E&C Engineers. All rights reserved.

This document and the information herein is the property of E&C Engineers. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by E&C Engineers. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by E&C Engineers.

Print Date / Time: 7/8/2016 9:08:10 AM

P&W Commission Number: 3339.00

Sheet Number: M1.01AW

ABBREVIATIONS

A

A	AIR (COMPRESSED)
	AMPS
ABV	ABOVE
A/C	AIR CONDITIONING
AC	ALTERNATING CURRENT AIR COMPRESSOR
AD	ACCESS DOOR, AREA DRAIN
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AL	ALUMINUM
AMB	AMBIENT
APD	AIR PRESSURE DROP
ARI	AMERICAN REFRIGERATION INSTITUTE
ARCH	ARCHITECT, ARCHITECTURAL
ASHRAE	AMERICAN SOCIETY OF HEATING AND REFRIGERATION ENGINEERS
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
AUX	AUXILIARY

B

BC	BELOW COUNTER
BLDG	BUILDING
BM	BENCHMARK
BTU	BRITISH THERMAL UNIT

C

C	CONDUIT, CELSIUS
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CH	CHILLER
CHW	CHILLED WATER PUMP
CHR	CHILLED WATER RETURN
CHS	CHILLED WATER SUPPLY
CIRC	CIRCULATING
CKT	CIRCUIT
CL	CENTERLINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CPI	CAST IRON PIPE INSTITUTE
CPVC	CHLORINATED POLYVINYL CHLORIDE
CO	CLEAN OUT
COL	COLUMN
COMB	COMBINATION
COMP	COMPRESSOR
CONC	CONCRETE, CONCENTRIC
COND	CONDENSER, CONDENSATE
CONN	CONNECTION
CONT	CONTINUOUS, CONTINUATION
CONTR	CONTROLLER, CONTRACTOR
CTR	CENTER
CU	COPPER
CW	COLD WATER
Cv	CAPACITY INDEX
CV	CHECK VALVE

D

D	DEPTH, DRAIN
Db	DECIBEL
DB	DRY BULB
DC	DIRECT CURRENT
DDC	DIRECT DIGITAL CONTROL
DESIG	DESIGNATION
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIFF	DIFFUSER
DIM	DIMENSION
DISC	DISCONNECT
DN	DOWN
DP	DISTRIBUTION PANEL
DPDT	DOUBLE-POLE, DOUBLE-THROW
DPST	DOUBLE-POLE, SINGLE-THROW
DS	DOWNSPOUT, DOUBLE SUCTION
DW	DISHWASHER
DWG	DRAWING
DWH	DOMESTIC WATER HEATER
DWP	DOMESTIC WATER PUMP
DX	DIRECT EXPANSION

E

EA	EACH
EAT	ENTERING AIR TEMPERATURE
ECC	ECCENTRIC
EDB	ENTERING DRY BULB
EDF	ELECTRIC DRINKING FOUNTAIN
EF	EXHAUST FAN
EFF	EFFICIENCY
EHC	ELECTRIC HEATING COIL
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EMERG	EMERGENCY
ENCL	ENCLOSURE
ENGR	ENGINEER
EPO	EMERGENCY POWER OFF
EQ	EQUAL
EQUIP	EQUIPMENT
ESP	EXTERNAL STATIC PRESSURE
EVAP	EVAPORATOR
EWB	ENTERING WET BULB
EWT	ENTERING WATER TEMPERATURE
EXT	EXTERNAL
EXTG	EXISTING

F

F	FARENHEIT, FIRE
FA	FIRE ALARM
FCO	FLOOR CLEAN OUT
FCP	FLOOR CONTROL STATION
FCU	FAN COIL UNIT
FD	FLOOR DRAIN, FIRE DAMPER
FDS	FIRE DEPARTMENT SIAMESE
FDV	FIRE DEPARTMENT VALVE
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FHR	FIRE HOSE RACK
FIXT	FIXTURE
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FLR	FLOOR
FLUOR	FLUORESCENT
FP	FIRE PUMP
FS	FLOW SWITCH, FIRE SPRINKLER
	FUSED SWITCH, FLOW SWITCH
FSK	FLOOR SINK
FT	FOOT, FEET
FTL	FEED-THRU LUGS
FUT	FUTURE

G

G	GAS
GA	GAGE
GAL	GALLON
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GFCI	GROUND FAULT CIRCUIT INTERUPTER
GND	GROUND
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GSH	GRAND SENSIBLE HEAT
GTH	GRAND TOTAL HEAT

H

H	HEIGHT
HB	HOSE BIBB
HD	HEAD, HUB DRAIN
HOA	HAND-OFF-AUTOMATIC
HORIZ	HORIZONTAL
HP	HORSEPOWER, HALON PANEL
HTG	HEATING
HTR	HEATER
HW	HOT WATER
HWC	HOT WATER CIRCULATOR
HWP	HEATING WATER PUMP
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HZ	HERTZ

I

ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCH
INCAND	INCANDESCENT
INSUL	INSULATION
INT	INTERNAL, INTERIOR

J

JB	JUNCTION BOX
JP	JOCKEY PUMP

K

KEC	KITCHEN EQUIPMENT CONTRACTOR
KVA	KILOVOLT-AMPS
KW	KILOWATT
KWH	KILOWATT-HOUR

L

L	LENGTH, LAVATORY
LAV	LAVATORY
LF	LINEAR FEET
LRA	LOCKED ROTOR AMPS
LVL	LEVEL
LWB	LEAVING WET BULB
LWT	LEAVING WATER TEMPERATURE

M

M	METER
MAX	MAXIMUM
MBH	THOUSAND OF BTU'S
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MG	MOTOR GENERATOR
MLO	MAIN LUGS ONLY
MS	MOP SINK
MTD	MOUNTED
MU	MAKE-UP
MV	MERCURY VAPOR
MVA	MEGAVOLT-AMPERES
MVD	MANUAL VOLUME DAMPER

N

N.C.	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
N.O.	NORMALLY OPEN
NO.	NUMBER
NTS	NOT TO SCALE

O

OA	OUTSIDE AIR
OAF	OUTSIDE AIR FAN
OBD	OPPOSED BLADE DAMPER
OD	OUTSIDE DIAMETER, OVERFLOW DRAIN
OPG	OPENING
OS&Y	OPEN STEM AND YOLK

P

P	PUMP, PLUMBING EQUIPMENT
PD	PRESSURE DROP
PH	PHASE
PIV	POST INDICATOR VALVE
PL	PILOT LIGHT
PLBG	PLUMBING
PNEU	PNEUMATIC
PNL	PANEL
PPM	PARTS PER MILLION
PRI	PRIMARY
PRV	PRESSURE REDUCING VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PT	PLUMBING TRIM
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
PWR	POWER

Q

QTY	QUANTITY

R

R	RISER
RA	RETURN AIR
RAG	RETURN AIR GRILL
RCP	REFLECTED CEILING PLAN, REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
RE:	REFERENCE, REFER
RECIRC	RECIRCULATE
REFR	REFRIGERATOR
REG	REGISTER
REINF	REINFORCING
REQD	REQUIRED
REV	REVISION, REVISE
RH	RELATIVE HUMIDITY
RLA	RUNNING LOAD AMPS
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
RTU	ROOFTOP UNIT
RV	RELIEF VALVE
RVNR	REDUCED-VOLTAGE, NON-REVERSING

S

SA	SUPPLY AIR
SAF	SUPPLY AIR FAN
SAN	SANITARY SEWER
SCHED	SCHEDULED
SCR	SILICON CONTROLLED RECTIFIER
SD	STORM DRAIN
SE	SEWAGE EJECTOR
SEC	SECONDARY
SECT	SECTION
SENS	SENSIBLE
SF	SQUARE FEET
SFCS	SPRINKLER FLOOR CONTROL STATION
SH	SHOWER
SHT	SHEET
SIM	SIMILAR
SK	SINK
SM	SHEET METAL
SP	SUMP PUMP, STATIC PRESSURE
SPEC	SPECIFICATION
SPKR	SPEAKER
SPDT	SINGLE-POLE, DOUBLE-THROW
SPST	SINGLE-POLE, SINGLE-THROW
SPR	SPRINKLER
SQ	SQUARE
SS	SERVICE SINK, START-STOP PUSHBUTTON
SSFU	SANITARY SEWER FIXTURE UNITS
SSSC	SOLID STATE SPEED CONTROL
STD	STANDARD
STL	STEEL
STR	STRAINER
SURF	SURFACE
SUSP	SUSPEND
SV	SANITARY VENT

T

TD	TRENCH DRAIN
TDH	TOTAL DYNAMIC HEAD
TEL	TELEPHONE
TF	TRANSFER FAN
TP	TRAP PRIMER
TSP	TOTAL STATIC PRESSURE
TSTAT	THERMOSTAT
TTB	TELEPHONE TERMINAL BOARD
TTC	TELEPHONE TERMINAL CABINET
TYP	TYPICAL

U

U	URINAL
UG	UNDERGROUND
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORIES, INC.
UPS	UNINTERRUPTABLE POWER SYSTEM

V

V	VOLT, VENT, VACUUM
VA	VOLT-AMPERE, VARIABLE AIR VOLUME
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VCP	VITRIFIED CLAY PIPE
VD	VOLUME DAMPER
VEL	VELOCITY
VERT	VERTICAL
VTR	VENT THRU ROOF

X

XFMR	TRANSFORMER

W

W	WATT, WASTE, WIDTH
W/	WITH
W/O	WITHOUT
WB	WET BULB
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WALL HYDRANT
WM	WATER METER
WP	WEATHERPROOF
WPD	WATER PRESSURE DROP
WT	WATERTIGHT, WEIGHT

Z

Z	ZONE

MEP SYMBOLS (ALL SYMBOLS SHOWN ARE NOT NECESSARILY USED ON THE DRAWINGS)

PIPING TYPES

- CHS — CHILLED WATER SUPPLY
- CHR — CHILLED WATER RETURN
- HWS — HEATING HOT WATER SUPPLY
- HWR — HEATING HOT WATER RETURN
- SANITARY DRAIN BELOW FLOOR
- SANITARY DRAIN ABOVE FLOOR
- SANITARY VENT
- GW — GREASE (KITCHEN) WASTE
- SD — STORM DRAIN
- OD — OVERFLOW DRAIN
- COLD WATER
- HOT WATER
- HOT WATER RECIRCULATION
- G — NATURAL GAS
- A — COMPRESSED AIR
- F — FIRE STANDPIPE, FIRE LINE
- FS — FIRE SPRINKLER
- TP — TRAP PRIMER
- D — DRAIN LINE
- ooo — EXISTING PIPE, "ooo" DENOTES TYPE
- ooo — ooo — EXISTING PIPE TO BE REMOVED, "ooo" DENOTES TYPE

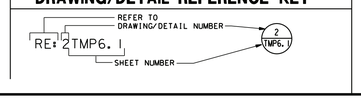
PIPING SYMBOLS

- ELBOW UP
- ELBOW DOWN
- DIRECTION OF FLOW
- DIRECTION OF SLOPE DOWN
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER
- TEE OUTLET UP
- TEE OUTLET DOWN
- UNION
- PIPE ANCHOR
- STRAINER WITH BLOWDOWN VALVE
- GATE VALVE, HVAC BALANCING/STOP VALVE
- GLOBE VALVE
- BALL VALVE
- OS&Y VALVE
- CHECK VALVE
- TWO-WAY MODULATING CONTROL VALVE
- THREE-WAY MODULATING CONTROL VALVE
- FCS — SPRINKLER FLOOR CONTROL STATION
- MANUAL AIR VENT
- AUTOMATIC AIR VENT
- T&P RELIEF VALVE
- VACUUM BREAKER
- LINE CLEANOUT
- FLOOR CLEANOUT
- PRESSURE GAUGE WITH GAUGE COCK
- THERMOMETER
- M — WATER METER
- FLEXIBLE CONNECTION
- PRESSURE AND TEMPERATURE TAP
- SUPERVISORY VALVE WITH FLOW/TAMPER SWITCH

MISCELLANEOUS

- PLUMBING FIXTURES
- POINT OF NEW CONNECTION TO EXISTING
- 1 — DRAWING NOTE REFERENCE
- 1 — R620 — OWNER OR CONTRACTOR FURNISHED EQUIPMENT REFERENCE
- a — bbb cc/dd — AIR DISTRIBUTION DEVICE REFERENCE. "a" DENOTES TYPE, "bbb" DENOTES CFM, "cc/dd" DENOTES NECK SIZE
- ooo — bbb ccc KW — HVAC TERMINAL UNIT REFERENCE. "ooo" DENOTES TYPE, "bbb" DENOTES CFM, "ccc KW" DENOTES HEATING KW WHERE APPLICABLE
- P I — RISER DESIGNATION. "P" DENOTES WASTE/VENT OR WASTE/VENT/WATER, "W" DENOTES WATER, "DS" DENOTES DOWNSPOUT, "F" DENOTES FIRE.
- FS — FLOW SWITCH
- VS — VALVE SUPERVISORY SWITCH
- FIRE HOSE CABINET
- FIRE HOSE RACK
- FIRE DEPARTMENT SIAMESE CONNECTION
- T — THERMOSTAT
- H — HUMIDISTAT
- F — FIRESTAT
- D RA — DUCT SMOKE DETECTOR. "SA" DENOTES SUPPLY AIR, "RA" DENOTES RETURN AIR
- PNEUMATIC TUBING OR CONTROL WIRING
- DASHED SYMBOLS INDICATE EXISTING DEVICES TO REMAIN, UNLESS OTHERWISE NOTED.
- INDICATES WALL-MOUNTED WHEN ATTACHED TO ANY SYMBOL
- INDICATED ABOVE COUNTER WHEN INCLUDED WITH ANY SYMBOL
- TELEVISION OUTLET
- FLOOR DRAIN
- AREA DRAIN
- ROOF DRAIN OR OVERFLOW DRAIN
- HOSE BIBB
- WALL HYDRANT

DRAWING/DETAIL REFERENCE KEY



DUCTWORK

- SUPPLY AIR DIFFUSER, NO LETTER DENOTES NEW, "R" DENOTES RELOCATED EXISTING.
- EXISTING SUPPLY AIR DIFFUSER. NO LETTER DENOTES TO REMAIN, "R" DENOTES TO BE REMOVED AND REUSED AS APPLICABLE.
- RETURN AIR OR EXHAUST GRILL. NO LETTER DENOTES NEW, "R" DENOTES RELOCATED EXISTING.
- EXISTING RETURN AIR OR EXHAUST GRILL. NO LETTER DENOTES TO REMAIN, "R" DENOTES TO BE REMOVED AND REUSED AS APPLICABLE.
- SUPPLY AIR SLOT, NO LETTER DENOTES NEW, "R" DENOTES RELOCATED EXISTING.
- EXISTING SUPPLY AIR SLOT. NO LETTER DENOTES TO REMAIN, "R" DENOTES TO BE REMOVED AND REUSED AS APPLICABLE.
- RETURN AIR SLOT, NO LETTER DENOTES NEW, "R" RELOCATED EXISTING.
- EXISTING RETURN AIR SLOT, NO LETTER DENOTES TO REMAIN, "R" DENOTES TO BE REMOVED AND RELOCATED AS APPLICABLE.
- NEW RECTANGULAR OR ROUND DUCTWORK
- RELOCATED EXISTING RECTANGULAR OR ROUND DUCTWORK
- EXISTING DUCTWORK
- EXISTING RECTANGULAR OR ROUND DUCTWORK TO BE REMOVED AND RELOCATED AS APPLICABLE
- NEW FLEXIBLE DUCT
- EXISTING FLEXIBLE DUCT
- EXISTING FLEXIBLE DUCT TO BE REMOVED
- SUPPLY OR OUTSIDE AIR DUCT
- RETURN, RELIEF, OR EXHAUST AIR DUCT
- FLEXIBLE DUCT CONNECTION
- UP — INCLINED RISE IN DUCT
- DN — INCLINED DROP IN DUCT
- TURNING VANES
- DUCT EXTRACTOR
- SPLITTER DAMPER
- DUCT MOUNTED HEATING COIL
- FIRE DAMPER
- S — SMOKE DAMPER
- FS — FIRE/SMOKE DAMPER
- MANUAL BALANCING DAMPER
- B — GRAVITY BACKDRAFT DAMPER
- M — MOTORIZED DAMPER

FIRE ALARM

- FACP FACP — FIRE ALARM CONTROL PANEL (FLUSH/SURFACE)
- FAAP FAAP — FIRE ALARM REMOTE ANNUNCIATOR (FLUSH/SURFACE)
- AV — FIRE ALARM AUDIO VISUAL SIGNAL, WALL MOUNTED
- V — FIRE ALARM VISUAL SIGNAL, WALL MOUNTED
- A — FIRE ALARM AUDIO SIGNAL, WALL MOUNTED
- A — FIRE ALARM CEILING SPEAKER
- H — HEAT DETECTOR
- S — AREA SMOKE DETECTOR
- S L — AREA SMOKE DETECTOR WITH LOCAL ALARM
- D RA — DUCT SMOKE DETECTOR. "RA" DENOTES RETURN AIR, "SA" DENOTES SUPPLY AIR
- RS — SMOKE DETECTOR REMOTE INDICATOR STATION
- J — FIREFIGHTER'S COMMUNICATION JACK
- H — STAIRWAY EMERGENCY TELEPHONE
- ES — ELEVATOR LOBBY EMERGENCY SIGN
- F — FIRE ALARM MANUAL PULL STATION
- FJ — FIRE ALARM MANUAL PULL STATION WITH FIREMAN'S JACK
- WF — SPRINKLER WATER FLOW SWITCH
- VS — VALVE SUPERVISORY SWITCH
- DH — MAGNETIC DOOR HOLDER
- ELECTRIC DOOR LOCK
- R — FIRE ALARM RELAY
- HCP — HALON CONTROL PANEL

PANEL DESIGNATIONS

2HEA-3

- "2" DENOTES FLOOR WHERE PANEL IS LOCATED
- "H" DENOTES VOLTAGE - "H" = 480Y/277V, "L" = 208Y/120V
- "E" DENOTES SYSTEM TYPE - BLANK = NORMAL POWER, E= EMERGENCY POWER
- "A" DENOTES PANEL SEQUENCE

ELECTRICAL EQUIPMENT

- DISTRIBUTION PANEL
- SWITCHBOARD OR MOTOR CONTROL CENTER
- NEW PANELBOARD (FLUSH/SURFACE MOUNT)
- EXISTING PANELBOARD
- DRY-TYPE TRANSFORMER
- PLYWOOD TERMINAL BOARD. TYPE AS NOTED, 4' X 8' X 3/4" UNLESS NOTED OTHERWISE
- TERMINAL CABINET (FLUSH/SURFACE MOUNT). TYPE AS NOTED, 24" X 48" X 3 1/2" UNLESS NOTED OTHERWISE.
- BAT — BATTERY/INVERTER UNIT

MOTORS AND CONTROLS

- SINGLE OR THREE PHASE MOTOR
- ELECTRIC DUCT HEATER
- DISCONNECT (SAFETY) SWITCH "200/3/150" DENOTES AMPERES/POLE/FUSE, "NF" DENOTES NON-FUSED
- ENCLOSED CIRCUIT BREAKER
- MOTOR STARTER
- MOTOR STARTER FURNISHED WITH EQUIPMENT
- COMBINATION DISCONNECT (SAFETY) SWITCH AND MOTOR STARTER, "30/3/15"0" DENOTES AMPERES/POLES/FUSE/ STARTER SIZE, "NF" DENOTES NON-FUSED.
- COMBINATION DISCONNECT (SAFETY) SWITCH AND MOTOR STARTER FURNISHED WITH EQUIPMENT
- M — MANUAL MOTOR STARTING WITH THERMAL OVERLOAD
- T — MOTOR-RATED TOGGLE SWITCH
- C — LIGHTING CONTACTOR
- TS — TIME SWITCH
- PC — PHOTOCELL
- PUSH BUTTON
- DC — DOOR CONTACT SWITCH

LIGHTING

- A B — NEW INCANDESCENT OR HID LIGHTING FIXTURE, LETTER DENOTES TYPE, "H PREFIX DENOTES HID
- RELOCATED EXISTING INCANDESCENT OR HID LIGHTING FIXTURE, LETTER DENOTES TYPE WHERE APPLICABLE
- EXISTING INCANDESCENT OR HID LIGHTING FIXTURE TO REMAIN
- EXISTING INCANDESCENT OR HID LIGHTING FIXTURE TO BE REMOVED AND REUSED AS APPLICABLE
- X — NEW EXIT SIGN, ARROWS AS INDICATED, LETTER DENOTES TYPE
- R — RELOCATED EXISTING EXIT SIGN, ARROWS AS INDICATED
- EXISTING EXIT SIGN TO REMAIN, ARROWS AS INDICATED
- R — EXISTING EXIT SIGN TO BE REMOVED AND REUSED AS APPLICABLE
- FB — NEW FLUORESCENT LIGHTING FIXTURE, LETTER DENOTES TYPE, "F PREFIX DENOTES FLUORESCENT
- R FB — RELOCATED EXISTING FLUORESCENT LIGHT FIXTURE, LETTER DENOTES TYPE WHERE APPLICABLE
- FB — EXISTING FLUORESCENT LIGHT FIXTURE TO REMAIN
- R FB — EXISTING FLUORESCENT LIGHT FIXTURE TO BE REMOVED AND REUSED AS APPLICABLE
- LIGHT FIXTURE ON EMERGENCY CIRCUIT

SWITCHES

- $ — NEW SWITCH, SPST, 20A, 120/277V
- $R — RELOCATED EXISTING SWITCH
- $ — EXISTING SWITCH TO REMAIN
- $R — EXISTING SWITCH TO BE REMOVED AND REUSED AS APPLICABLE
- $3 — SWITCH, 20A, 120/277V, "2" DENOTES DPST, "3" DENOTES THREE-WAY, "4" DENOTES FOUR-WAY
- $L — SWITCH, SPDT, CENTER OFF, MOMENTARY CONTACT
- $K — SWITCH, SPST, 20A, 120/277V, "K" DENOTES KEY SWITCH, "P" DENOTES PILOT LIGHT, "T" DENOTES SPRING WOUND TIMER
- DIMMER CONTROL SWITCH, 600 WATT UNLESS OTHERWISE NOTED

RECEPTACLES AND OUTLETS

- SIMPLEX WALL RECEPTACLE, NEMA 5-20R, 20A, 125V
- NEW DUPLEX WALL RECEPTACLE, NEMA 5-15R, 15A, 125V OR NEMA 5-20R, 20A, 125V, RE: SPECIFICATIONS, DOT INDICATES ABOVE COUNTER
- R — RELOCATED EXISTING DUPLEX RECEPTACLE
- EXISTING DUPLEX RECEPTACLE TO REMAIN
- R — EXISTING DUPLEX RECEPTACLE TO BE REMOVED AND REUSED AS APPLICABLE
- DUPLEX WALL RECEPTACLE ON EMERGENCY CIRCUIT, RED COLOR
- DUPLEX WALL RECEPTACLE ON A CIRCUIT DEDICATED TO DATA PROCESSING, GRAY COLOR. PROVIDE ISOLATED GROUND TYPE RECEPTACLES WHERE NOTED. (IG)
- WP — DUPLEX WALL RECEPTACLE, "WP" DENOTES WEATHERPROOF, "TP" DENOTES SAFETY TYPE.
- FOURPLEX WALL RECEPTACLE, NEMA 5-15R, 15A, 125V
- FOURPLEX WALL RECEPTACLE ON EMERGENCY CIRCUIT, RED COLOR
- SPECIAL RECEPTACLE, NEMA CONFIGURATION AS NOTED
- PA — FLOOR OUTLET, "P" DENOTES POKE-THRU, "F" DENOTES FLUSH, "A" DENOTES TYPE WHERE APPLICABLE.
- MULTI-OUTLET SURFACE RACEWAY
- J — JUNCTION BOX
- DIRECT CONNECTION TO EQUIPMENT
- P — PULL BOX (OVER 4" SQUARE)
- NEW TELEPHONE WALL OUTLET. "W" DENOTES WALL PHONE HEIGHT, "P" DENOTES PAY PHONE, DOT INDICATES ABOVE COUNTER.
- E — EXISTING TELEPHONE WALL OUTLET TO REMAIN
- R — EXISTING TELEPHONE WALL OUTLET TO BE REMOVED
- NEW DATA WALL OUTLET
- R — RELOCATED EXISTING DATA WALL OUTLET
- EXISTING DATA WALL OUTLET TO REMAIN
- R — EXISTING DATA WALL OUTLET TO BE REMOVED AND REUSED AS APPLICABLE
- COMBINATION TELEPHONE/DATA WALL OUTLET

CIRCUITING AND WIRING

- CIRCUIT CONCEALED IN WALL OR CEILING
- CONDUIT CAST IN CONCRETE OR BELOW SLAB
- EXPOSED CONDUIT
- CONDUIT TURNED UP
- CONDUIT TURNED DOWN
- HASH MARKS INDICATE NUMBER OF CONDUCTORS PHASE/NEUTRAL/SWITCH LEG/GROUND LEFT TO RIGHT. NO HASH MARKS INDICATES 2#12, UNLESS OTHERWISE NOTED.
- LA-2, 4 — HOMERUN TO PANEL WITH CIRCUIT NUMBER(S) AS INDICATED.
- LA-6 — PARTIAL CIRCUIT HOMERUN TO PANEL
- T — COMMUNICATIONS CONDUIT OR CABLE. "T" DENOTES TELEPHONE, "D" DENOTES DATA, "I" DENOTES INTERCOM, "PA" DENOTES PAGING, "S" DENOTES SECURITY, "FA" DENOTES FIRE ALARM

CIRCUITING NOTES

LIGHTING FIXTURE CIRCUITING NOTES

A. THE LIGHTING PLANS INDICATE SWITCHING AND BRANCH CIRCUIT NUMBERS FOR ALL LIGHTING FIXTURES. LOWER CASE LETTERS AT SWITCHES AND LIGHT FIXTURES INDICATE SWITCHING WHERE THE CONTROL PATTERN IS NOT OBVIOUS. INSTALL BRANCH CIRCUIT WIRING IN A RACEWAY TO ALL RIGIDLY ATTACHED LIGHT FIXTURES AND TO JUNCTION BOXES FOR ALL LAY-IN LIGHT FIXTURES, AS REQUIRED TO PROVIDE SWITCHING AND CIRCUITING AS SHOWN ON THE DRAWINGS. RE: SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

B. BRANCH CIRCUIT HOMERUNS SHALL BE LIMITED TO THREE PHASE CONDUCTORS (ON DIFFERENT PHASES), ONE NEUTRAL CONDUCTOR AND ONE EQUIPMENT GROUND CONDUCTOR (WHERE SHOWN OR SPECIFIED), AND SHALL BE INSTALLED IN CONDUIT.

C. ALL LAY-IN LIGHTING FIXTURES SHALL BE CONNECTED TO A BRANCH CIRCUIT JUNCTION BOX WITH A FLEXIBLE FIXTURE TAIL. RE: SPECIFICATIONS. A MAXIMUM OF FOUR FIXTURE TAILS SHALL BE CONNECTED TO A SINGLE JUNCTION BOX. FIXTURE TO FIXTURE WIRING OF LAY-IN LIGHTING FIXTURES IS NOT PERMITTED.

D. WHERE ALLOWED BY THE LOCAL AUTHORITY HAVING JURISDICTION AND THE NEC, TYPE MC CABLE MAY BE USED FOR LAY-IN FIXTURE HOMERUNS (10 FEET MAXIMUM). SWITCH LEG DROPS FROM FIXTURE JUNCTION BOXES OR NONLAY-IN FIXTURES AND FOR SINGLE CIRCUIT BRANCH CIRCUIT WIRING FROM FIXTURE TO FIXTURE (EXCEPT LAY-IN FIXTURES) AND FROM FIXTURE TO JUNCTION BOX. TYPE MC CABLE SHALL NOT BE USED FOR BRANCH CIRCUIT HOMERUNS. TYPE MC CABLE SHALL NOT BE USED WHERE MORE THAN THREE CONDUCTORS (PHASE/NEUTRAL/GROUND) ARE REQUIRED, WHERE EXPOSED, OR IN LENGTHS EXCEEDING 20 FEET.

POWER PLAN CIRCUITING NOTES

A. THE POWER PLANS INDICATE BRANCH CIRCUIT NUMBERS FOR ALL RECEPTACLES. WHERE BRANCH CIRCUIT WIRING IS NOT SHOWN, INSTALL BRANCH CIRCUIT WIRING IN A RACEWAY, AS REQUIRED TO PROVIDE CIRCUITING AS SHOWN ON THE DRAWINGS. RE: SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

B. BRANCH CIRCUIT HOMERUNS SHALL BE LIMITED TO THREE PHASE CONDUCTORS (ON DIFFERENT PHASES), ONE, TWO OR THREE NEUTRAL CONDUCTORS AND ONE GROUND CONDUCTOR (WHERE SHOWN OR SPECIFIED), AND SHALL BE INSTALLED IN CONDUIT. SEPARATE NEUTRAL CONDUCTORS SHALL BE PROVIDED FOR EACH PHASE ON DATA CIRCUITS AND ELSEWHERE WHERE SHOWN OR NOTED ON THE DRAWINGS, WHERE SCHEDULES OR WHERE SPECIFIED.

C. WHERE ALLOWED BY THE LOCAL AUTHORITY HAVING JURISDICTION AND THE NEC TYPE MC CABLE MAY BE USED FOR DROPS IN PARTITIONS TO RECEPTACLES. TYPE MC CABLE SHALL NOT BE USED FOR BRANCH CIRCUIT HOMERUNS OR FOR RECEPTACLE TO RECEPTACLE WIRING IN PARTITIONS. TYPE MC CABLE SHALL NOT BE USED WHERE MORE THAN THREE CONDUCTORS (PHASE/NEUTRAL/GROUND) ARE REQUIRED, WHERE EXPOSED, OR IN LENGTHS EXCEEDING 20 FEET.

GENERAL NOTES

A. ALL MECHANICAL, ELECTRICAL & PLUMBING WORK SHALL COMPLY WITH ALL APPLICABLE STATE AND LOCAL BUILDING CODES AND UTHSC-H STANDARDS REQUIREMENTS. THE QUALITY OF MATERIALS AND WORKMANSHIP SHALL BE ESTABLISHED BY THE WORK COMPLETED BY THE BASE BUILDING CONTRACTORS, AS INTERPRETED BY THE ENGINEER. REFER TO BASE BUILDING SPECIFICATIONS WHEN AVAILABLE, FOR MATERIALS AND METHODS FOR MECHANICAL AND PLUMBING CONSTRUCTION.

B. THE MECHANICAL, ELECTRICAL & PLUMBING CONTRACTORS SHALL VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH ALL EXISTING CONDITIONS RELATED TO THEIR WORK AND THE WORK OF ALL OTHER TRADES, PRIOR TO SUBMITTING BIDS. ANY DISCREPANCIES IN THE CONTRACT DOCUMENTS WHICH ARE NOTED DURING THIS VISIT SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER PRIOR TO SUBMITTING BIDS.

C. FURNISH ALL LABOR, MATERIALS, EQUIPMENT, APPARATUS AND APPURTENANCES REQUIRED FOR A COMPLETE WORKING AND COORDINATED SYSTEM. ALL NEW MATERIALS, EQUIPMENT, APPARATUS AND APPURTENANCES SHALL MATCH EXISTING BUILDING STANDARDS IN QUALITY, TYPE AND FINISH, UNLESS OTHERWISE NOTED.

D. ALL INTERRUPTIONS OF SERVICES (POWER, WATER, HVAC, ETC.) AND ALL WORK IN OCCUPIED TENANT SPACES (E.G. PLUMBING OR ELECTRICAL WORK IN AN OCCUPIED TENANT'S SPACE BELOW A SPACE UNDER CONSTRUCTION) MUST BE SCHEDULED THRU THE BUILDING MANAGER A MINIMUM OF 24 HOURS IN ADVANCE. ANY INTERRUPTIONS OR CONSTRUCTION WHICH WILL AFFECT NORMAL OPERATION OF THE BUILDING OR IT'S TENANTS SHALL BE SCHEDULED, WITH THE BUILDING MANAGER'S APPROVAL, ON AN AFTER-HOURS BASIS.

E. SUBMIT SHOP DRAWINGS TO THE ENGINEER AND OBTAIN APPROVAL, PRIOR TO PROCURING ANY NEW EQUIPMENT. SUBMIT OPERATING AND MAINTENANCE MANUALS FOR ALL NEW EQUIPMENT TO THE ENGINEER.

F. ALL REQUIRED HVAC CONTROL WIRING AND EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR.

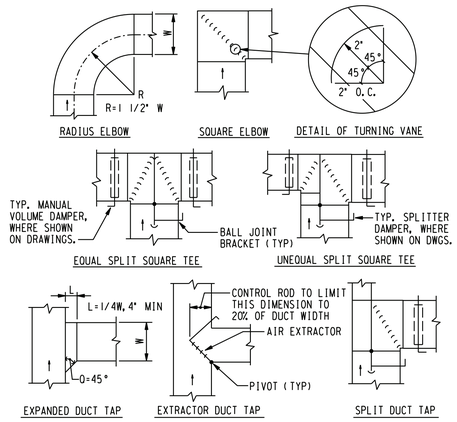
G. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR THE EXACT LOCATION OF ALL CEILING MOUNTED DEVICES.

H. REFER TO ARCHITECTURAL INTERIOR ELEVATION DRAWINGS, WHERE THE ARCHITECT HAS DRAWN SUCH ELEVATIONS, FOR THE LOCATIONS OF ALL WALL MOUNTED DEVICES. OBTAIN THE ARCHITECT'S APPROVAL OF PROPOSED LOCATIONS FOR ALL VISIBLE THERMOSTATS AND OTHER CONTROL DEVICES.

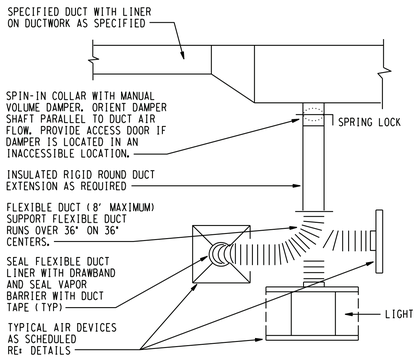
I. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF WALLS WHICH EXTEND TO STRUCTURE. EACH HVAC DUCT OR PIPE PENETRATION THRU THESE WALLS SHALL BE INSTALLED AS DETAILED. WHERE FLEXIBLE DUCT PENETRATES A WALL WHICH EXTENDS TO STRUCTURE, PROVIDE INSULATED RIGID DUCT EXTENDING 12 INCHES ON EITHER SIDE OF THE PARTITION.

J. ALL DUCTWORK SIZES SHOWN ARE FREE AIR STREAM DIMENSIONS.

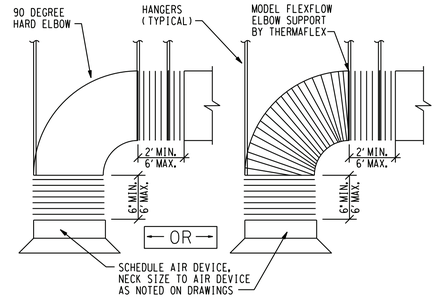
K. ALL SLAB PENETRATIONS SHALL BE SEALED WITH A UL LISTED FIRE SAFING AND WATERSTOP MATERIAL, IN ACCORDANCE WITH APPLICABLE STATE AND LOCA



01 TYPICAL DUCT FITTINGS
NOT TO SCALE



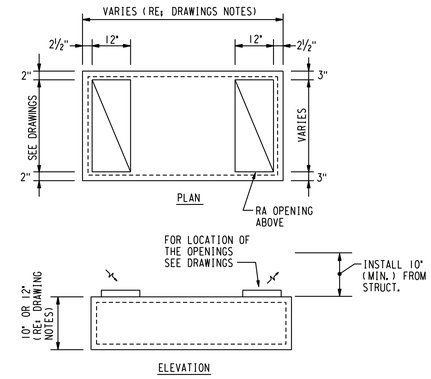
02 TYPICAL AIR DEVICE FLEXIBLE CONNECTION
NOT TO SCALE



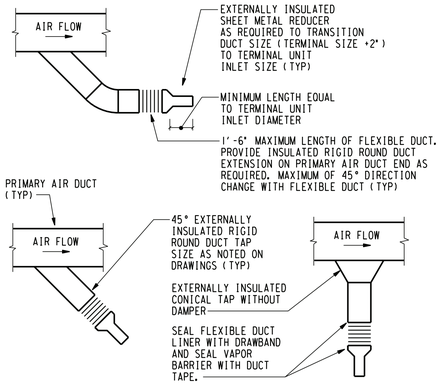
NOTE:

1. HARD OR FLEXFLOW ELBOW IS THE CONTRACTOR'S OPTION.
2. WHERE SPACE CONSTRAINTS ALLOW, THIS DETAIL SHALL BE UTILIZED. WHERE SPACE WILL NOT ALLOW, DETAIL XXX SHALL BE UTILIZED.
3. MAXIUM 10'-0" RUN TOTAL

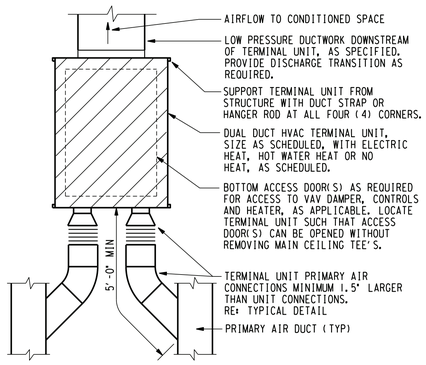
03 TYPICAL ELBOW CONNECTION
NOT TO SCALE



04 RETURN AIR BOOT DETAIL
NOT TO SCALE



05 TYPICAL PRIMARY DUCT TAPS FOR HVAC TERMINAL UNITS
NOT TO SCALE



FIELD COORDINATE EXACT TERMINAL UNIT LOCATIONS TO INSTALL UNITS UP IN STRUCTURAL "PANS" BETWEEN BEAMS AND JOISTS, WHERE REQUIRED TO ALLOW FOR THE INSTALLATION OF LIGHTING FIXTURES BELOW UNITS.

06 TYPICAL DOUBLE DUCT HVAC TERMINAL UNIT
NOT TO SCALE

AIR DISTRIBUTION DEVICES

Plan Designation	A	B	C			
Manufacturer	Titus	Titus	Titus			
Model/Series	OMNI-AA	OMNI-AA	FLOWBAR			
Function	Supply	Return	Supply			
Device Type	Ceiling	Ceiling	Ceiling			
Face Type	Plaque	Plaque	Slot			
Face Size (inches)	24" x 24"	24" x 24"	48" Long			
Neck Size (inches)	Re: Dwgs	15" Rnd	Re: Dwgs			
Maximum NC	30	30	30			
Border Type	TYPE 3	TYPE 3	TYPE 22			
Material	Aluminum	Aluminum	Aluminum			
Exterior Finish	White	White	Black			
Interior Finish	White	White	Black			
Mounting Type	Lay-in	Lay-in	Lay-in			
Accessories						
Remarks						

LIGHT FIXTURE SCHEDULE

FIXTURE TYPE	MANUFACTURER	CATALOG NUMBER	LAMP TYPE (a) (b)	BALLAST/DRIVER TYPE	VOLTAGE	FIXTURE WATTS	MOUNTING	DESCRIPTION
A	PHILLIPS/LIGHTOLIER	QHE2GPFOP232-277-SPECIAL BALLAST	(2) FO32 T8 - 4100K	<10% THD, PROGRAM START, 56 W MAXIMUM INPUT	120/277 V	56 W	LAY-IN	2' x 4' FLUORESCENT HIGH EFFICIENCY ALTER WITH MICROPERFORATED MESH SHIELD BASKET, ONE PROGRAM START T8 TWO LAMP ELECTRONIC BALLAST.
A LED (c)	CREE	ZR24-40L-40K-CMA	4000 LM 4000 K 90 CRI LED	<10% THD DIMMING LED DRIVER	120/277 V	44 W	LAY-IN	2' x 4' HIGH EFFICIENCY LED TROFFER WITH DIMMING DRIVER AND SMARTCAST INTEGRAL MOTION AND AMBIENT SENSORS AND WIRELESS COMMUNICATIONS.
T1	LITECONTROL	59-P-I-08-C1-1T5HO-NPN-1C-277-FA1 (d)	(1) F54 T5HO - 4100K	<10% THD PROGRAM START ELECTRONIC BALLAST	277 V	54 W	PENDANT	8' MATTE WHITE INDIRECT PENDANT LIGHT FIXTURE WITH 15" AIRCRAFT CABLE PENDANT MOUNTS AND >10% THD PROGRAM START BALLAST. PROVIDE FIXTURES WITH END CAPS, FIXTURE DISCONNECTSUL LISTED CANOPY POKES AND OTHER ACCESSORIES AS REQUIRED FOR A COMPLETE INSTALLATION TO MATCH EXISTING INSTALLESION. FIXTURE MOUNTING AND LAMP COLOR TO MATCH EXISTING FIXTURES IN THE ROOM.
X1	PHILLIPS/CHLORIDE	55L 3 R OR APPROVED EQUAL (e)	2.5 W RED LED	INTEGRAL LED DRIVER	120/277 V	2.5 W	SURFACE	SINGLE FACE LED EXIT SIGN TO MATCH EXISTING WITH BRUSHED ALUMINUM FACE AND BLACK HOUSING, RED LETTERS, ARROWS AS INDICATED.
X2	PHILLIPS/LIGHTOLIER	55L 3 R OR APPROVED EQUAL (e)	5 W RED LED	INTEGRAL LED DRIVER	120/277 V	5 W	SURFACE	DOUBLE FACE LED EXIT SIGN TO MATCH EXISTING WITH BRUSHED ALUMINUM FACE ANDBLACK HOUSING, RED LETTERS, ARROWS AS INDICATED.

NOTE (a) - ALL FLUORESCENT LAMPS SHALL BE PHILLIPS ALTO LOW MERCURY.
NOTE (b) - FLUORESCENT LAMP AND LED COLOR TEMPERATIURE TO MATCH EXISTING LAMPS IN THE PROJECT AREA, CONFIRM COLOR COMPATIBILITY RIOR TO SUBMITTING FIXTURES.
NOTE (c) - ALTERNATE E1 VERSION OF TYPE A LIGHT FIXTURE. PROVIDE ALL COMPONENTS REQUIRED FOR A COMPLETE AND FUNCTIONING LIGHT FXTURES WITH ASSOCIATED LIGHTING CONTROLS.
NOTE (d) - CONFIRM VISUAL COMPATIBILITY WITH EXISTING PENDANT LIGHTING IN THE AREA PRIOR TO ORDERING.
NOTE (e) - CONFIRM VISUAL COMPATIBILITY WITH EXISTING EXIT SIGNS IN THE AREA PRIOR TO ORDERING.

DOUBLE DUCT TERMINAL UNITS

Plan Designation	DDB-01-01	DDB-01-02	DDB-01-03	DDB-01-04	DDB-01-05	DDB-01-06	DDB-01-07	DDB-01-08	DDB-01-09	DDB-01-10	DDB-01-11	DDB-01-12	DDB-01-13	DDB-01-14	DDB-01-15	DDB-01-16	DDB-01-17	DDB-01-18	DDB-01-19	DDB-01-20	DDB-01-21	DDB-01-22	DDB-01-23	DDB-01-24	DDB-01-25	DDB-01-26
Manufacturer	Nailor	Nailor	Nailor	Nailor	Nailor	Nailor	Nailor	Nailor	Nailor	Nailor	Nailor	Nailor	Nailor	Nailor	Nailor	Nailor	Nailor	Nailor	Nailor	Nailor	Nailor	Nailor	Nailor	Nailor	Nailor	Nailor
Model/Series	D3230 (2)	D3230 (2)	D3230 (2)	D3230 (2)	D3230 (2)	D3230 (2)	D3230 (2)	D3230 (2)	D3230 (2)	D3230 (2)	D3230 (2)	D3230 (2)	D3230 (2)	D3230 (2)	D3230 (2)	D3230 (2)	D3230 (2)	D3230 (2)	D3230 (2)	D3230 (2)	D3230 (2)	D3230 (2)	D3230 (2)	D3230 (2)	D3230 (2)	D3230 (2)
Size	10	10	8	8	4	6	6	8	6	8	8	6	6	8	6	8	6	6	8	6	6	8	6	8	6	8
Terminal Unit Maximum Airflow	745 cfm	745 cfm	450 cfm	600 cfm	100 cfm	375 cfm	350 cfm	605 cfm	250 cfm	570 cfm	455 cfm	375 cfm	375 cfm	485 cfm	200 cfm	570 cfm	340 cfm	200 cfm	415 cfm	315 cfm	250 cfm	430 cfm	250 cfm	600 cfm	375 cfm	450 cfm
Terminal Unit Minimum Airflow	373 cfm	373 cfm	225 cfm	300 cfm	50 cfm	188 cfm	175 cfm	303 cfm	125 cfm	285 cfm	228 cfm	188 cfm	188 cfm	243 cfm	100 cfm	285 cfm	170 cfm	100 cfm	208 cfm	158 cfm	125 cfm	215 cfm	125 cfm	300 cfm	188 cfm	225 cfm
Design Cooling Airflow	745 cfm	745 cfm	450 cfm	600 cfm	100 cfm	375 cfm	350 cfm	605 cfm	250 cfm	570 cfm	455 cfm	375 cfm	375 cfm	485 cfm	200 cfm	570 cfm	340 cfm	200 cfm	415 cfm	315 cfm	250 cfm	430 cfm	250 cfm	600 cfm	375 cfm	450 cfm
Minimum Cooling Airflow	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm
Cooling Inlet Size	10"	10"	8"	8"	4"	6"	6"	8"	6"	8"	8"	6"	6"	8"	6"	8"	6"	6"	8"	6"	6"	8"	6"	8"	6"	8"
Cooling Flex Duct Size	10"	10"	8"	8"	4"	6"	6"	8"	8"	8"	8"	6"	6"	8"	6"	8"	6"	6"	8"	6"	6"	8"	6"	8"	6"	8"
Maximum Heating Airflow	745 cfm	745 cfm	450 cfm	600 cfm	100 cfm	375 cfm	350 cfm	605 cfm	250 cfm	570 cfm	455 cfm	375 cfm	375 cfm	485 cfm	200 cfm	570 cfm	340 cfm	200 cfm	415 cfm	315 cfm	250 cfm	430 cfm	250 cfm	600 cfm	375 cfm	450 cfm
Minimum Heating Airflow	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm	100 cfm	101 cfm	102 cfm	103 cfm	104 cfm	105 cfm	106 cfm	107 cfm	108 cfm	109 cfm	110 cfm	111 cfm	112 cfm	113 cfm	114 cfm	115 cfm	116 cfm
Heating Inlet Size	10"	10"	8"	8"	4"	6"	6"	8"	6"	8"	8"	6"	6"	8"	6"	8"	6"	6"	8"	6"	6"	8"	6"	8"	6"	8"
Heating Flex Duct Size	10"	10"	8"	8"	4"	6"	6"	8"	6"	8"	8"	6"	6"	8"	6"	8"	6"	6"	8"	6"	6"	8"	6"	8"	6"	8"
Outlet Size	14/12"	14/12"	10/10"	10/10"	8/8"	8/8"	8/8"	10/10"	8/8"	8/8"	8/8"	8/8"	8/8"	8/8"	8/8"	8/8"	8/8"	8/8"	8/8"	8/8"	8/8"	8/8"	8/8"	8/8"	8/8"	8/8"
Minimum Inlet Static Pressure	1.0 "wc	1.0 "wc	1.0 "wc	1.0 "wc	1.0 "wc	1.0 "wc	1.0 "wc	1.0 "wc	1.0 "wc	1.0 "wc	1.0 "wc	1.0 "wc	1.0 "wc	1.0 "wc	1.0 "wc	1.0 "wc	1.0 "wc	1.0 "wc	1.0 "wc	1.0 "wc	1.0 "wc	1.0 "wc	1.0 "wc	1.0 "wc	1.0 "wc	1.0 "wc
Max. Terminal Pressure Drop	0.5 "wc	0.5 "wc	0.5 "wc	0.5 "wc	0.5 "wc	0.5 "wc	0.5 "wc	0.5 "wc	0.5 "wc	0.5 "wc	0.5 "wc	0.5 "wc	0.5 "wc	0.5 "wc	0.5 "wc	0.5 "wc	0.5 "wc	0.5 "wc	0.5 "wc	0.5 "wc	0.5 "wc	0.5 "wc	0.5 "wc	0.5 "wc	0.5 "wc	0.5 "wc
Max. Room Noise Criteria (NC)	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Control Type	DDC (3)	DDC (3)	DDC (3)	DDC (3)	DDC (3)	DDC (3)	DDC (3)	DDC (3)	DDC (3)	DDC (3)	DDC (3)	DDC (3)	DDC (3)	DDC (3)	DDC (3)	DDC (3)	DDC (3)	DDC (3)	DDC (3)	DDC (3)	DDC (3)	DDC (3)	DDC (3)	DDC (3)	DDC (3)	DDC (3)
Control Sequence	Re: UTHSC-H	Re: UTHSC-H	Re: UTHSC-H	Re: UTHSC-H	Re: UTHSC-H	Re: UTHSC-H	Re: UTHSC-H	Re: UTHSC-H	Re: UTHSC-H	Re: UTHSC-H	Re: UTHSC-H	Re: UTHSC-H	Re: UTHSC-H	Re: UTHSC-H	Re: UTHSC-H	Re: UTHSC-H	Re: UTHSC-H	Re: UTHSC-H	Re: UTHSC-H	Re: UTHSC-H	Re: UTHSC-H	Re: UTHSC-H	Re: UTHSC-H	Re: UTHSC-H	Re: UTHSC-H	Re: UTHSC-H

(1) - Coordinate Metasys Terminal Unit Designation with UTHSC-H Project Manager.
(2) - With UT Spec Construction and Testing, Solid Metal Liner, Bottom Access Door, Integral Sound Attenuator and Mixing Baffles.
(3) - Provide terminal unit with DDC Controls, Re: Specifications.

I:\3300\3339\MMech\3339 MEP0.1.dgn
7/8/2016 9:05:12 AM

Philo Wilke Partnership
11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

Consultants

Structural Engineer
Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer
E&C Engineers and Consultants
TX Firm Registration No. F-003068
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY
William C. Clifford 2016.07.08 11:40:56 -05'00'
E&C Engineers & Consultants Inc.
Texas Firm Registration No: F-003068

Issues / Revisions

No.	Date	Description
1	07/08/2016	Issue for Construction

Project

UT Health MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas Health Science Center at Houston

Drawing Name

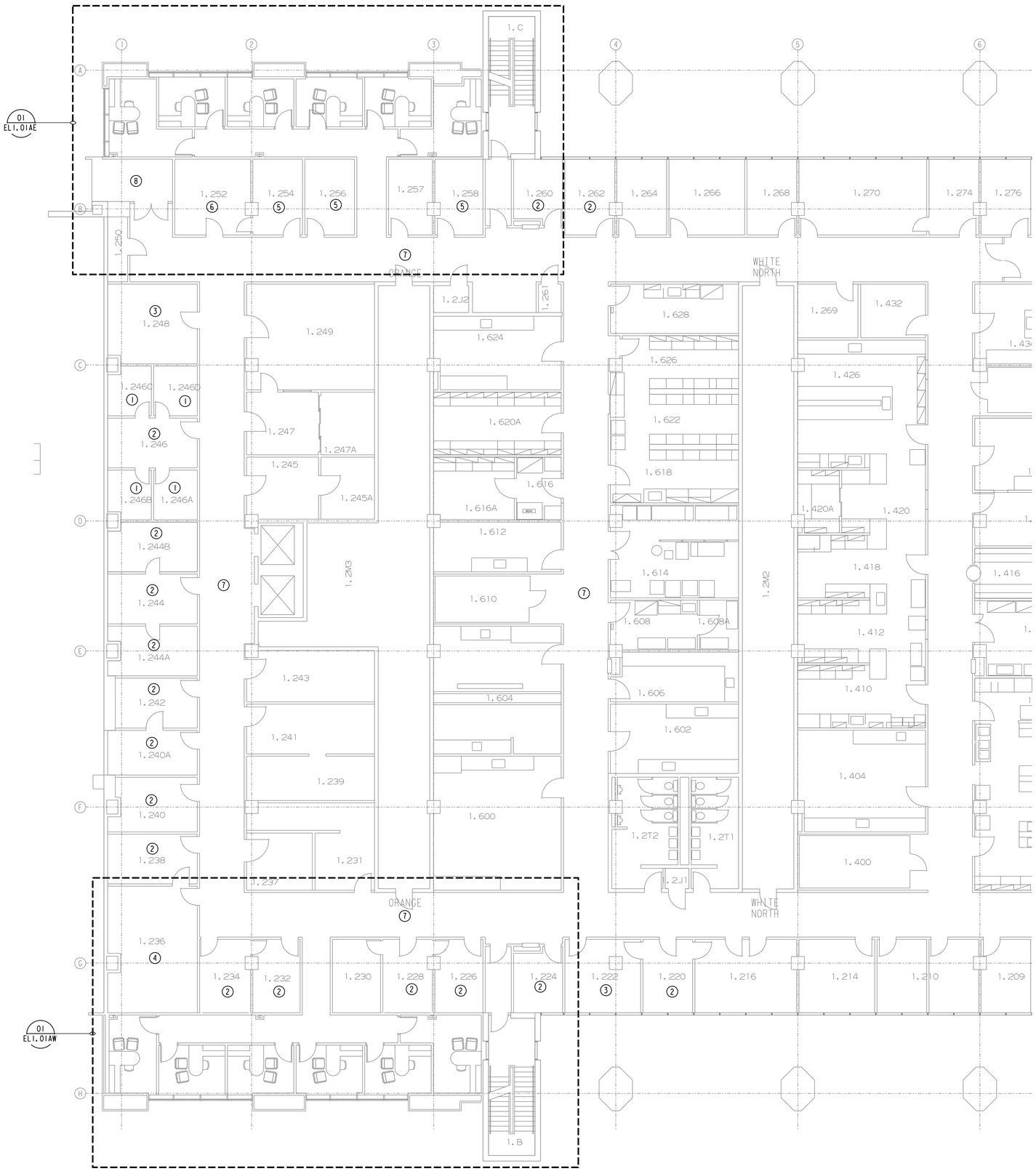
Mechanical/Electrical/ Plumbing Schedules And Details

Copyright (C) 2015 by E&C Engineers. All rights reserved.
This document and the information herein is the property of E&C Engineers. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by E&C Engineers. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by E&C Engineers.

Print Date / Time: 7/8/2016 9:05:12 AM

P&W Commission Number: 3339.00

Sheet Number: MEP0.1



01 FIRST FLOOR - ELECTRICAL RENOVATION PLAN

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

GENERAL NOTES:

A. RE: MEP0.0 FOR ADDITIONAL GENERAL NOTES.

DRAWING NOTES:

1. BASE BID, NO LIGHTING CHANGES IN THIS ROOM. ALTERNATE 2, REMOVE (1) EXISTING FLUORESCENT LIGHT FIXTURE AND LIGHT SWITCH IN THIS ROOM FOR CEILING/LIGHTING REPLACEMENT. RE: 01/EL1.01A FOR NEW LIGHTING FIXTURES AND LIGHTING CONTROLS IN ROOM.
2. BASE BID, NO LIGHTING CHANGES IN THIS ROOM. ALTERNATE 2, REMOVE (4) EXISTING FLUORESCENT LIGHT FIXTURES AND LIGHT SWITCH IN THIS ROOM FOR CEILING/LIGHTING REPLACEMENT. RE: 01/EL1.01A FOR NEW LIGHTING FIXTURES AND LIGHTING CONTROLS IN ROOM.
3. BASE BID, NO LIGHTING CHANGES IN THIS ROOM. ALTERNATE 2, REMOVE (6) EXISTING FLUORESCENT LIGHT FIXTURES AND LIGHT SWITCH IN THIS ROOM. RE: 01/EL1.01A FOR NEW LIGHTING FIXTURES AND LIGHTING CONTROLS IN ROOM.
4. BASE BID, NO LIGHTING CHANGES IN THIS ROOM. ALTERNATE 2, REMOVE (8) EXISTING FLUORESCENT LIGHT FIXTURES AND LIGHT SWITCH IN THIS ROOM FOR CEILING/LIGHTING REPLACEMENT. RE: 01/EL1.01A FOR NEW LIGHTING FIXTURES AND LIGHTING CONTROLS IN ROOM.
5. BASE BID, NO LIGHTING CHANGES IN THIS ROOM. ALTERNATE 2, REMOVE (4) EXISTING FLUORESCENT LIGHT FIXTURES, (3) EXISTING INCANDESCENT LIGHT FIXTURES, LIGHT SWITCH AND DIMMER IN THIS ROOM FOR CEILING/LIGHTING REPLACEMENT. RECONNECT BRANCH CIRCUIT SERVING INCANDESCENT LIGHTING TO MAINTAIN CIRCUIT CONTINUITY TO LOADS WHICH REMAIN ON THE CIRCUIT. RE: 01/EL1.01A FOR NEW LIGHTING FIXTURES AND LIGHTING CONTROLS IN ROOM.
6. BASE BID, NO LIGHTING CHANGES IN THIS ROOM. ALTERNATE 2, REMOVE (6) EXISTING FLUORESCENT LIGHT FIXTURES, (3) EXISTING INCANDESCENT LIGHT FIXTURES, LIGHT SWITCH AND DIMMER IN THIS ROOM FOR CEILING/LIGHTING REPLACEMENT. RECONNECT BRANCH CIRCUIT SERVING INCANDESCENT LIGHTING TO MAINTAIN CIRCUIT CONTINUITY TO LOADS WHICH REMAIN ON THE CIRCUIT. RE: 01/EL1.01A FOR NEW LIGHTING FIXTURES AND LIGHTING CONTROLS IN ROOM.
7. BASE BID, REMOVE AND REINSTALL EXISTING CEILING MOUNTED LIGHTING FIXTURES IN CORRIDOR AS REQUIRED TO ALLOW NEW HVAC TERMINAL UNITS AND RELATED DUCTWORK, CONTROL WIRING AND CONTROL POWER TO BE INSTALLED. ALTERNATE 3 REMOVE ALL EXISTING CORRIDOR FLUORESCENT LIGHT FIXTURES AND EXIT SIGNS FOR CORRIDOR CEILING/LIGHTING REPLACEMENT. RE: 01/EL1.01A FOR NEW CORRIDOR LIGHTING FIXTURES AND EXIT SIGNS.
8. REMOVE AND REINSTALL EXISTING CEILING MOUNTED LIGHTING FIXTURES IN CORRIDOR AS REQUIRED TO ALLOW NEW STRUCTURAL FRAMING TO BE INSTALLED.

Philo Wilke Partnership
11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

Consultants

Structural Engineer
Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer
E&C Engineers and Consultants
TX Firm Registration No. F-003068
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY
WILLIAM C CLIFFORD 44368 REGISTERED PROFESSIONAL ENGINEER STATE OF TEXAS
William C. Clifford
2016.07.08 11:23:53 -05'00'
E&C Engineers & Consultants Inc.
Texas Firm Registration No: F-003068

Issues / Revisions

No.	Date	Description
1	07/08/2016	Issue for Construction

Project

UT Health MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas Health Science Center at Houston

Drawing Name

Electrical Lighting Demolition Plan First Floor - North

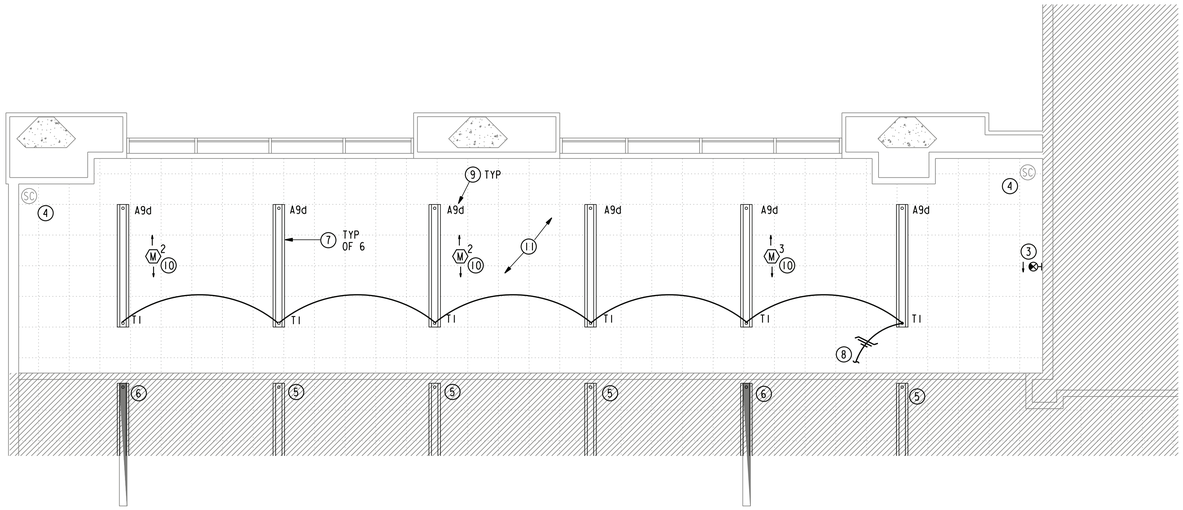
Copyright (C) 2015 by E&C Engineers. All rights reserved.

This document and the information herein is the property of E&C Engineers. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by E&C Engineers. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by E&C Engineers.

Print Date / Time: 7/8/2016 9:11:01 AM

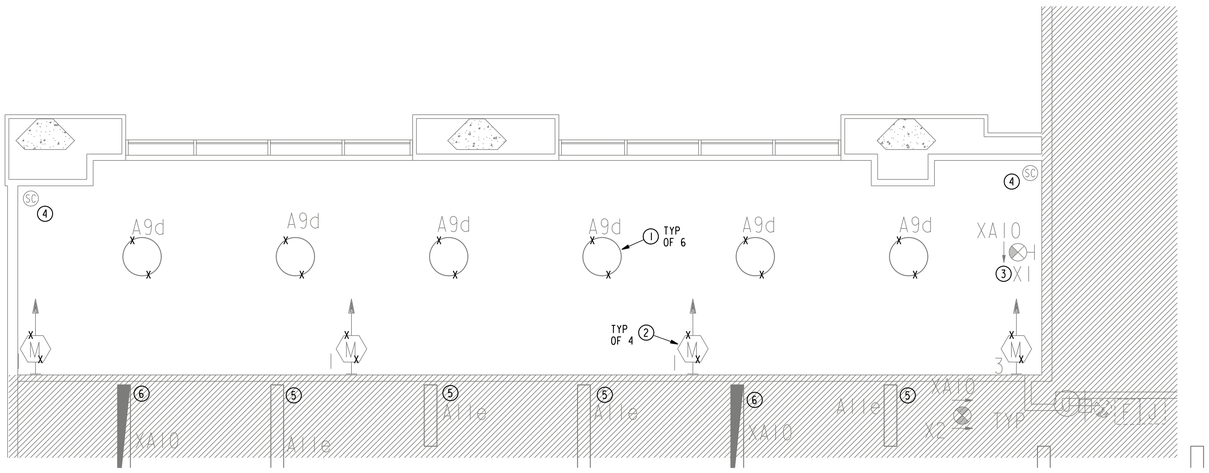
P&W Commission Number	Sheet Number
3339.00	DEL1.01A

I:\3300\3339\ME\elec\3339 DEL1.01A.dgn
7/8/2016 9:11:01 AM



02 GROUND FLOOR EAST - ELECTRICAL LIGHTING ALTERATION PLAN

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



01 GROUND FLOOR EAST - ELECTRICAL LIGHTING DEMOLITION PLAN

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

GENERAL NOTES:

A. RE: MEP0.0 FOR ADDITIONAL GENERAL NOTES.

B. MODIFICATIONS AND ADDITIONS TO THE EXISTING BUILDING FIRE ALARM SYSTEM SHALL BE DESIGNED, PREPARED AND SIGNED BY A STATE OF TEXAS LICENSED FIRE ALARM PLANNING SUPERINTENDENT IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND APPLICABLE CODES AND STANDARDS. FIRE ALARM DEVICES SHOWN ON THE DRAWINGS ARE FOR GENERAL SCOPE AND COORDINATION ONLY AND ALL FIRE ALARM DEVICES REQUIRED BY THE PROJECT SPECIFICATIONS AND APPLICABLE CODES AND STANDARDS SHALL BE PROVIDED.

DRAWING NOTES:

(1) REMOVE EXISTING PENDANT LIGHT FIXTURE AND ASSOCIATED BRANCH CIRCUIT WIRING AND CONDUIT. STORE REMOVED LIGHT FIXTURE AS DIRECTED BY OWNER. RE: 02/EL1.0GAE, NOTE 8 FOR REUSE OF EXISTING BRANCH CIRCUIT AND LIGHTING CONTROL RELAY/POWER PACK AND OVERRIDE SWITCHES TO SERVE NEW LIGHT FIXTURES.

(2) REMOVE EXISTING WALL MOUNTED MOTION SENSOR AND ASSOCIATED CONTROL WIRING TO EXISTING LIGHTING CONTROL RELAY/POWER PACK. RE: 02/EL1.0GAE, NOTE 9 FOR NEW CEILING MOUNTED SENSOR AND ASSOCIATED CONTROL WIRING TO CONTROL EXISTING LIGHTING CONTROL RELAY/POWER PACK.

(3) EXISTING WALL MOUNTED EXIT SIGN TO REMAIN AND BE REUSED.

(4) EXISTING WALL MOUNTED SECURITY CAMERA TO REMAIN AND BE REUSED.

(5) EXISTING LIGHT FIXTURE ON NORMAL POWER AND ASSOCIATED LIGHTING CONTROLS TO REMAIN AND BE REUSED.

(6) EXISTING UNSWITCHED LIGHT FIXTURE ON EMERGENCY POWER TO REMAIN AND BE REUSED.

(7) NEW RECESSED CEILING LIGHT FIXTURE TO MATCH EXISTING, TYPE AS NOTED.

(8) CIRCUIT NEW LIGHT FIXTURES TO EXISTING BRANCH CIRCUIT AND LIGHTING CONTROL RELAY/POWER PACK AND OVERRIDE SWITCHES WHICH SERVED THE EXISTING PENDANT LIGHT FIXTURES WHICH WERE REMOVED.

(9) INDICATES REUSED EXISTING BRANCH CIRCUIT TO PANEL GHA CIRCUIT 9 VIA EXISTING LIGHTING CONTROL RELAY/POWER PACK 1 AND EXISTING 'd' OVERRIDE SWITCHES.

(10) NEW CEILING MOUNTED MOTION SENSOR, TYPE AND MANUFACTURER TO MATCH EXISTING, WIRED WITH PLENUM RATED CONTROL CABLE TO CONTROL REUSED EXISTING RELAY/POWER PACK WHICH CONTROLLED PENDANT LIGHT FIXTURES WHICH WERE REMOVED. WIRE NEW SENSORS TO PROVIDE THE SAME CONTROL OF OPEN AREA LIGHT FIXTURES AS THE EXISTING LIGHTING CONTROLS.

(11) EXISTING CEILING MOUNTED FIRE ALARM SPEAKERS AND STROBES WHICH PROVIDE COVERAGE FOR THIS AREA TO REMAIN AND BE REUSED.

Philo Wilke Partnership

11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

Consultants

Structural Engineer
Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer
E&C Engineers and Consultants
TX Firm Registration No. F-003068
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY WILLIAM C. CLIFFORD 44368 REGISTERED PROFESSIONAL ENGINEER

William C. Clifford
2016.07.08
11:29:30 -05'00'

E&C Engineers & Consultants Inc.
Texas Firm Registration No: F-003068

Issues / Revisions

No.	Date	Description
1	07/08/2016	Issue for Construction

Project

UT Health MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas
Health Science Center at Houston

Drawing Name

Electrical Lighting Demolition and Alteration Plans Ground Floor East

Copyright (C) 2015 by E&C Engineers. All rights reserved.

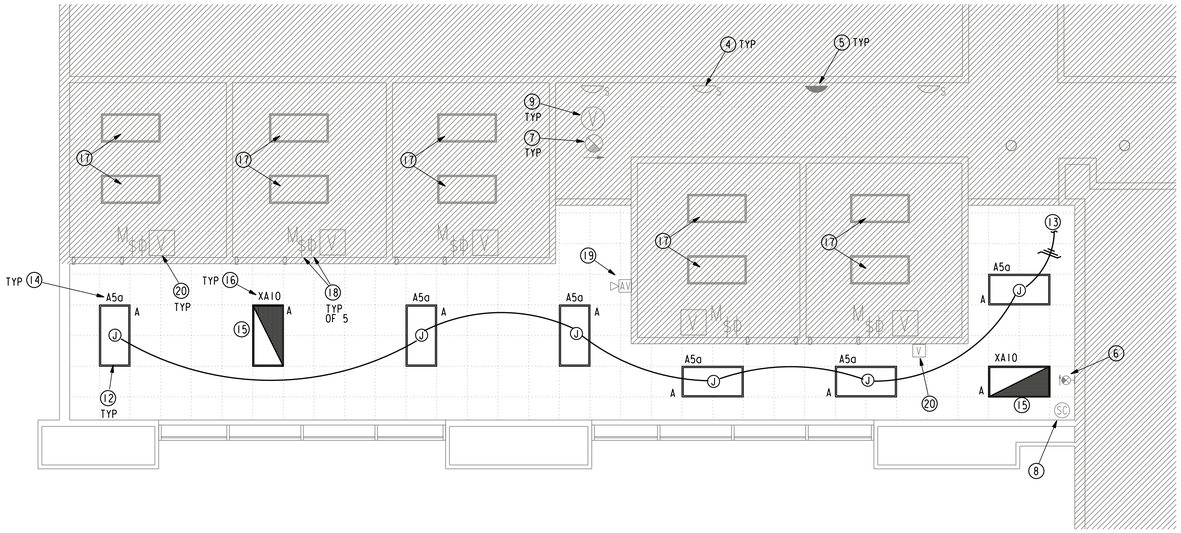
This document and the information herein is the property of E&C Engineers. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by E&C Engineers. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by E&C Engineers.

Print Date / Time: 7/8/2016 9:09:05 AM

P&W Commission Number: 3339.00

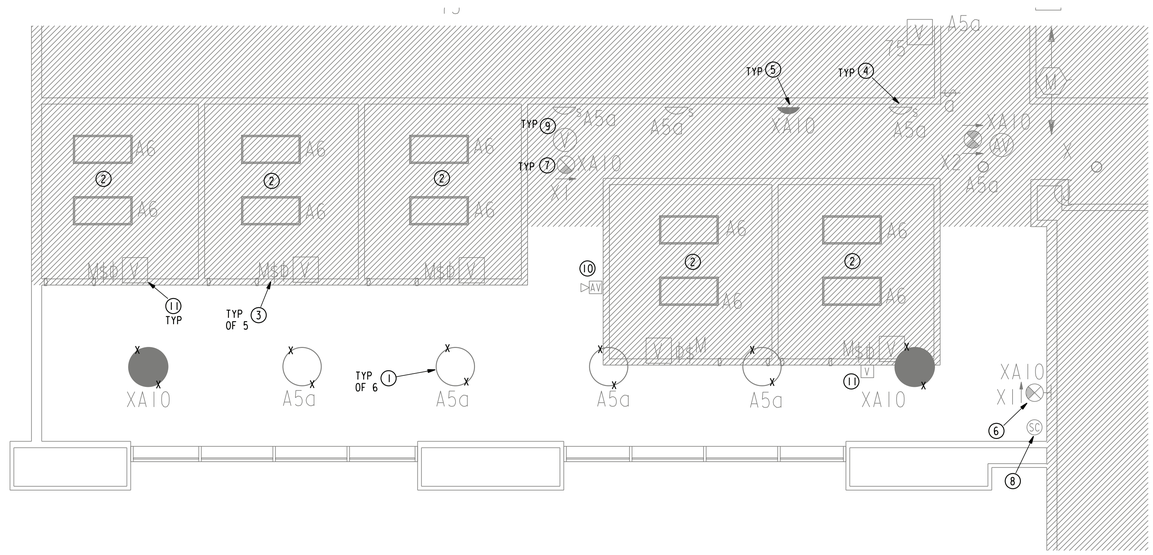
Sheet Number: EL1.0GAE

I:\3300\3339\MElec\3339 EL1.0GAE.dgn
7/8/2016 9:09:05 AM



02 GROUND FLOOR WEST - ELECTRICAL LIGHTING ALTERATION PLAN

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



01 GROUND FLOOR WEST - ELECTRICAL LIGHTING DEMOLITION PLAN

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

GENERAL NOTES:

A. RE: MEP0.0 FOR ADDITIONAL GENERAL NOTES.

B. MODIFICATIONS AND ADDITIONS TO THE EXISTING BUILDING FIRE ALARM SYSTEM SHALL BE DESIGNED, PREPARED AND SIGNED BY A STATE OF TEXAS LICENSED FIRE ALARM PLANNING SUPERINTENDENT IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND APPLICABLE CODES AND STANDARDS. FIRE ALARM DEVICES SHOWN ON THE DRAWINGS ARE FOR GENERAL SCOPE AND COORDINATION ONLY AND ALL FIRE ALARM DEVICES REQUIRED BY THE PROJECT SPECIFICATIONS AND APPLICABLE CODES AND STANDARDS SHALL BE PROVIDED.

DRAWING NOTES:

1. REMOVE EXISTING PENDANT LIGHT FIXTURE AND ASSOCIATED BRANCH CIRCUIT WIRING AND CONDUIT. STORE REMOVED LIGHT FIXTURE AS DIRECTED BY OWNER. RE: RE: 02/EL1.0GAW, NOTES 13 AND 15 FOR REUSE OF EXISTING BRANCH CIRCUITS AND LIGHTING CONTROL RELAY AND OVERRIDE SWITCHES TO SERVE NEW LIGHT FIXTURES.

2. REMOVE EXISTING STUDY ROOM LIGHT FIXTURES AND ASSOCIATED BRANCH CIRCUIT WIRING AND CONDUIT IN ROOM CEILING SPACE AS REQUIRED TO ALLOW THE CEILING AND EXISTING STRUCTURAL CLOSURE TO BE REMOVED. STORE REMOVED LIGHT FIXTURES FOR REINSTALLATION, RE: 02/EL1.0GAW, NOTE 17.

3. EXISTING OCCUPANCY SENSING SWITCH AND DIMMER CONTROLLING EXISTING STUDY ROOM LIGHTING TO REMAIN AND BE REUSED. REMOVE ASSOCIATED SWITCH BRANCH CIRCUIT WIRING AND CONDUIT IN ROOM WALL AND CEILING SPACE AS REQUIRED TO ALLOW THE CEILING AND EXISTING STRUCTURAL CLOSURE TO BE REMOVED. RE: 02/EL1.0GAW, NOTE 18 FOR SWITCH BRANCH CIRCUIT WIRING AND CONDUIT REINSTALLATION.

4. EXISTING RELAY CONTROLLED LIGHT FIXTURE ON NORMAL POWER TO REMAIN AND BE REUSED.

5. EXISTING UNSWITCHED LIGHT FIXTURE ON EMERGENCY POWER TO REMAIN AND BE REUSED.

6. EXISTING WALL MOUNTED EXIT SIGN TO REMAIN AND BE REUSED.

7. EXISTING CEILING MOUNTED EXIT SIGN TO REMAIN AND BE REUSED.

8. EXISTING WALL MOUNTED SECURITY CAMERA TO REMAIN AND BE REUSED.

9. EXISTING CEILING MOUNTED FIRE ALARM STROBE TO REMAIN AND BE REUSED.

10. EXISTING WALL MOUNTED FIRE ALARM SPEAKER/STROBE TO REMAIN AND BE REUSED. REMOVE ASSOCIATED FIRE ALARM WIRING AND CONDUIT IN ROOM WALL AND CEILING SPACE AS REQUIRED TO ALLOW THE CEILING AND EXISTING STRUCTURAL CLOSURE TO BE REMOVED. RE: 02/EL1.0GAW, NOTE 19 FOR FIRE ALARM WIRING AND CONDUIT REINSTALLATION.

11. EXISTING WALL MOUNTED FIRE ALARM STROBE TO REMAIN AND BE REUSED. REMOVE ASSOCIATED FIRE ALARM WIRING AND CONDUIT IN ROOM WALL AND CEILING SPACE AS REQUIRED TO ALLOW THE CEILING AND EXISTING STRUCTURAL CLOSURE TO BE REMOVED. RE: 02/EL1.0GAW, NOTE 20 FOR FIRE ALARM WIRING AND CONDUIT REINSTALLATION.

12. NEW FLUORESCENT LIGHT FIXTURE, TYPE AS INDICATED. FOR LIGHTING ALTERNATE E1, PROVIDE ALTERNATE TYPE A LED LIGHT FIXTURES AND ACCESSORIES AS REQUIRED FOR A COMPLETE INSTALLATION.

13. CIRCUIT NEW LIGHT FIXTURES TO EXISTING BRANCH CIRCUIT AND LIGHTING CONTROL RELAY PACK AND OVERRIDE SWITCHES WHICH SERVED THE EXISTING PENDANT LIGHT FIXTURES WHICH WERE REMOVED.

14. INDICATES REUSED EXISTING BRANCH CIRCUIT TO PANEL GHA CIRCUIT 5 VIA EXISTING LIGHTING CONTROL RELAY "a" AND EXISTING "a" OVERRIDE SWITCHES.

15. CIRCUIT NEW LIGHT FIXTURE UNSWITCHED TO REUSED EXISTING EMEGENCY LIGHTING BRANCH CIRCUIT.

16. INDICATES REUSED EXISTING EMERGENCY BRANCH CIRCUIT TO PANEL GHXA CIRCUIT 10.

17. AFTER THE NEW INFILL SLAB IS INSTALLED, REINSTALL EXISTING LIGHT FIXTURES IN NEW CEILING WITH NEW BRANCH CIRCUIT WIRING TO REUSED EXISTING BRANCH CIRCUITS TO MATCH ORIGINAL EXISTING INSTALLATION. FOR LIGHTING ALTERNATE E1, REPLACE EXISTING LIGHT FIXTURES WITH ALTERNATE TYPE A LED LIGHT FIXTURES AND ACCESSORIES AS REQUIRED FOR A COMPLETE INSTALLATION.

18. AFTER THE NEW INFILL SLAB IS INSTALLED, REINSTALL SWITCH BRANCH CIRCUIT WIRING AND CONDUIT IN ROOM WALL AND CEILING SPACE TO MATCH ORIGINAL EXISTING INSTALLATION.

19. AFTER THE NEW INFILL SLAB IS INSTALLED, REINSTALL FIRE ALARM SPEAKER/STROBE FIRE ALARM WIRING AND CONDUIT IN ROOM WALL AND CEILING SPACE TO MATCH ORIGINAL EXISTING INSTALLATION.

20. AFTER THE NEW INFILL SLAB IS INSTALLED, REINSTALL FIRE ALARM STROBE FIRE ALARM WIRING AND CONDUIT IN ROOM WALL AND CEILING SPACE TO MATCH ORIGINAL EXISTING INSTALLATION.

Philo Wilke Partnership

11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

Consultants

Structural Engineer
Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer
E&C Engineers and Consultants
TX Firm Registration No. F-003068
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY WILLIAM C. CLIFFORD 2016.07.08 11:30:08 -05'00'

E&C Engineers & Consultants Inc.
Texas Firm Registration No: F-003068

Issues / Revisions

No.	Date	Description
1	07/08/2016	Issue for Construction

Project

UT Health MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas Health Science Center at Houston

Drawing Name

Electrical Lighting Demolition and Alteration Plans Ground Floor West

Copyright (C) 2015 by E&C Engineers. All rights reserved.

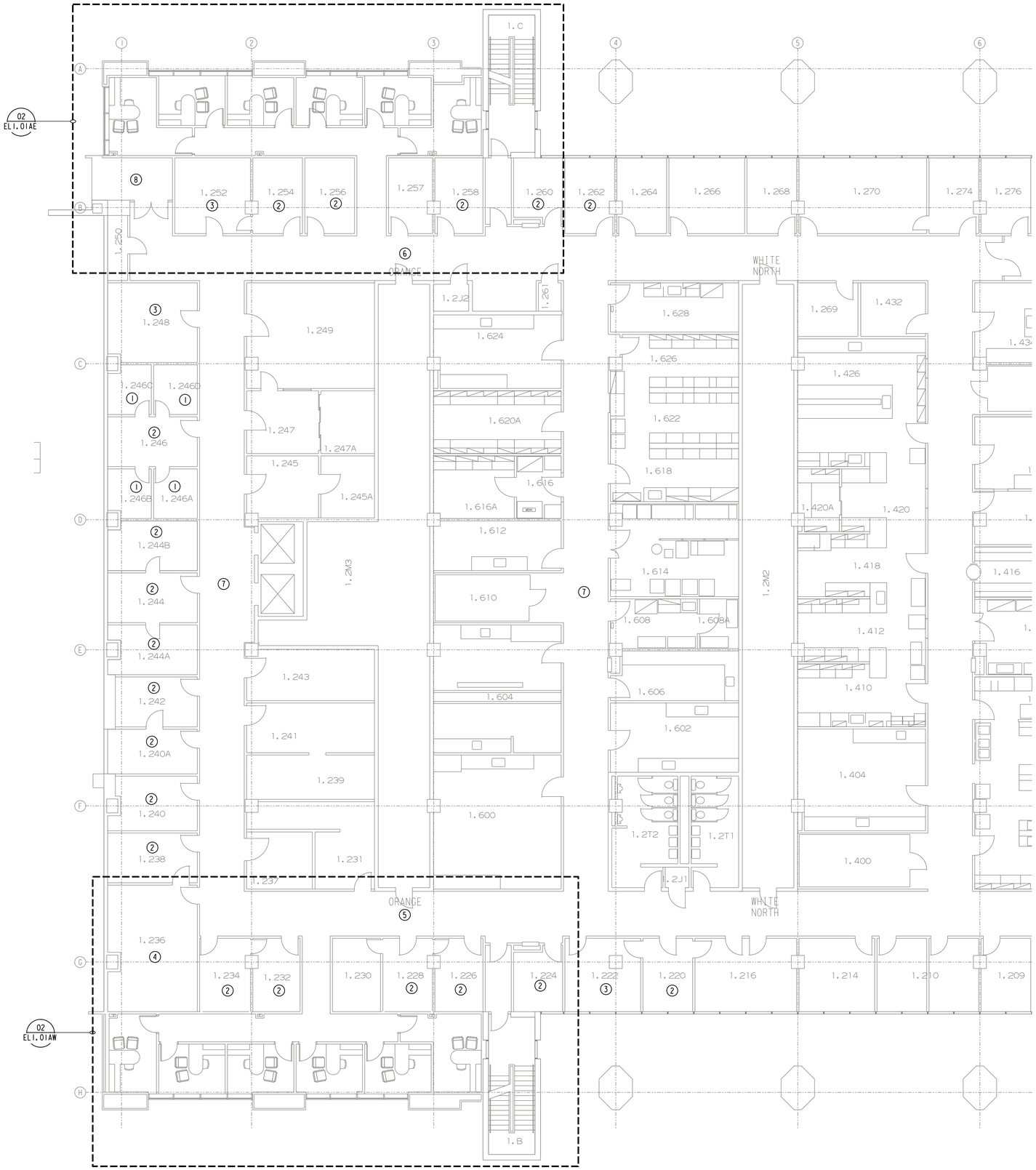
This document and the information herein is the property of E&C Engineers. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by E&C Engineers. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by E&C Engineers.

Print Date / Time: 7/8/2016 9:09:25 AM

P&W Commission Number: 3339.00

Sheet Number: EL1.0GAW

I:\3300\3339\MEP\ec\3339 EL1.0GAW.dgn
7/8/2016 9:09:25 AM



01 FIRST FLOOR - ELECTRICAL RENOVATION PLAN

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

GENERAL NOTES:

A. RE: MEP0.0 FOR ADDITIONAL GENERAL NOTES.

DRAWING NOTES:

1. BASE BID, NO LIGHTING CHANGES IN THIS ROOM. ALTERNATE 2, PROVIDE (1) NEW TYPE A LED LIGHT FIXTURE IN THE NEW REPLACEMENT CEILING IN THIS ROOM AND A NEW CREE NO. CFP-1-WH OR APPROVED EQUAL WALL SWITCH WITH WIRELESS DIMMING CAPABILITY TO CONTROL ROOM LIGHTING.

2. BASE BID, NO LIGHTING CHANGES IN THIS ROOM. ALTERNATE 2, PROVIDE (2) NEW TYPE A LED LIGHT FIXTURES IN THE NEW REPLACEMENT CEILING IN THIS ROOM AND A NEW CREE NO. CFP-1-WH OR APPROVED EQUAL WALL SWITCH WITH WIRELESS DIMMING CAPABILITY TO CONTROL ROOM LIGHTING.

3. BASE BID, NO LIGHTING CHANGES IN THIS ROOM. ALTERNATE 2, PROVIDE (4) NEW TYPE A LED LIGHT FIXTURES IN THE NEW REPLACEMENT CEILING IN THIS ROOM AND A NEW CREE NO. CFP-1-WH OR APPROVED EQUAL WALL SWITCH WITH WIRELESS DIMMING CAPABILITY TO CONTROL ROOM LIGHTING.

4. BASE BID, NO LIGHTING CHANGES IN THIS ROOM. ALTERNATE 2, PROVIDE (6) NEW TYPE A LED LIGHT FIXTURES IN THE NEW REPLACEMENT CEILING IN THIS ROOM AND A NEW CREE NO. CFP-1-WH OR APPROVED EQUAL WALL SWITCH WITH WIRELESS DIMMING CAPABILITY TO CONTROL ROOM LIGHTING.

5. BASE BID, REMOVE AND REINSTALL EXISTING CEILING MOUNTED LIGHTING FIXTURES IN CORRIDOR AS REQUIRED TO ALLOW NEW HVAC TERMINAL UNITS AND RELATED DUCTWORK, CONTROL WIRING AND CONTROL POWER TO BE INSTALLED. ALTERNATE 3, PROVIDE (8) NEW TYPE A LED LIGHT FIXTURES AND NEW TYPE X1 OR X2 LED EXIT SIGNS TO REPLACE EXISTING EXIT SIGNS IN THIS CORRIDOR. CIRCUIT NEW CORRIDOR LIGHT FIXTURES TO EXISTING NORMAL AND EMERGENCY BRANCH CIRCUITS WHICH SERVED EXISTING LIGHTING FIXTURES WHICH ARE BEING REPLACED. CIRCUIT NEW EXIT SIGNS TO EXISTING EMERGENCY CIRCUITS WHICH SERVE D THE EXISTING EXIT SIGNS.

6. BASE BID, REMOVE AND REINSTALL EXISTING CEILING MOUNTED LIGHTING FIXTURES IN CORRIDOR AS REQUIRED TO ALLOW NEW HVAC TERMINAL UNITS AND RELATED DUCTWORK, CONTROL WIRING AND CONTROL POWER TO BE INSTALLED. ALTERNATE 3, PROVIDE (10) NEW TYPE A LED LIGHT FIXTURES AND NEW TYPE X1 OR X2 LED EXIT SIGNS TO REPLACE EXISTING EXIT SIGNS IN THIS CORRIDOR. CIRCUIT NEW CORRIDOR LIGHT FIXTURES TO EXISTING NORMAL AND EMERGENCY BRANCH CIRCUITS WHICH SERVED EXISTING LIGHTING FIXTURES WHICH ARE BEING REPLACED. CIRCUIT NEW EXIT SIGNS TO EXISTING EMERGENCY CIRCUITS WHICH SERVE D THE EXISTING EXIT SIGNS.

7. BASE BID, REMOVE AND REINSTALL EXISTING CEILING MOUNTED LIGHTING FIXTURES IN CORRIDOR AS REQUIRED TO ALLOW NEW HVAC TERMINAL UNITS AND RELATED DUCTWORK, CONTROL WIRING AND CONTROL POWER TO BE INSTALLED. ALTERNATE 3, PROVIDE (12) NEW TYPE A LED LIGHT FIXTURES AND NEW TYPE X1 OR X2 LED EXIT SIGNS TO REPLACE EXISTING EXIT SIGNS IN THIS CORRIDOR. CIRCUIT NEW CORRIDOR LIGHT FIXTURES TO EXISTING NORMAL AND EMERGENCY BRANCH CIRCUITS WHICH SERVED EXISTING LIGHTING FIXTURES WHICH ARE BEING REPLACED. CIRCUIT NEW EXIT SIGNS TO EXISTING EMERGENCY CIRCUITS WHICH SERVE D THE EXISTING EXIT SIGNS.

8. REMOVE AND REINSTALL EXISTING CEILING MOUNTED LIGHTING FIXTURES IN CORRIDOR AS REQUIRED TO ALLOW NEW STRUCTURAL FRAMING TO BE INSTALLED.

Philo Wilke Partnership
11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

Consultants

Structural Engineer
Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer
E&C Engineers and Consultants
TX Firm Registration No. F-003068
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY WILLIAM C. CLIFFORD 44368 REGISTERED PROFESSIONAL ENGINEER

William C. Clifford 2016.07.08 11:32:19 -05'00'

E&C Engineers & Consultants Inc.
Texas Firm Registration No: F-003068

Issues / Revisions

No.	Date	Description
1	07/08/2016	Issue for Construction

Project

UT Health MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas
Health Science Center at Houston

Drawing Name

Electrical Lighting Alteration Plan First Floor - North

Copyright (C) 2015 by E&C Engineers. All rights reserved.

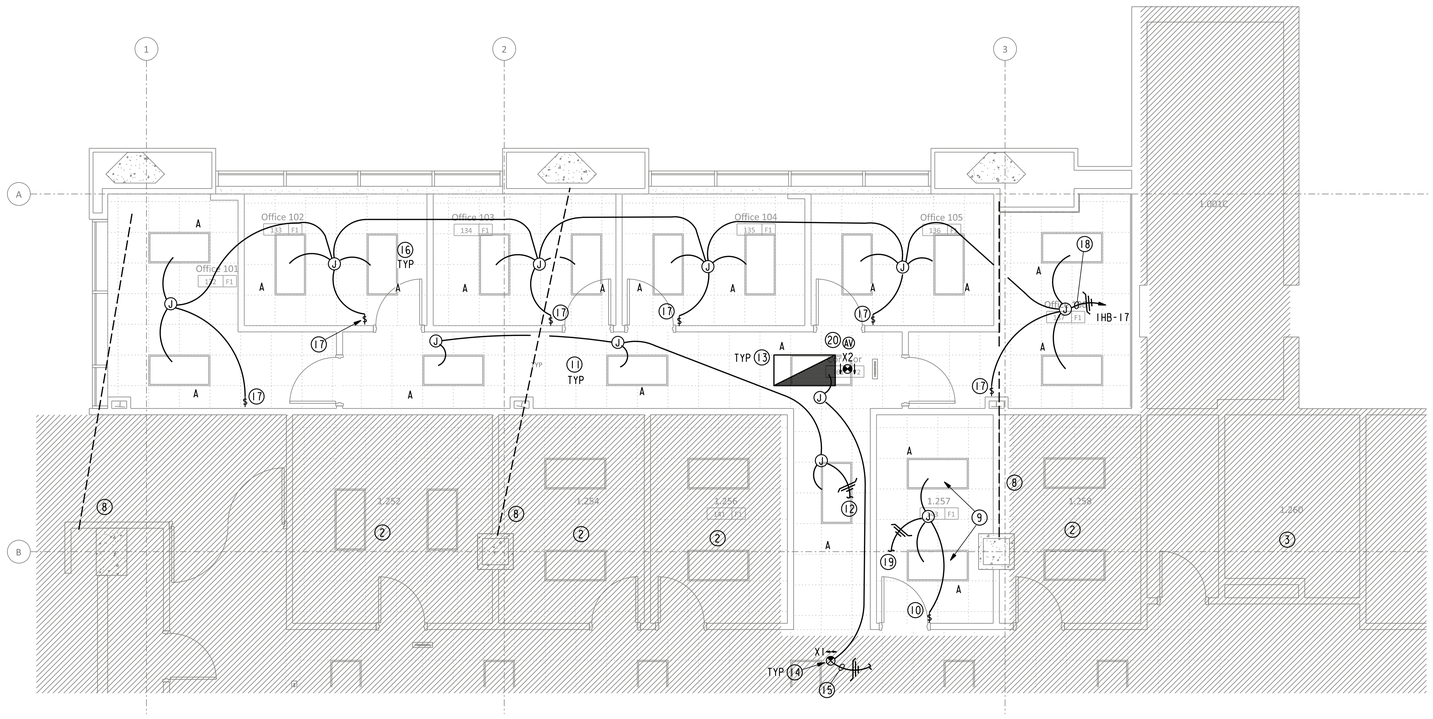
This document and the information herein is the property of E&C Engineers. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by E&C Engineers. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by E&C Engineers.

Print Date / Time: 7/8/2016 9:11:31 AM

PW Commission Number: 3339.00

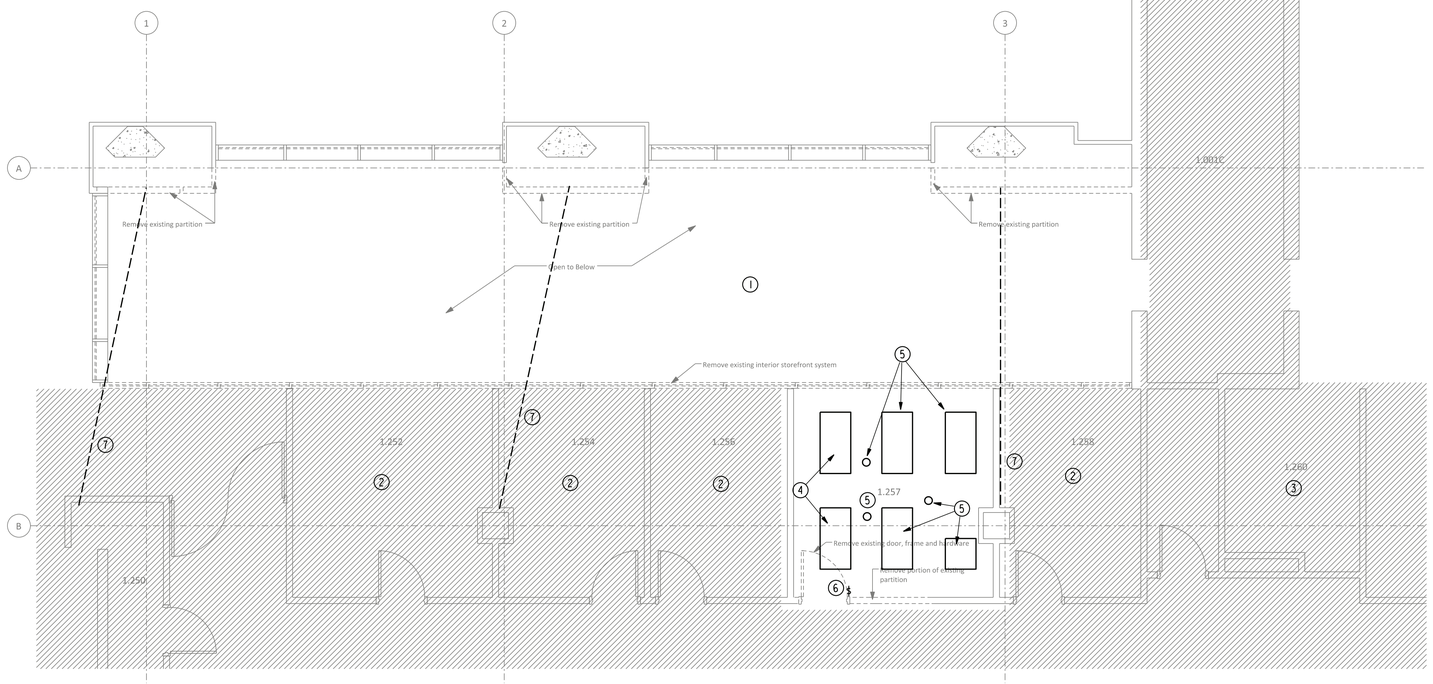
Sheet Number: EL1.01A

I:\3300\3339\MEP\Elec\3339 EL1.01A.dgn
7/8/2016
9:11:31 AM



02 FIRST FLOOR EAST - ELECTRICAL LIGHTING ALTERATION PLAN

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



01 FIRST FLOOR EAST - ELECTRICAL LIGHTING DEMOLITION PLAN

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

GENERAL NOTES:

A. RE: MEP0.0 FOR ADDITIONAL GENERAL NOTES.

B. THE BUILDING FIRE ALARM SYSTEM SHALL BE PREPARED BY A STATE OF TEXAS LICENSED FIRE ALARM PLANNING SUPERINTENDENT IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND APPLICABLE CODES AND STANDARDS. FIRE ALARM DEVICES SHOWN ON THE DRAWINGS ARE FOR GENERAL SCOPE AND COORDINATION ONLY AND ALL FIRE ALARM DEVICES REQUIRED BY THE PROJECT SPECIFICATIONS AND APPLICABLE CODES AND STANDARDS SHALL BE PROVIDED.

C. FIRE ALARM DEVICE LOCATIONS SHOWN ON THE DRAWINGS ARE FOR GENERAL COORDINATION PURPOSES ONLY. A STATE LICENSED FIRE ALARM CONTRACTOR SHALL DESIGN THE FIRE ALARM SYSTEM/SYSTEM MODIFICATIONS FOR THE SPACE AS SPECIFIED WITH ALL FIRE ALARM DEVICES AND FUNCTIONS, INCLUDING DEVICES AND FUNCTIONS IN ADDITION TO THOSE SHOWN ON THIS DRAWING, AS REQUIRED BY THE SPECIFICATIONS, APPLICABLE CODES AND STANDARDS AND THE AHJ.

D. ALL CEILING MOUNTED STROBES SHALL COMPLY WITH NFPA 72 FOR LAMP TYPE, LAMP COLOR, PULSE DURATION, INTENSITY, AND FLASH RATE. ALL CEILING MOUNTED STROBES SHALL COMPLY WITH NFPA 72 FOR THE CEILING HEIGHT THEY ARE MOUNTED IN. THE MAXIMUM ALLOWABLE SOUND LEVEL OF THE CEILING MOUNTED DEVICE SHALL BE NO MORE THAN 110DB AT THE MINIMUM HEARING DISTANCE FROM THE DEVICE.

E. ALL FIRE ALARM WIRING SHALL BE RUN PARALLEL AND PERPENDICULAR TO THE BUILDING LINES AND SHALL IN GENERAL FOLLOW THE SAME PATH AS THE NEW VOICE/DATA CABLING. NEW AND EXISTING FIRE ALARM WIRING SHALL BE SUPPORTED ON J HOOKS OR ATTACHED TO CEILING SUPPORT WIRES USING APPROVED CLIPS. NEW AND EXISTING FIRE ALARM WIRING SHALL NOT BE SUPPORTED ON THE CEILING GRID OR TILE.

DRAWING NOTES:

1. RE: EL1.0GAE FOR REMOVAL OF EXISTING PENDANT LIGHT FIXTURES.
2. FOR BASE BID EXISTING LIGHTING AND ASSOCIATED LIGHTING CONTROLS AND BRANCH CIRCUIT WIRING IN THIS ROOM TO REMAIN AND BE REUSED. REMOVE AND REINSTALL LIGHT FIXTURES AS REQUIRED TO INSTALL NEW HVAC TERMINAL UNITS AND DUCTWORK. RE: DEL1.01A AND EL1.01A FOR ALTERNATE 2 LIGHT FIXTURE AND LIGHTING CONTROL REPLACEMENT IN THIS ROOM.
3. FOR BASE BID EXISTING LIGHTING AND ASSOCIATED LIGHTING CONTROLS AND BRANCH CIRCUIT WIRING IN THIS ROOM TO REMAIN AND BE REUSED. RE: DEL1.01A AND EL1.01A FOR ALTERNATE 2 LIGHT FIXTURE AND LIGHTING CONTROL REPLACEMENT IN THIS ROOM.
4. REMOVE EXISTING OFFICE LIGHT FIXTURE AND ASSOCIATED BRANCH CIRCUIT WIRING.
5. FOR BASE BID, REMOVE EXISTING INCANDESCENT AND FLUORESCENT LIGHT FIXTURES AND ASSOCIATED BRANCH CIRCUIT AND SWITCH WIRING AS REQUIRED TO ALLOW NEW STRUCTURAL BEAM TO BE INSTALLED. RE: 02/EL1.01AE NOTE 9 FOR NEW LIGHT FIXTURES IN THIS ROOM.
6. REMOVE EXISTING LIGHT SWITCH, DIMMER AND ASSOCIATED BRANCH CIRCUIT WIRING. RE: 02/EL1.01AE NOTE 10 FOR NEW LIGHTING CONTROLS FOR ROOM LIGHTING.
7. RELOCATE EXISTING ABOVE CEILING ELECTRICAL WORK AS REQUIRED TO ALLOW NEW STRUCTURAL BEAM TO BE INSTALLED.
8. NEW OVERHEAD STRUCTURAL BEAM, RE: STRUCTURAL DRAWINGS.
9. FOR BASE BID, INSTALL FLUORESCENT LIGHT FIXTURES, TYPE AS NOTED, IN THIS ROOM. ALTERNATE 2, PROVIDE (2) NEW TYPE A LED LIGHT FIXTURES IN THIS ROOM.
10. FOR BASE BID, PROVIDE A NEW WATT STOPPER NO. DSW-100 OR APPROVED EQUAL DUAL TECHNOLOGY WALLBOX OCCUPANCY SENSOR SWITCH TO CONTROL ROOM LIGHTING. FOR ALTERNATE 2, PROVIDE A NEW CREE NO. CFP-1-WH OR APPROVED EQUAL WALL SWITCH WITH WIRELESS DIMMING CAPABILITY TO CONTROL ROOM LIGHTING.
11. NEW BASE BID 2 X 4 DIRECT/INDIRECT BASKET FLUORESCENT CORRIDOR LIGHT FIXTURE, TYPE AS NOTED, ON NORMAL POWER. PROVIDE ALTERNATE TYPE A LED LIGHT FIXTURES FOR ALTERNATE 1.
12. CIRCUIT TO EXISTING BRANCH CIRCUIT/LIGHTING CONTROLS SERVING EXISTING CORRIDOR NORMAL POWER LIGHT FIXTURES. CONFIRM THAT EXISTING BRANCH CIRCUIT HAS CAPACITY FOR NEW LOAD BEING ADDED PRIOR TO CONNECTING.
13. NEW BASE BID 2 X 4 DIRECT/INDIRECT BASKET FLUORESCENT CORRIDOR LIGHT FIXTURE, TYPE AS NOTED, ON EMERGENCY POWER. PROVIDE ALTERNATE TYPE A LED LIGHT FIXTURES FOR ALTERNATE 1.
14. NEW LED EXIT SIGN, TYPE AS NOTED.
15. CIRCUIT UNSWITCHED TO EXISTING BRANCH CIRCUIT SERVING EXISTING CORRIDOR EMERGENCY POWER LIGHT FIXTURES AND EXIT SIGNS. CONFIRM THAT EXISTING BRANCH CIRCUIT HAS CAPACITY FOR NEW LOAD BEING ADDED PRIOR TO CONNECTING.
16. NEW BASE BID 2 X 4 FLUORESCENT LIGHT FIXTURE, TYPE AS NOTED. PROVIDE ALTERNATE TYPE A LED LIGHT FIXTURES FOR ALTERNATE 1.
17. FOR BASE BID, PROVIDE A NEW WATT STOPPER NO. DSW-100 OR APPROVED EQUAL DUAL TECHNOLOGY WALLBOX OCCUPANCY SENSOR SWITCH TO CONTROL ROOM LIGHTING. FOR ALTERNATE 1, PROVIDE A NEW CREE NO. CFP-1-WH OR APPROVED EQUAL WALL SWITCH WITH WIRELESS DIMMING CAPABILITY TO CONTROL ROOM LIGHTING.
18. NEW BRANCH CIRCUIT HOMERUN TO A NEW 20A/1P CIRCUIT BREAKER INSTALLED IN AN EXISTING SPACE IN PANEL INDICATED. UPDATE PANEL SCHEDULE TO SHOW NEW LOADS ADDED. RE: 01/EP1.01A FOR APPROXIMATE PANEL LOCATION.
19. CIRCUIT NEW ROOM LIGHT FIXTURES TO EXISTING BRANCH CIRCUIT WHICH SERVED EXISTING OFFICE FLUORESCENT LIGHTING.
20. PROPOSED LOCATION FOR NEW CEILING MOUNTED FIRE ALARM SPEAKER/STROBE, RE: GENERAL NOTES B-C.

Philo Wilke Partnership

11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

Consultants

Structural Engineer
Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer
E&C Engineers and Consultants
TX Firm Registration No. F-003068
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY
William C. Clifford
2016.07.08
11:33:17 -05'00'

E&C Engineers & Consultants Inc.
Texas Firm Registration No: F-003068

Issues / Revisions

No.	Date	Description
1	07/08/2016	Issue for Construction

Project

UT Health MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas Health Science Center at Houston

Drawing Name

Electrical Lighting Demolition and Alteration Plans First Floor East

Copyright (C) 2015 by E&C Engineers. All rights reserved.

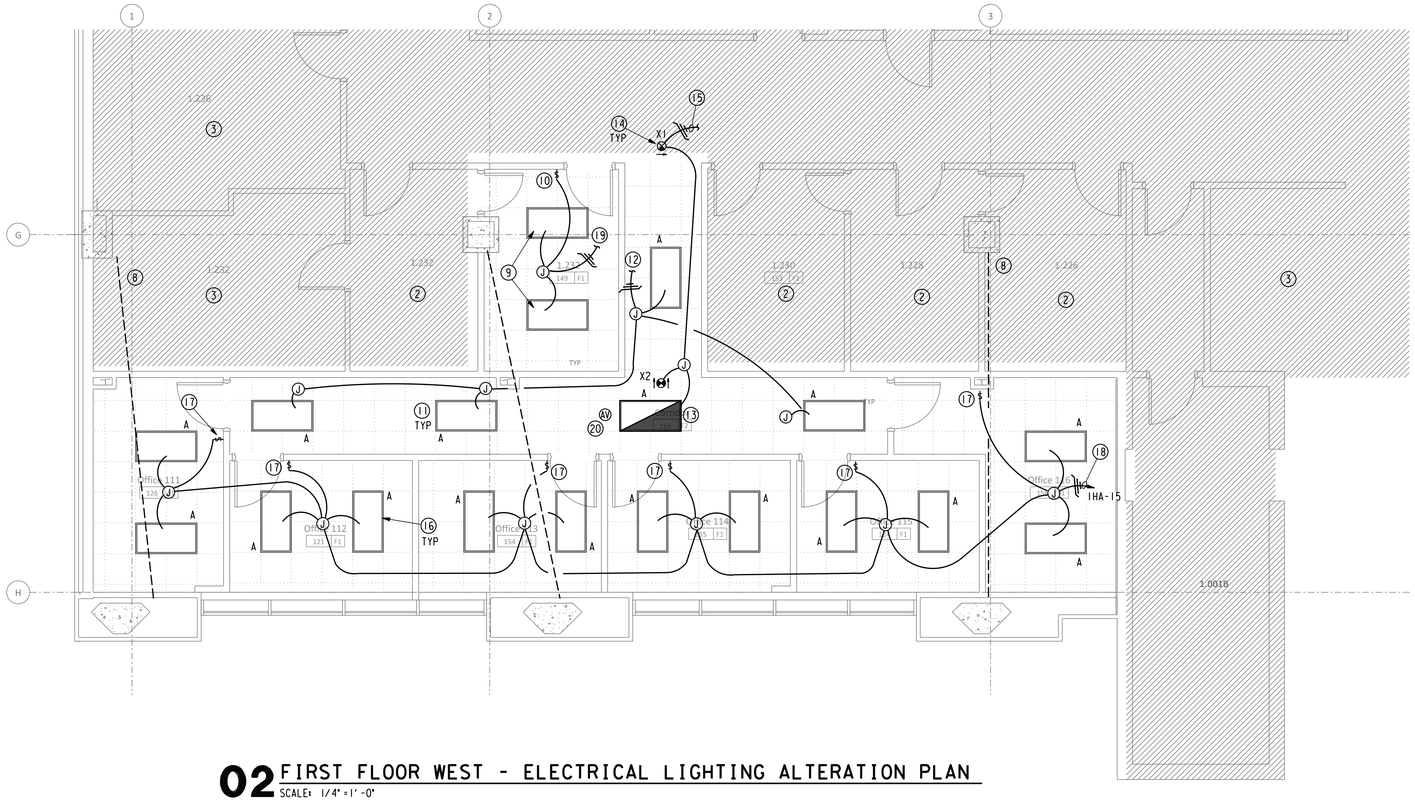
This document and the information herein is the property of E&C Engineers. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by E&C Engineers. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by E&C Engineers.

Print Date / Time: 7/8/2016 9:13:22 AM

PWW Commission Number: 3339.00

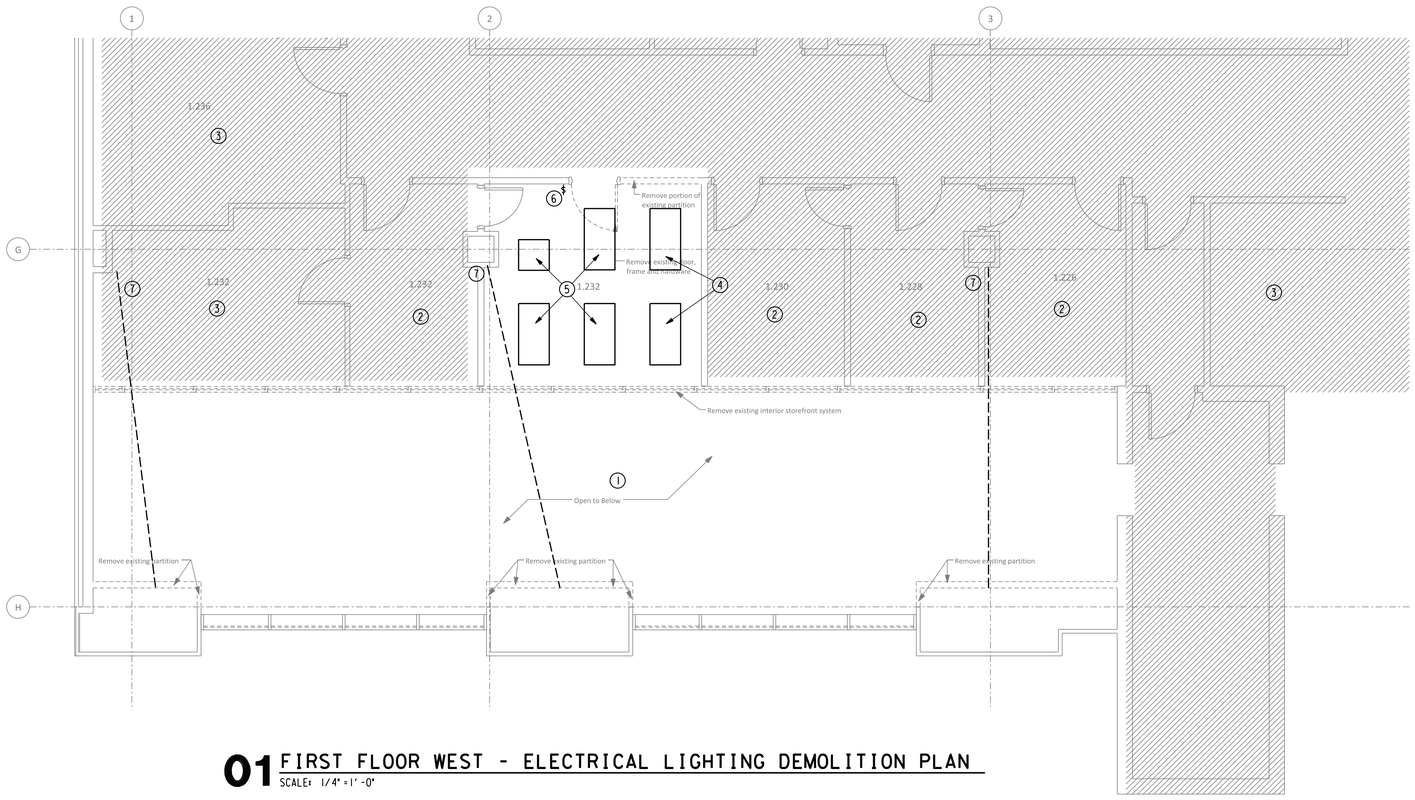
Sheet Number: EL1.01AE

I:\3300\3339\MEle\3339 EL1.01AE.dgn
7/8/2016
9:13:22 AM



02 FIRST FLOOR WEST - ELECTRICAL LIGHTING ALTERATION PLAN

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



01 FIRST FLOOR WEST - ELECTRICAL LIGHTING DEMOLITION PLAN

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

I:\3300\3339\ME\ec3339 EL1.01AW.dgn
7/8/2016 9:13:45 AM

GENERAL NOTES:

A. RE: MEP0.0 FOR ADDITIONAL GENERAL NOTES.

B. THE BUILDING FIRE ALARM SYSTEM SHALL BE PREPARED BY A STATE OF TEXAS LICENSED FIRE ALARM PLANNING SUPERINTENDENT IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND APPLICABLE CODES AND STANDARDS. FIRE ALARM DEVICES SHOWN ON THE DRAWINGS ARE FOR GENERAL SCOPE AND COORDINATION ONLY AND ALL FIRE ALARM DEVICES REQUIRED BY THE PROJECT SPECIFICATIONS AND APPLICABLE CODES AND STANDARDS SHALL BE PROVIDED.

C. FIRE ALARM DEVICE LOCATIONS SHOWN ON THE DRAWINGS ARE FOR GENERAL COORDINATION PURPOSES ONLY. A STATE LICENSED FIRE ALARM CONTRACTOR SHALL DESIGN THE FIRE ALARM SYSTEM/SYSTEM MODIFICATIONS FOR THE SPACE AS SPECIFIED WITH ALL FIRE ALARM DEVICES AND FUNCTIONS, INCLUDING DEVICES AND FUNCTIONS IN ADDITION TO THOSE SHOWN ON THIS DRAWING, AS REQUIRED BY THE SPECIFICATIONS, APPLICABLE CODES AND STANDARDS AND THE AHJ.

D. ALL CEILING MOUNTED STROBES SHALL COMPLY WITH NFPA 72 FOR LAMP TYPE, LAMP COLOR, PULSE DURATION, INTENSITY, AND FLASH RATE. ALL CEILING MOUNTED STROBES SHALL COMPLY WITH NFPA 72 FOR THE CEILING HEIGHT THEY ARE MOUNTED IN. THE MAXIMUM ALLOWABLE SOUND LEVEL OF THE CEILING MOUNTED DEVICE SHALL BE NO MORE THAN 110DB AT THE MINIMUM HEARING DISTANCE FROM THE DEVICE.

E. ALL FIRE ALARM WIRING SHALL BE RUN PARALLEL AND PERPENDICULAR TO THE BUILDING LINES AND SHALL IN GENERAL FOLLOW THE SAME PATH AS THE NEW VOICE/DATA CABLING. NEW AND EXISTING FIRE ALARM WIRING SHALL BE SUPPORTED ON J HOOKS OR ATTACHED TO CEILING SUPPORT WIRES USING APPROVED CLIPS. NEW AND EXISTING FIRE ALARM WIRING SHALL NOT BE SUPPORTED ON THE CEILING GRID OR TILE.

DRAWING NOTES:

1. RE: EL1.0GAW FOR REMOVAL OF EXISTING PENDANT LIGHT FIXTURES.
2. FOR BASE BID EXISTING LIGHTING AND ASSOCIATED LIGHTING CONTROLS AND BRANCH CIRCUIT WIRING IN THIS ROOM TO REMAIN AND BE REUSED. REMOVE AND REINSTALL LIGHT FIXTURES AS REQUIRED TO INSTALL NEW HVAC TERMINAL UNITS AND DUCTWORK. RE: DEL1.01A AND EL1.01A FOR ALTERNATE 2 LIGHT FIXTURE AND LIGHTING CONTROL REPLACEMENT IN THIS ROOM.
3. FOR BASE BID EXISTING LIGHTING AND ASSOCIATED LIGHTING CONTROLS AND BRANCH CIRCUIT WIRING IN THIS ROOM TO REMAIN AND BE REUSED. RE: DEL1.01A AND EL1.01A FOR ALTERNATE 2 LIGHT FIXTURE AND LIGHTING CONTROL REPLACEMENT IN THIS ROOM.
4. REMOVE EXISTING OFFICE LIGHT FIXTURE AND ASSOCIATED BRANCH CIRCUIT WIRING.
5. FOR BASE BID, REMOVE EXISTING INCANDESCENT AND FLUORESCENT LIGHT FIXTURES AND ASSOCIATED BRANCH CIRCUIT AND SWITCH WIRING AS REQUIRED TO ALLOW NEW STRUCTURAL BEAM TO BE INSTALLED. RE: 02/EL1.01AW NOTE 9 FOR NEW LIGHT FIXTURES IN THIS ROOM.
6. FOR BASE BID EXISTING LIGHT SWITCH AND ASSOCIATED BRANCH CIRCUIT WIRING TO REMAIN AND BE RECONNECTED TO CONTROL ROOM LIGHTING. RE: 02/EL1.01AW NOTE 10. RE: DEL1.01A AND EL1.01A FOR ALTERNATE 2 LIGHTING AND LIGHTING CONTROL REPLACEMENT IN THIS ROOM.
7. RELOCATE EXISTING ABOVE CEILING ELECTRICAL WORK AS REQUIRED TO ALLOW NEW STRUCTURAL BEAM TO BE INSTALLED.
8. NEW OVERHEAD STRUCTURAL BEAM(S). RE: STRUCTURAL DRAWINGS.
9. FOR BASE BID, INSTALL FLUORESCENT LIGHT FIXTURES, TYPE AS NOTED, IN THIS ROOM. ALTERNATE 2, PROVIDE (2) NEW TYPE A LED LIGHT FIXTURES IN THIS ROOM.
10. FOR BASE BID, PROVIDE A NEW WATT STOPPER NO. DSW-100 OR APPROVED EQUAL DUAL TECHNOLOGY WALLBOX OCCUPANCY SENSOR SWITCH TO CONTROL ROOM LIGHTING. FOR ALTERNATE 2, PROVIDE A NEW CREE NO. CFP-1-WH OR APPROVED EQUAL WALL SWITCH WITH WIRELESS DIMMING CAPABILITY TO CONTROL ROOM LIGHTING
11. NEW BASE BID 2 X 4 DIRECT/INDIRECT BASKET FLUORESCENT CORRIDOR LIGHT FIXTURE, TYPE AS NOTED, ON NORMAL POWER. PROVIDE ALTERNATE TYPE A LED LIGHT FIXTURES FOR ALTERNATE 1.
12. CIRCUIT TO EXISTING BRANCH CIRCUIT/LIGHTING CONTROLS SERVING EXISTING CORRIDOR NORMAL POWER LIGHT FIXTURES. CONFIRM THAT EXISTING BRANCH CIRCUIT HAS CAPACITY FOR NEW LOAD BEING ADDED PRIOR TO CONNECTING.
13. NEW BASE BID 2 X 4 DIRECT/INDIRECT BASKET FLUORESCENT CORRIDOR LIGHT FIXTURE, TYPE AS NOTED, ON EMERGENCY POWER. PROVIDE ALTERNATE TYPE A LED LIGHT FIXTURES FOR ALTERNATE 1.
14. NEW LED EXIT SIGN, TYPE AS NOTED.
15. CIRCUIT UNSWITCHED TO EXISTING BRANCH CIRCUIT SERVING EXISTING CORRIDOR EMERGENCY POWER LIGHT FIXTURES AND EXIT SIGNS. CONFIRM THAT EXISTING BRANCH CIRCUIT HAS CAPACITY FOR NEW LOAD BEING ADDED PRIOR TO CONNECTING.
16. NEW BASE BID 2 X 4 FLUORESCENT LIGHT FIXTURE, TYPE AS NOTED. PROVIDE ALTERNATE TYPE A LED LIGHT FIXTURES FOR ALTERNATE 1.
17. FOR BASE BID, PROVIDE A NEW WATT STOPPER NO. DSW-100 OR APPROVED EQUAL DUAL TECHNOLOGY WALLBOX OCCUPANCY SENSOR SWITCH TO CONTROL ROOM LIGHTING. FOR ALTERNATE 1, PROVIDE A NEW CREE NO. CFP-1-WH OR APPROVED EQUAL WALL SWITCH WITH WIRELESS DIMMING CAPABILITY TO CONTROL ROOM LIGHTING.
18. NEW BRANCH CIRCUIT HOMERUN TO A NEW 20A/1P CIRCUIT BREAKER INSTALLED IN AN EXISTING SPACE IN PANEL INDICATED. UPDATE PANEL SCHEDULE TO SHOW NEW LOADS ADDED. RE: 01/EP1.01A FOR APPROXIMATE PANEL LOCATION.
19. CIRCUIT NEW ROOM LIGHT FIXTURES TO EXISTING BRANCH CIRCUIT WHICH SERVED EXISTING OFFICE FLUORESCENT LIGHTING.
20. PROPOSED LOCATION FOR NEW CEILING MOUNTED FIRE ALARM SPEAKER/STROBE, RE: GENERAL NOTES B-G.

Philo Wilke Partnership
11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

Consultants

Structural Engineer
Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer
E&C Engineers and Consultants
TX Firm Registration No. F-003068
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY WILLIAM C. CLIFFORD 44368 REGISTERED PROFESSIONAL ENGINEER

William C. Clifford
2016.07.08
11:34:03 -05'00'

E&C Engineers & Consultants Inc.
Texas Firm Registration No: F-003068

Issues / Revisions

No.	Date	Description
1	07/08/2016	Issue for Construction

Project

UT Health MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas Health Science Center at Houston

Drawing Name

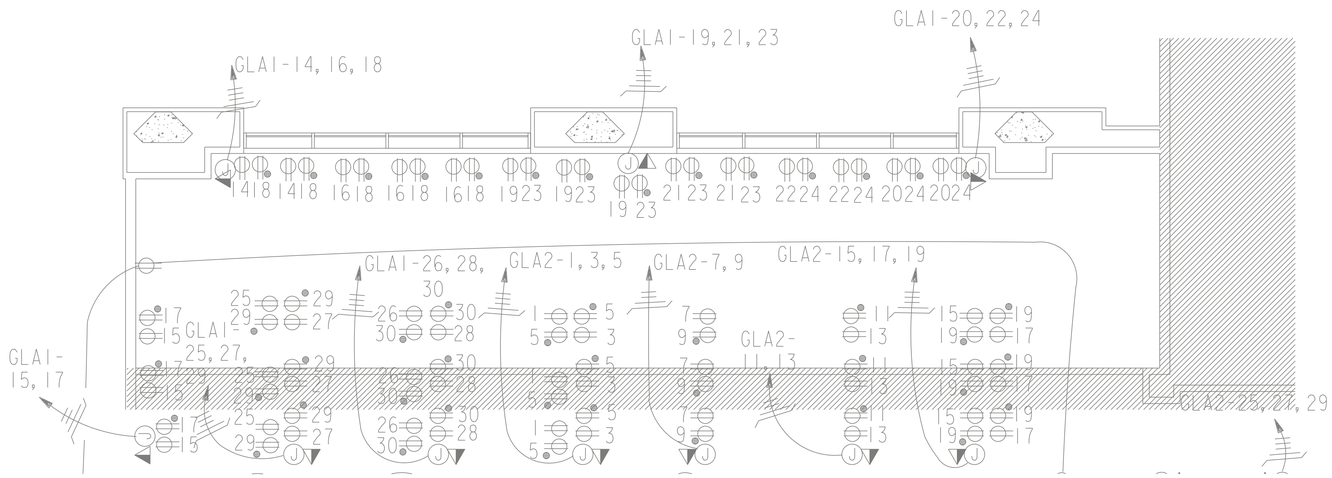
Electrical Lighting Demolition and Alteration Plans First Floor West

Copyright (C) 2015 by E&C Engineers. All rights reserved.

This document and the information herein is the property of E&C Engineers. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by E&C Engineers. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by E&C Engineers.

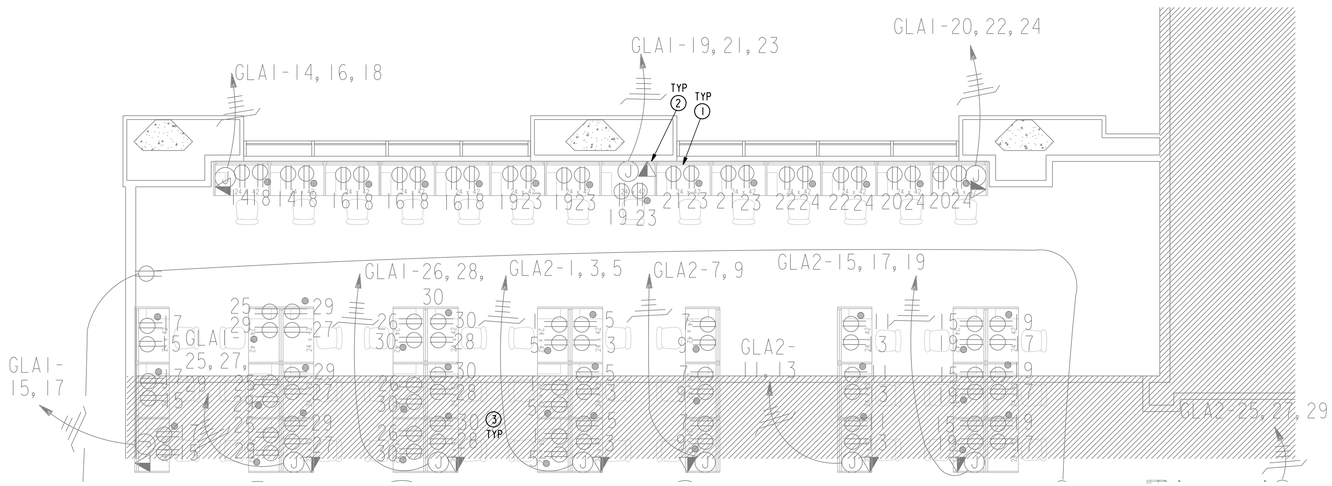
Print Date / Time: 7/8/2016 9:13:45 AM

P&W Commission Number	Sheet Number
3339.00	EL1.01AW



02 GROUND FLOOR EAST - ELECTRICAL POWER ALTERATION PLAN

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



01 GROUND FLOOR EAST - ELECTRICAL POWER DEMOLITION PLAN

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

GENERAL NOTES:

A. RE: MEP0.0 FOR ADDITIONAL GENERAL NOTES.

DRAWING NOTES:

1. EXISTING RECEPTACLE AND BRANCH CIRCUIT WIRING TO REMAIN AND BE REUSED.
2. EXISTING VOICE/DATA OUTLET AND RELATED VOICE/DATA WIRING AND CONDUIT TO REMAIN AND BE REUSED.
3. RELOCATE EXISTING ABOVE CEILING CONDUIT AND WIRING AS REQUIRED TO ALLOW THE NEW INFILL STRUCTURE AND RELATED CONSTRUCTION TO BE INSTALLED.

Philo Wilke Partnership

11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

Consultants

Structural Engineer

Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer

E&C Engineers and Consultants
TX Firm Registration No. F-003068
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

STATE OF TEXAS
WILLIAM C CLIFFORD
44368
REGISTERED
PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY
William C. Clifford
2016.07.08
11:34:38 -05'00'

E&C Engineers & Consultants Inc.
Texas Firm Registration No: F-003068

Issues / Revisions

No.	Date	Description
1	07/08/2016	Issue for Construction

Project

UT Health MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas
Health Science Center at Houston

Drawing Name

Electrical Power Demolition and Alteration Plans Ground Floor East

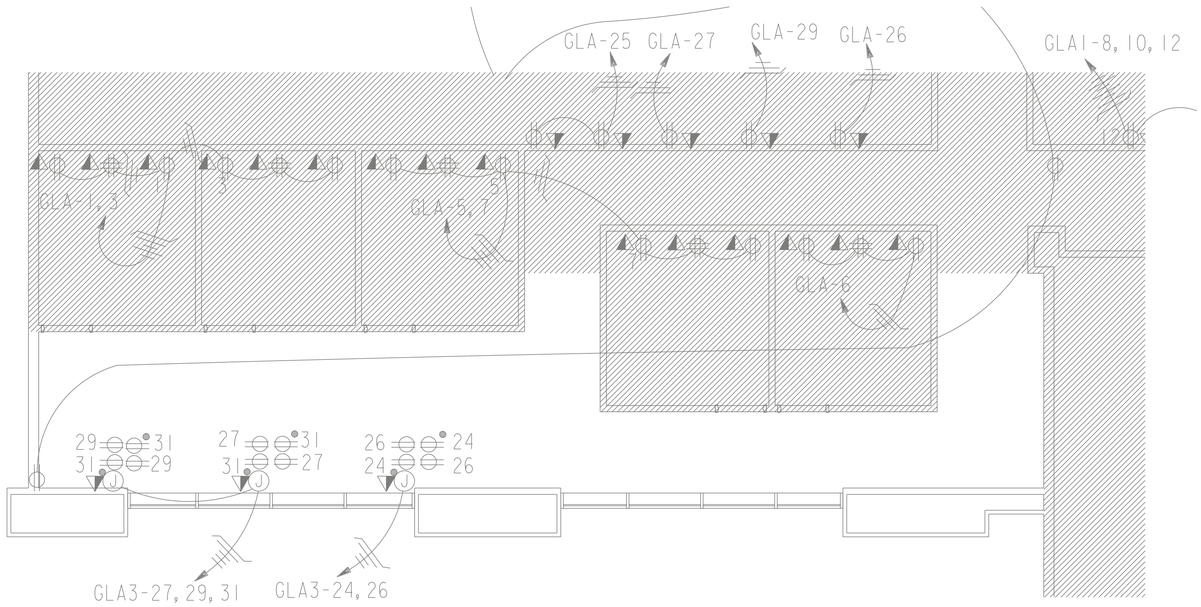
Copyright (C) 2015 by E&C Engineers. All rights reserved.

This document and the information herein is the property of E&C Engineers. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by E&C Engineers. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by E&C Engineers.

Print Date / Time: 7/8/2016 9:09:57 AM

P&W Commission Number	Sheet Number
3339.00	EP1.0GAE

I:\3300\3339\MElec\3339 EP1.0GAE.dgn
7/8/2016 9:09:57 AM



02 GROUND FLOOR WEST - ELECTRICAL POWER ALTERATION PLAN

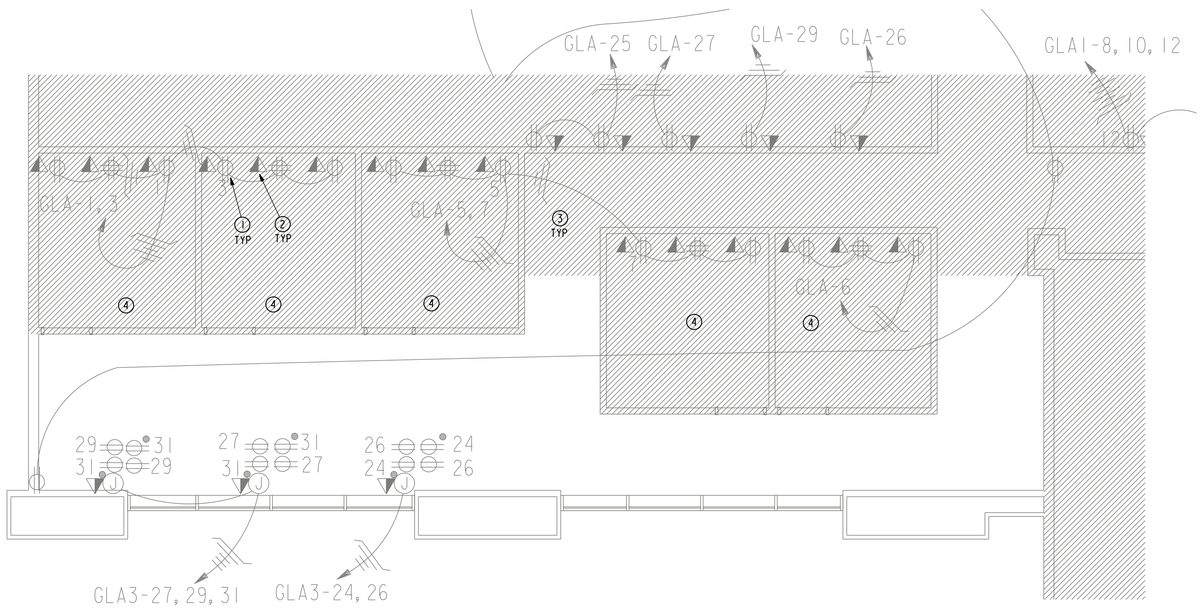
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

A. RE: MEP0.0 FOR ADDITIONAL GENERAL NOTES.

DRAWING NOTES:

1. EXISTING RECEPTACLE AND BRANCH CIRCUIT WIRING TO REMAIN AND BE REUSED.
2. EXISTING VOICE/DATA OUTLET AND RELATED VOICE/DATA WIRING AND CONDUIT TO REMAIN AND BE REUSED.
3. RELOCATE EXISTING ABOVE CEILING CONDUIT AND WIRING AS REQUIRED TO ALLOW THE NEW INFILL STRUCTURE AND RELATED CONSTRUCTION TO BE INSTALLED.
4. REMOVE AND REINSTALL OR RELOCATE EXISTING WIRING AND CONDUIT IN ROOM WALL AND CEILING SPACE AS REQUIRED TO ALLOW THE CEILING AND EXISTING STRUCTURAL CLOSURE TO BE REMOVED AND THE NEW INFILL STRUCTURE AND RELATED CONSTRUCTION TO BE INSTALLED.



01 GROUND FLOOR WEST - ELECTRICAL POWER DEMOLITION PLAN

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

I:\3300\3339\MElec\3339 EP1.0GAW.dgn
7/8/2016 9:10:35 AM

Philo Wilke Partnership

11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

Consultants

Structural Engineer

Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer

E&C Engineers and Consultants
TX Firm Registration No. F-003068
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

STATE OF TEXAS · WILLIAM C CLIFFORD · 44368 · REGISTERED · PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY William C. Clifford 2016.07.08 11:35:12 -05'00'

E&C Engineers & Consultants Inc.
Texas Firm Registration No: F-003068

Issues / Revisions

No.	Date	Description
1	07/08/2016	Issue for Construction

Project

UT Health MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas Health Science Center at Houston

Drawing Name

Electrical Power Demolition and Alteration Plans Ground Floor West

Copyright (C) 2015 by E&C Engineers. All rights reserved.

This document and the information herein is the property of E&C Engineers. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by E&C Engineers. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by E&C Engineers.

Print Date / Time: 7/8/2016 9:10:35 AM

P&W Commission Number: 3339.00

Sheet Number: EP1.0GAW

01 FIRST FLOOR - ELECTRICAL RENOVATION PLAN

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

GENERAL NOTES:

A. RE: MEP0.0 FOR ADDITIONAL GENERAL NOTES.

DRAWING NOTES:

1. TOGGLE SWITCH DISCONNECT AND 120 VOLT POWER CONNECTION TO NEW HVAC TERMINAL UNIT.
2. NEW BRANCH CIRCUIT HOMERUN TO NEW 20A/1P CIRCUIT BREAKER INSTALLED IN PANEL INDICATED.
3. APPROXIMATE LOCATION OF EXISTING 277/480V, 3P-4W PANEL 1HA. INSTALL A NEW 20A/1P CIRCUIT BREAKER AT CIRCUIT 15. UPDATE PANEL SCHEDULE TO SHOW NEW LOADS ADDED.
4. APPROXIMATE LOCATION OF EXISTING 120/208V, 3P-4W PANEL 1LA. INSTALL NEW 20A/1P CIRCUIT BREAKERS AT CIRCUITS 1, 2, 3 AND 4. UPDATE PANEL SCHEDULE TO SHOW NEW LOADS ADDED.
5. APPROXIMATE LOCATION OF EXISTING 277/480V, 3P-4W PANEL 1HB. INSTALL A NEW 20A/1P CIRCUIT BREAKER AT CIRCUIT 17. UPDATE PANEL SCHEDULE TO SHOW NEW LOADS ADDED.
6. APPROXIMATE LOCATION OF EXISTING 120/208V, 3P-4W PANEL 1LB. INSTALL NEW 20A/1P CIRCUIT BREAKERS AT CIRCUITS 28 AND 30. UPDATE PANEL SCHEDULE TO SHOW NEW LOADS ADDED.
7. BASE BID, REMOVE AND REINSTALL EXISTING CEILING MOUNTED ELECTRICAL DEVICES IN CORRIDOR AS REQUIRED TO ALLOW NEW HVAC TERMINAL UNITS AND RELATED DUCTWORK, CONTROL WIRING AND CONTROL POWER TO BE INSTALLED. ALTERNATE 3 REMOVE ALL EXISTING CEILING MOUNTED ELECTRICAL DEVICES FOR CORRIDOR CEILING REPLACEMENT AND REINSTALL IN NEW CORRIDOR CEILING.
8. REMOVE AND REINSTALL EXISTING CEILING MOUNTED ELECTRICAL DEVICES IN CORRIDOR AS REQUIRED TO ALLOW NEW STRUCTURAL FRAMING TO BE INSTALLED.

Philo Wilke Partnership

11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

Consultants

Structural Engineer
Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer
E&C Engineers and Consultants
TX Firm Registration No. F-003068
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY WILLIAM C. CLIFFORD, 44368, REGISTERED PROFESSIONAL ENGINEER, STATE OF TEXAS

William C. Clifford
2016.07.08 11:35:58 -05'00'

E&C Engineers & Consultants Inc.
Texas Firm Registration No: F-003068

Issues / Revisions

No.	Date	Description
1	07/08/2016	Issue for Construction

Project

UT Health MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas Health Science Center at Houston

Drawing Name

Electrical Power Alteration Plan First Floor - North

Copyright (C) 2015 by E&C Engineers. All rights reserved.

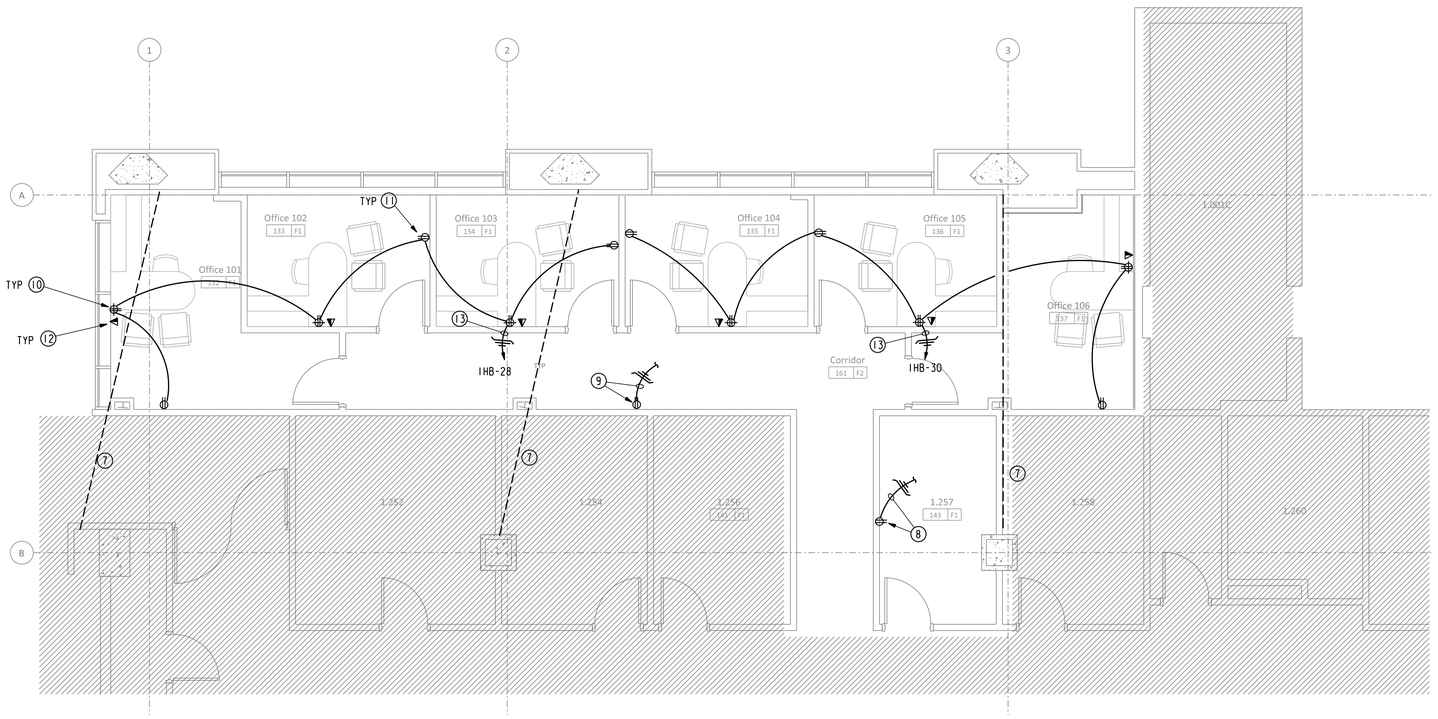
This document and the information herein is the property of E&C Engineers. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by E&C Engineers. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by E&C Engineers.

Print Date / Time: 7/8/2016 9:14:16 AM

P&W Commission Number: 3339.00

Sheet Number: EP1.01A

I:\3300\3339\MEElec\3339 EP1.01A.dgn
7/8/2016 9:14:16 AM



02 FIRST FLOOR EAST - ELECTRICAL POWER ALTERATION PLAN

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

GENERAL NOTES:

A. RE: MEP0.0 FOR ADDITIONAL GENERAL NOTES.

DRAWING NOTES:

(1) EXISTING ELECTRICAL TO REMAIN AND BE REUSED.

(2) REMOVE EXISTING OFFICE RECEPTACLE AND ASSOCIATED BRANCH CIRCUIT WIRING. RECONNECT BRANCH CIRCUIT AS REQUIRED TO MAINTAIN CONTINUITY.

(3) REMOVE EXISTING VOICE/DATA OUTLET. COORDINATE SEPARATE VOICE/DATA CABLING WORK WITH UTHEALTH PROJECT MANAGER.

(4) EXISTING OFFICE RECEPTACLE AND ASSOCIATED BRANCH CIRCUIT WIRING TO REMAIN AND BE REUSED.

(5) EXISTING OFFICE VOICE/DATA OUTLET TO REMAIN. COORDINATE SEPARATE VOICE/DATA CABLING WORK WITH UTHEALTH PROJECT MANAGER.

(6) RELOCATE EXISTING ABOVE CEILING ELECTRICAL WORK AS REQUIRED TO ALLOW NEW STRUCTURAL BEAM TO BE INSTALLED.

(7) NEW OVERHEAD STRUCTURAL BEAM(S). RE: STRUCTURAL DRAWINGS.

(8) NEW OFFICE RECEPTACLE CIRCUITED TO EXISTING BRANCH CIRCUIT WHICH SERVES THIS OFFICE.

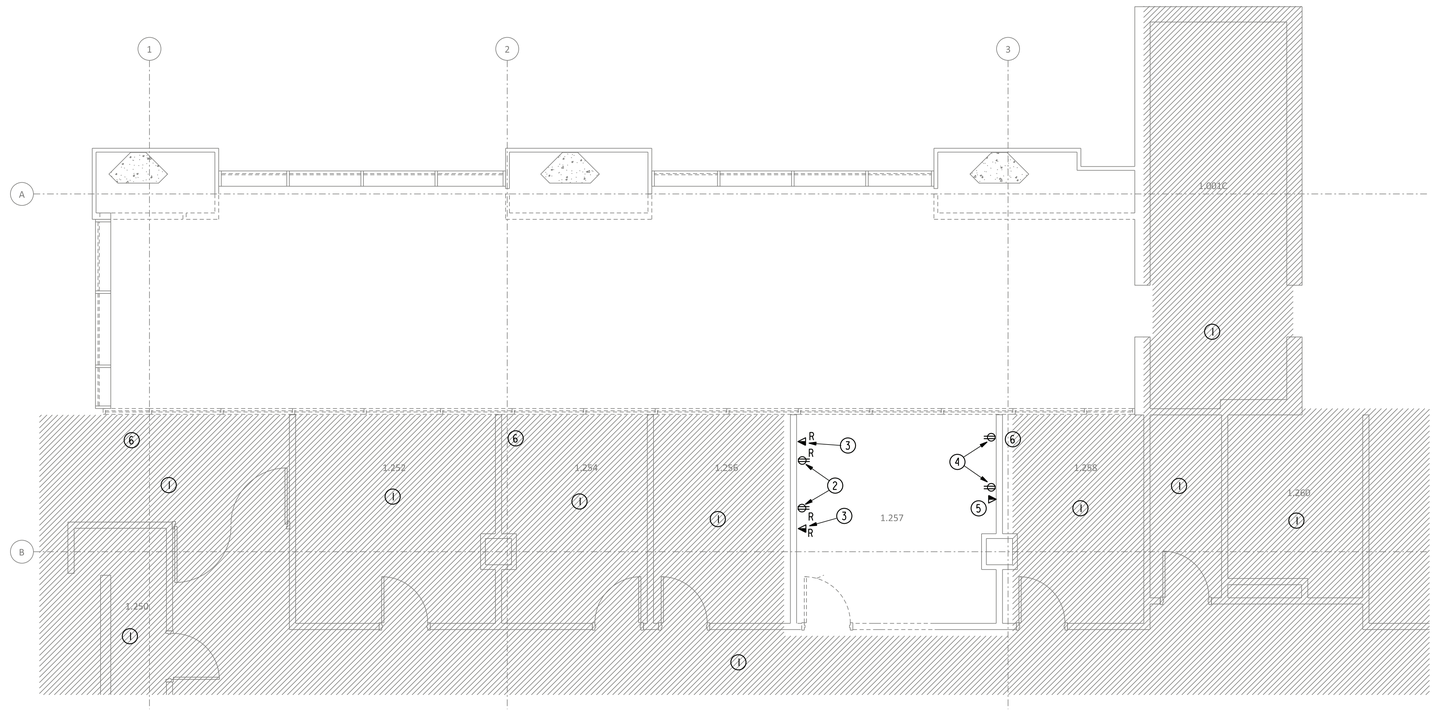
(9) NEW CORRIDOR RECEPTACLE CIRCUITED TO EXISTING BRANCH CIRCUIT WHICH SERVES ADJACENT CORRIDOR RECEPTACLES.

(10) NEW NEMA 5-15R FOURPLEX RECEPTACLE AT 18" AFF.

(11) NEW NEMA 5-15R DUPLEX RECEPTACLE AT 18" AFF.

(12) NEW VOICE/DATA OUTLET ROUGH-IN AT 18" AFF. PROVIDE A SINGLE GANG DRY-WALL RING WITH TWO PULLCORDS VIA A GROMMET IN THE PARTITION TOP PLATE TO AN ACCESSIBLE CEILING SPACE. COORDINATE SEPARATE VOICE/DATA CABLING WORK WITH UTHEALTH PROJECT MANAGER.

(13) NEW BRANCH CIRCUIT HOMERUN TO A NEW 20A/1P CIRCUIT BREAKER INSTALLED IN AN EXISTING SPACE IN PANEL INDICATED. UPDATE PANEL SCHEDULE TO SHOW NEW LOADS ADDED. RE: 01/EP1.01A FOR APPROXIMATE PANEL LOCATION.



01 FIRST FLOOR EAST - ELECTRICAL POWER DEMOLITION PLAN

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

Philo Wilke Partnership

11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

Consultants

Structural Engineer
Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer
E&C Engineers and Consultants
TX Firm Registration No. F-003068
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY STATE OF TEXAS, WILLIAM C CLIFFORD, 44368, REGISTERED, PROFESSIONAL ENGINEER

William C. Clifford
2016.07.08
11:36:35 -05'00'

E&C Engineers & Consultants Inc.
Texas Firm Registration No: F-003068

Issues / Revisions

No.	Date	Description
1	07/08/2016	Issue for Construction

Project

UT Health MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas
Health Science Center at Houston

Drawing Name

Electrical Power Demolition and Alteration Plans First Floor East

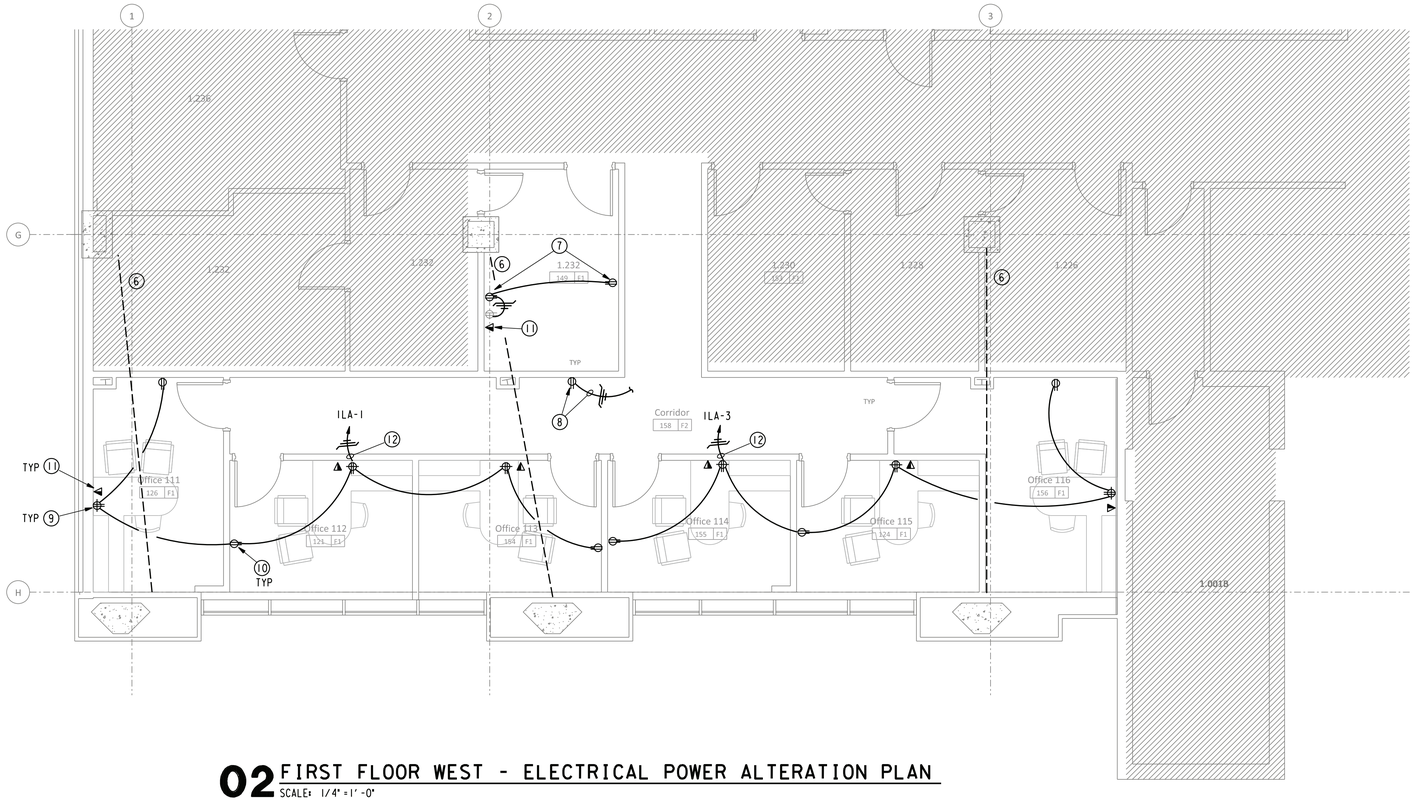
Copyright (C) 2015 by E&C Engineers. All rights reserved.

This document and the information herein is the property of E&C Engineers. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by E&C Engineers. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by E&C Engineers.

Print Date / Time: 7/8/2016 9:14:51 AM

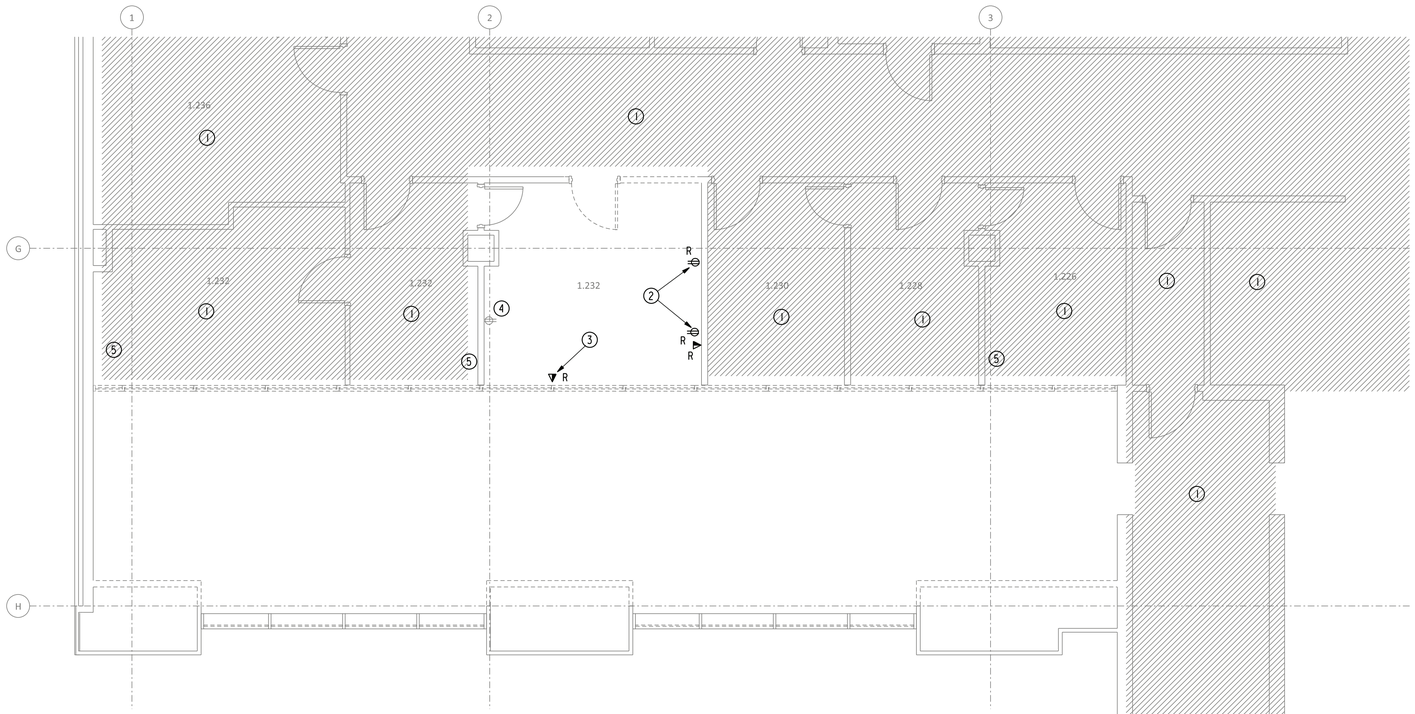
P&W Commission Number	Sheet Number
3339.00	EP1.01AE

I:\3300\3339\MElec\3339 EP1.01AE.dgn
7/8/2016 9:14:51 AM



02 FIRST FLOOR WEST - ELECTRICAL POWER ALTERATION PLAN

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



01 FIRST FLOOR WEST - ELECTRICAL POWER DEMOLITION PLAN

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

GENERAL NOTES:

A. RE: MEP0.0 FOR ADDITIONAL GENERAL NOTES.

DRAWING NOTES:

1. EXISTING ELECTRICAL TO REMAIN AND BE REUSED.
2. REMOVE EXISTING OFFICE RECEPTACLE AND ASSOCIATED BRANCH CIRCUIT WIRING. RECONNECT BRANCH CIRCUIT AS REQUIRED TO MAINTAIN CONTINUITY.
3. REMOVE EXISTING VOICE/DATA OUTLET. COORDINATE SEPARATE VOICE/DATA CABLING WORK WITH UTHEALTH PROJECT MANAGER.
4. EXISTING OFFICE RECEPTACLE AND ASSOCIATED BRANCH CIRCUIT WIRING TO REMAIN AND BE REUSED.
5. RELOCATE EXISTING ABOVE CEILING ELECTRICAL WORK AS REQUIRED TO ALLOW NEW STRUCTURAL BEAM TO BE INSTALLED.
6. NEW OVERHEAD STRUCTURAL BEAM(S), RE: STRUCTURAL DRAWINGS.
7. NEW OFFICE RECEPTACLE CIRCUITED TO EXISTING BRANCH CIRCUIT WHICH SERVES THIS OFFICE.
8. NEW CORRIDOR RECEPTACLE CIRCUITED TO EXISTING BRANCH CIRCUIT WHICH SERVES ADJACENT CORRIDOR RECEPTACLES.
9. NEW NEMA 5-15R FOURPLEX RECEPTACLE AT 18" AFF.
10. NEW NEMA 5-15R DUPLEX RECEPTACLE AT 18" AFF.
11. NEW VOICE/DATA OUTLET ROUGH-IN AT 18" AFF. PROVIDE A SINGLE GANG DRY-WALL RING WITH TWO PULLCORDS VIA A GROMMET IN THE PARTITION TOP PLATE TO AN ACCESSIBLE CEILING SPACE. COORDINATE SEPARATE VOICE/DATA CABLING WORK WITH UTHEALTH PROJECT MANAGER.
12. NEW BRANCH CIRCUIT HOMERUN TO A NEW 20A/1P CIRCUIT BREAKER INSTALLED IN AN EXISTING SPACE IN PANEL INDICATED. UPDATE PANEL SCHEDULE TO SHOW NEW LOADS ADDED. RE: 01/EP1.01A FOR APPROXIMATE PANEL LOCATION.

Philo Wilke Partnership

11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

Consultants

Structural Engineer
Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer
E&C Engineers and Consultants
TX Firm Registration No. F-003068
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

STATE OF TEXAS · WILLIAM C CLIFFORD · 44368 · REGISTERED · PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY William C. Clifford 2016.07.08 11:37:21 -05'00'

E&C Engineers & Consultants Inc.
Texas Firm Registration No: F-003068

Issues / Revisions

No.	Date	Description
1	07/08/2016	Issue for Construction

Project

UT Health MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas
Health Science Center at Houston

Drawing Name

Electrical Power Demolition and Alteration Plans First Floor West

Copyright (C) 2015 by E&C Engineers. All rights reserved.

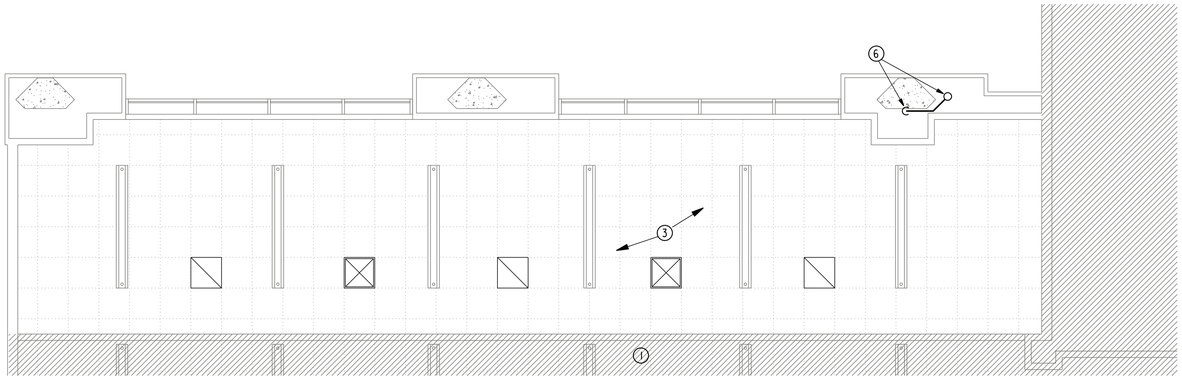
This document and the information herein is the property of E&C Engineers. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by E&C Engineers. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by E&C Engineers.

Print Date / Time: 7/8/2016 9:15:10 AM

P&W Commission Number: 3339.00

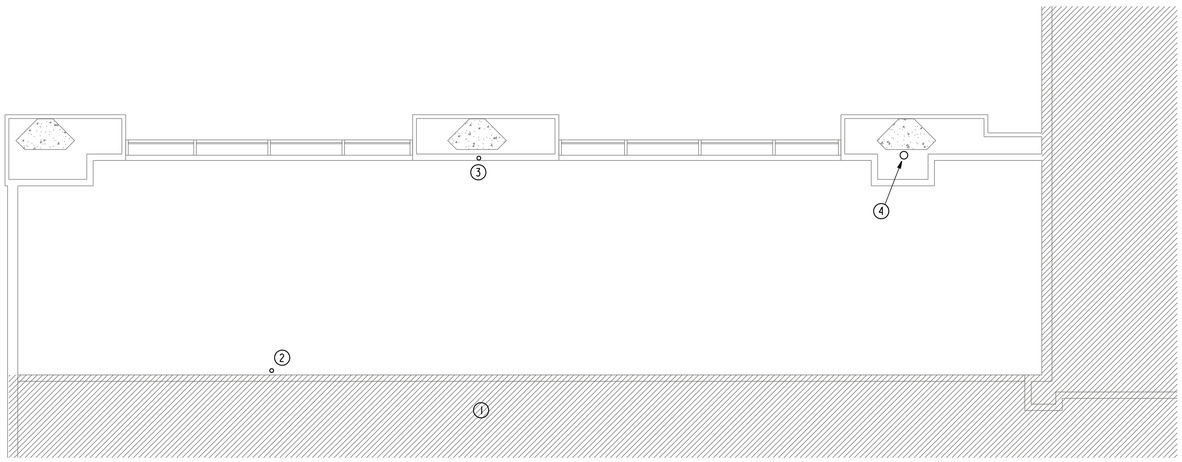
Sheet Number: EP1.01AW

I:\3300\3339\MElec\3339 EP1.01AW.dgn
7/8/2016 9:15:10 AM



02 GROUND FLOOR EAST - PLUMBING ALTERATION PLAN

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



01 GROUND FLOOR EAST - PLUMBING DEMOLITION PLAN

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

GENERAL NOTES:

A. REF MEP0.0 FOR ADDITIONAL GENERAL NOTES.

B. MODIFICATIONS AND ADDITIONS TO THE EXISTING BUILDING FIRE PROTECTION AND FIRE SPRINKLER SYSTEMS SHALL BE DESIGNED, PREPARED AND SIGNED BY A STATE OF TEXAS LICENSED FIRE SPRINKLER CONTRACTOR/RME IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND APPLICABLE CODES AND STANDARDS. THE FIRE PROTECTION AND FIRE SPRINKLER SYSTEM MODIFICATION AND ADDITION SCOPE SHOWN ON THE DRAWINGS ARE FOR GENERAL SCOPE AND COORDINATION ONLY AND ALL FIRE PROTECTION AND FIRE SPRINKLER SYSTEM MODIFICATIONS AND ADDITIONS REQUIRED BY THE PROJECT SPECIFICATIONS AND APPLICABLE CODES AND STANDARDS SHALL BE PROVIDED.

DRAWING NOTES:

1. EXISTING SPRINKLER PIPING AND SPRINKLER HEADS IN THIS AREA TO REMAIN. RELOCATE EXISTING SPRINKLER HEADS AND SPRINKLER PIPING AS REQUIRED TO ALLOW NEW LIGHTING AND OTHER CEILING MOUNTED DEVICES TO BE INSTALLED.

2. REMOVE EXISTING FIRE SPRINKLER MAIN UP TO FIRST FLOOR FIRE SPRINKLERS ABOVE AND CAP EXISTING FIRE SPRINKLER MAIN TO REMAIN.

3. REMOVE EXISTING ABANDONED PLUMBING VENT LINE AND PLUG FLUSH WITH GROUND FLOOR SLAB.

4. TEMPORARILY CAP ASSOCIATED ROOF DRAINS CONNECTED TO EXISTING 6" CI DOWNSPOUT AND REMOVE DOWNSPOUT FROM NOMINAL 6" BELOW THE STRUCTURAL BEAM AT THE 2ND FLOOR FRAMING DOWN TO 6" ABOVE THE GROUND FLOOR SLAB TO ALLOW NEW STRUCTURAL BEAM CONNECTION PLATES AT THE 1ST AND 2ND FLOOR FRAMING TO BE INSTALLED. REF 02/P1.0GAE FOR REPLACEMENT DOWNSPOUT.

5. AFTER THE NEW INFILL SLAB IS INSTALLED, EXTEND EXISTING GROUND FLOOR FIRE SPRINKLER PIPING AND INSTALL NEW FIRE SPRINKLER HEADS IN THIS NEW INFILL AREA.

6. AFTER THE STRUCTURAL CONNECTING PLATE FOR THE NEW 2ND FLOOR FRAMING HAS BEEN INSTALLED, CONNECT NEW 6" NO-HUB CI DOWNSPOUT TO THE DOWNSPOUT STUB AT THE 2ND FLOOR FRAMING, EXTEND DOWN BELOW THE NEW TWIN BEAM STEEL FRAMING AT THE 2ND FLOOR FRAMING, OFFSET AND TURN BACK INTO THE CAVITY ADJACENT TO THE COLUMN, TURN DOWN IN THE CAVITY TO BELOW THE EXISTING FLOOD WALL TUBE FRAMING, TURN OUT OF THE CAVITY, OFFSET AND THEN TURN DOWN AND CONNECT TO THE EXISTING DOWNSPOUT STUB AT THE GROUND FLOOR SLAB. ALL NO-HUB COUPLINGS AND FITTINGS SHALL BE RESTRAINED USING HOLDRITE NO-HUB RESTRAINTS OR AN APPROVED EQUAL. REMOVE ROOF DRAIN PLUGS AND PLACE DOWNSPOUT BACK IN SERVICE AFTER OFFSET PIPING IS COMPLETE.

Philo Wilke Partnership
11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

Consultants

Structural Engineer
Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer
E&C Engineers and Consultants
TX Firm Registration No. F-003068
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

STATE OF TEXAS
WILLIAM C CLIFFORD
44368
REGISTERED
PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY
William C. Clifford
2016.07.08
11:41:22 -05'00'

E&C Engineers & Consultants Inc.
Texas Firm Registration No: F-003068

Issues / Revisions

No.	Date	Description
1	07/08/2016	Issue for Construction

Project

UT Health MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas
Health Science Center at Houston

Drawing Name

Plumbing
Demolition and
Alteration Plans
Ground Floor East

Copyright (C) 2015 by E&C Engineers. All rights reserved.

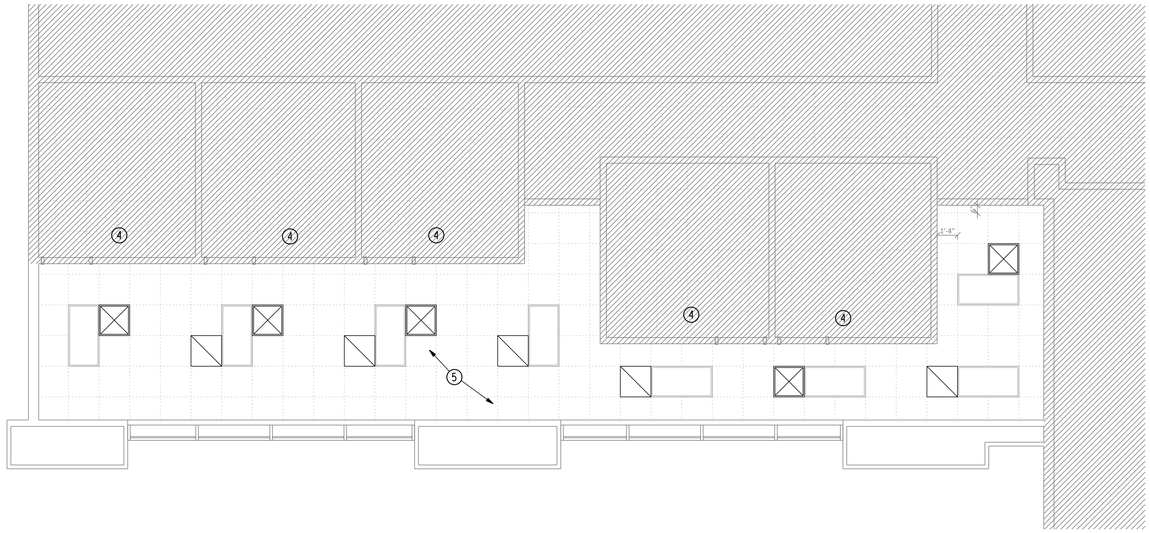
This document and the information herein is the property of E&C Engineers. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by E&C Engineers. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by E&C Engineers.

Print Date / Time: 7/8/2016 9:03:50 AM

P&W Commission Number: 3339.00

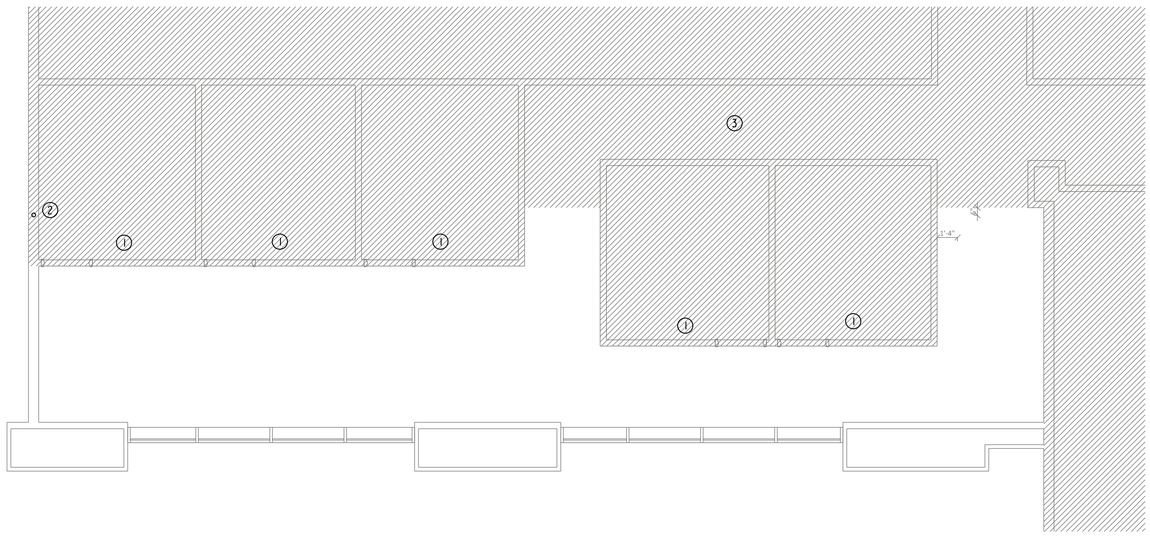
Sheet Number: P1.0GAE

I:\3300\3339\MP\Plumb\3339 P1.0GAE.dgn
7/8/2016 9:03:50 AM



02 GROUND FLOOR WEST - PLUMBING ALTERATION PLAN

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



01 GROUND FLOOR WEST - PLUMBING DEMOLITION PLAN

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

GENERAL NOTES:

A. RE: MEP0.0 FOR ADDITIONAL GENERAL NOTES.

B. MODIFICATIONS AND ADDITIONS TO THE EXISTING BUILDING FIRE PROTECTION AND FIRE SPRINKLER SYSTEMS SHALL BE DESIGNED, PREPARED AND SIGNED BY A STATE OF TEXAS LICENSED FIRE SPRINKLER CONTRACTOR/RME IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND APPLICABLE CODES AND STANDARDS. THE FIRE PROTECTION AND FIRE SPRINKLER SYSTEM MODIFICATION AND ADDITION SCOPE SHOWN ON THE DRAWINGS ARE FOR GENERAL SCOPE AND COORDINATION ONLY AND ALL FIRE PROTECTION AND FIRE SPRINKLER SYSTEM MODIFICATIONS AND ADDITIONS REQUIRED BY THE PROJECT SPECIFICATIONS AND APPLICABLE CODES AND STANDARDS SHALL BE PROVIDED.

DRAWING NOTES:

1. REMOVE EXISTING FIRE SPRINKLER PIPING AND SPRINKLER HEADS TO ALLOW THE CEILING AND EXISTING STRUCTURAL CLOSURE TO BE REMOVED. STORE REMOVED PIPING AND SPRINKLER HEADS FOR REINSTALLATION. RE: 02/P1.0GAW, NOTE 4.
2. REMOVE EXISTING FIRE SPRINKLER MAIN UP TO FIRST FLOOR FIRE SPRINKLERS ABOVE AND CAP EXISTING FIRE SPRINKLER MAIN TO REMAIN.
3. EXISTING SPRINKLER PIPING AND SPRINKLER HEADS IN THIS AREA TO REMAIN. RELOCATE EXISTING SPRINKLER HEADS AND SPRINKLER PIPING AS REQUIRED TO ALLOW NEW LIGHTING AND OTHER CEILING MOUNTED DEVICES TO BE INSTALLED.
4. AFTER THE NEW INFILL SLAB IS INSTALLED, REINSTALL EXISTING FIRE SPRINKLER PIPING AND SPRINKLER HEADS TO MATCH ORIGINAL EXISTING INSTALLATION.
5. AFTER THE NEW INFILL SLAB IS INSTALLED, EXTEND EXISTING GROUND FLOOR FIRE SPRINKLER PIPING AND INSTALL NEW FIRE SPRINKLER HEADS IN THIS NEW INFILL AREA.

Philo Wilke Partnership
11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

Consultants

Structural Engineer
Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer
E&C Engineers and Consultants
TX Firm Registration No. F-003068
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

STATE OF TEXAS · WILLIAM C CLIFFORD · 44368 · REGISTERED · PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY
William C. Clifford
2016.07.08 11:41:51 -05'00'

E&C Engineers & Consultants Inc.
Texas Firm Registration No: F-003068

Issues / Revisions

No.	Date	Description
1	07/08/2016	Issue for Construction

Project

UT Health MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas
Health Science Center at Houston

Drawing Name

Plumbing Demolition and Alteration Plans Ground Floor West

Copyright (C) 2015 by E&C Engineers. All rights reserved.

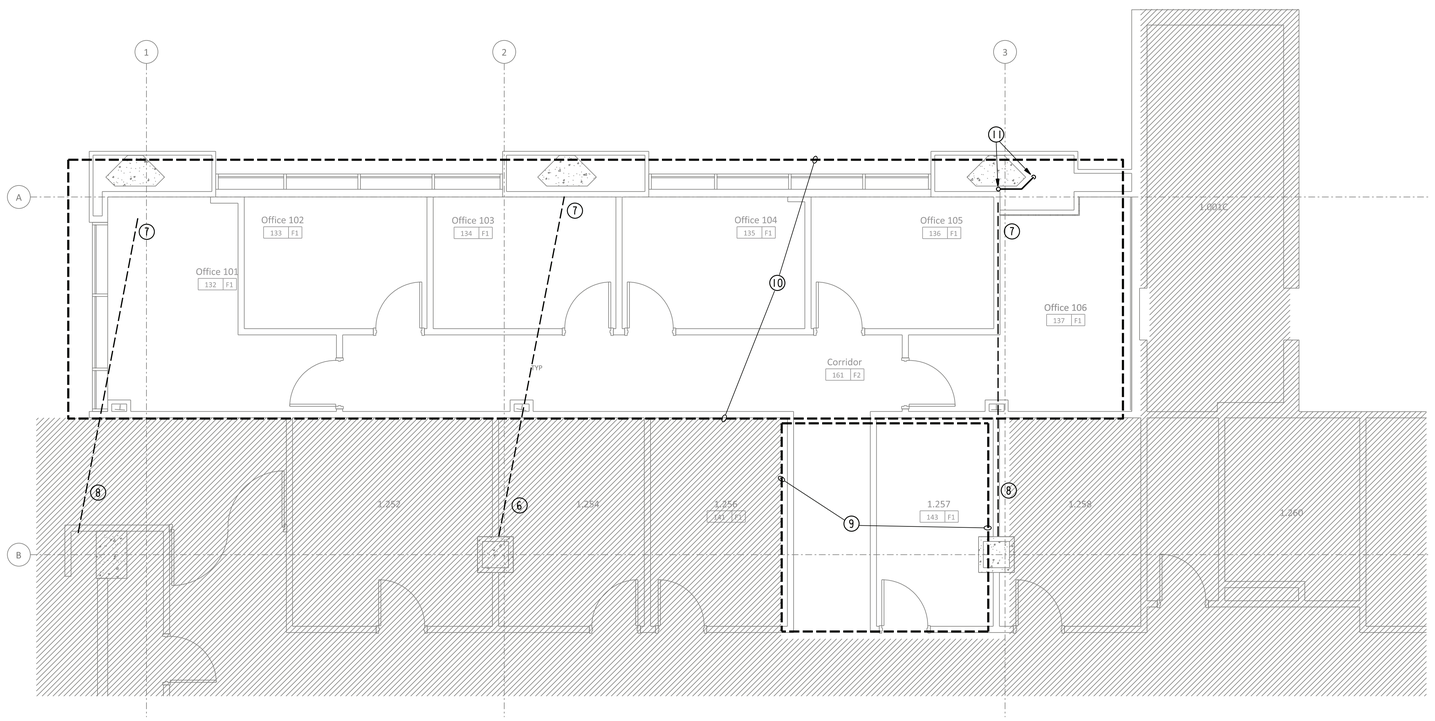
This document and the information herein is the property of E&C Engineers. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by E&C Engineers. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by E&C Engineers.

Print Date / Time: 7/8/2016 9:04:14 AM

P&W Commission Number: 3339.00

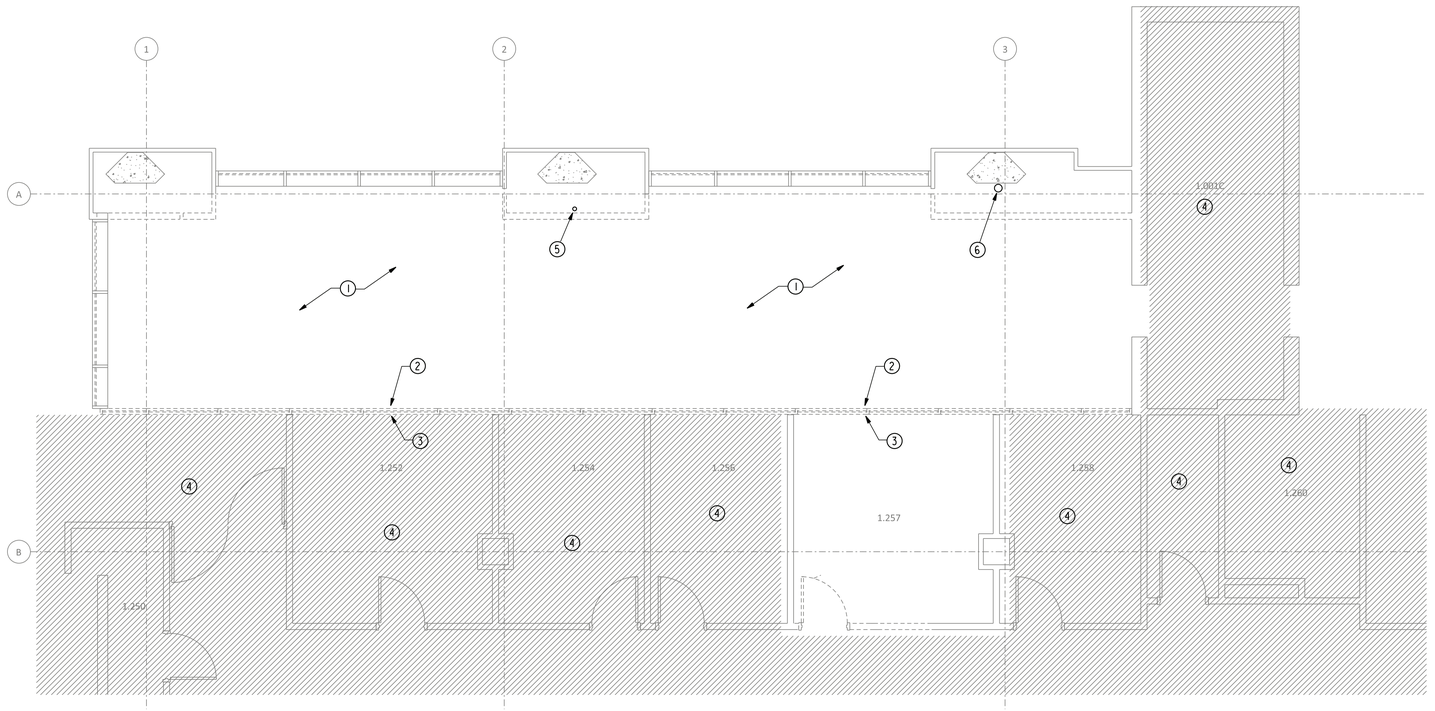
Sheet Number: P1.0GAW

I:\3300\3339\MP\Plumb\3339 P1.0GAW.dgn
7/8/2016 9:04:14 AM



02 FIRST FLOOR EAST - PLUMBING ALTERATION PLAN

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



01 FIRST FLOOR EAST - PLUMBING DEMOLITION PLAN

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

GENERAL NOTES:

A. RE: MEP0.0 FOR ADDITIONAL GENERAL NOTES.

B. MODIFICATIONS AND ADDITIONS TO THE EXISTING BUILDING FIRE PROTECTION AND FIRE SPRINKLER SYSTEMS SHALL BE DESIGNED, PREPARED AND SIGNED BY A STATE OF TEXAS LICENSED FIRE SPRINKLER CONTRACTOR/RME IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND APPLICABLE CODES AND STANDARDS. THE FIRE PROTECTION AND FIRE SPRINKLER SYSTEM MODIFICATION AND ADDITION SCOPE SHOWN ON THE DRAWINGS ARE FOR GENERAL SCOPE AND COORDINATION ONLY AND ALL FIRE PROTECTION AND FIRE SPRINKLER SYSTEM MODIFICATIONS AND ADDITIONS REQUIRED BY THE PROJECT SPECIFICATIONS AND APPLICABLE CODES AND STANDARDS SHALL BE PROVIDED.

DRAWING NOTES:

1. REMOVE EXISTING FIRE SPRINKLER HEADS AND SPRINKLER PIPING SERVED FROM THE GROUND FLOOR FIRE SPRINKLER SYSTEM.
2. REMOVE EXISTING CURTAIL WALL GLAZING FIRE SPRINKLER HEADS AND SPRINKLER PIPING SERVED FROM THE GROUND FLOOR FIRE SPRINKLER SYSTEM.
3. REMOVE EXISTING CURTAIL WALL GLAZING FIRE SPRINKLER HEADS AND SPRINKLER PIPING SERVED FROM THE FIRST FLOOR FIRE SPRINKLER SYSTEM.
4. EXISTING FIRE SPRINKLER HEADS AND SPRINKLER PIPING TO REMAIN.
5. REMOVE EXISTING ABANDONED PLUMBING VENT LINE AND PLUG FLUSH WITH 2ND FLOOR FRAMING.
6. TEMPORARILY CAP ASSOCIATED ROOF DRAINS CONNECTED TO EXISTING 6" CI DOWNSPOUT AND REMOVE DOWNSPOUT FROM NOMINAL 6" BELOW THE STRUCTURAL BEAM AT THE 2ND FLOOR FRAMING DOWN TO 6" ABOVE THE GROUND FLOOR SLAB TO ALLOW NEW STRUCTURAL BEAM CONNECTION PLATES AT THE 1ST AND 2ND FLOOR FRAMING TO BE INSTALLED. RE: 02/P1.01AE FOR REPLACEMENT DOWNSPOUT.
7. NEW STRUCTURAL BEAM(S) AT THE FIRST FLOOR, RE: STRUCTURAL DRAWINGS.
8. RELOCATE EXISTING FIRE SPRINKLER PIPING AND OTHER ABOVE CEILING PIPING AS REQUIRED TO ALLOW THE NEW STRUCTURAL BEAM TO BE INSTALLED AT THE FIRST FLOOR.
9. RECONFIGURE EXISTING FIRE SPRINKLER HEADS AND PIPING SERVED FROM THE EXISTING FIRST FLOOR FIRE SPRINKLER SYSTEM IN THIS AREA TO SUIT NEW SPACE PLANNING.
10. PROVIDE NEW FIRE SPRINKLER HEADS AND PIPING SERVED FROM THE EXISTING FIRST FLOOR FIRE SPRINKLER SYSTEM IN NEW OFFICES AND CORRIDOR.
11. AFTER THE STRUCTURAL CONNECTING PLATE FOR THE NEW 2ND FLOOR FRAMING HAS BEEN INSTALLED, CONNECT NEW 6" NO-HUB CI DOWNSPOUT TO THE DOWNSPOUT STUB AT THE 2ND FLOOR FRAMING, EXTEND DOWN BELOW THE NEW TWIN BEAM STEEL FRAMING AT THE 2ND FLOOR FRAMING, OFFSET AND TURN BACK INTO THE CAVITY ADJACENT TO THE COLUMN, TURN DOWN IN THE CAVITY TO BELOW THE EXISTING FLOOD WALL TUBE FRAMING, TURN OUT OF THE CAVITY, OFFSET AND THEN TURN DOWN AND CONNECT TO THE EXISTING DOWNSPOUT STUB AT THE GROUND FLOOR SLAB. ALL NO-HUB COUPLINGS AND FITTINGS SHALL BE RESTRAINED USING HOLDRITE NO-HUB RESTRAINTS OR AN APPROVED EQUAL. REMOVE ROOF DRAIN PLUGS AND PLACE DOWNSPOUT BACK IN SERVICE AFTER OFFSET PIPING IS COMPLETE.

Philo Wilke Partnership
11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

Consultants

Structural Engineer
Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer
E&C Engineers and Consultants
TX Firm Registration No. F-003068
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

STATE OF TEXAS
WILLIAM C CLIFFORD
44368
REGISTERED
PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY
William C. Clifford
2016.07.08 11:42:29 -05'00'

E&C Engineers & Consultants Inc.
Texas Firm Registration No: F-003068

Issues / Revisions

No.	Date	Description
1	07/08/2016	Issue for Construction

Project

UT Health MSB
1st Floor Infill
LRC 3 & 4

UTHealth™
The University of Texas
Health Science Center at Houston

Drawing Name

Plumbing
Demolition and
Alteration Plans
First Floor East

Copyright (C) 2015 by E&C Engineers. All rights reserved.

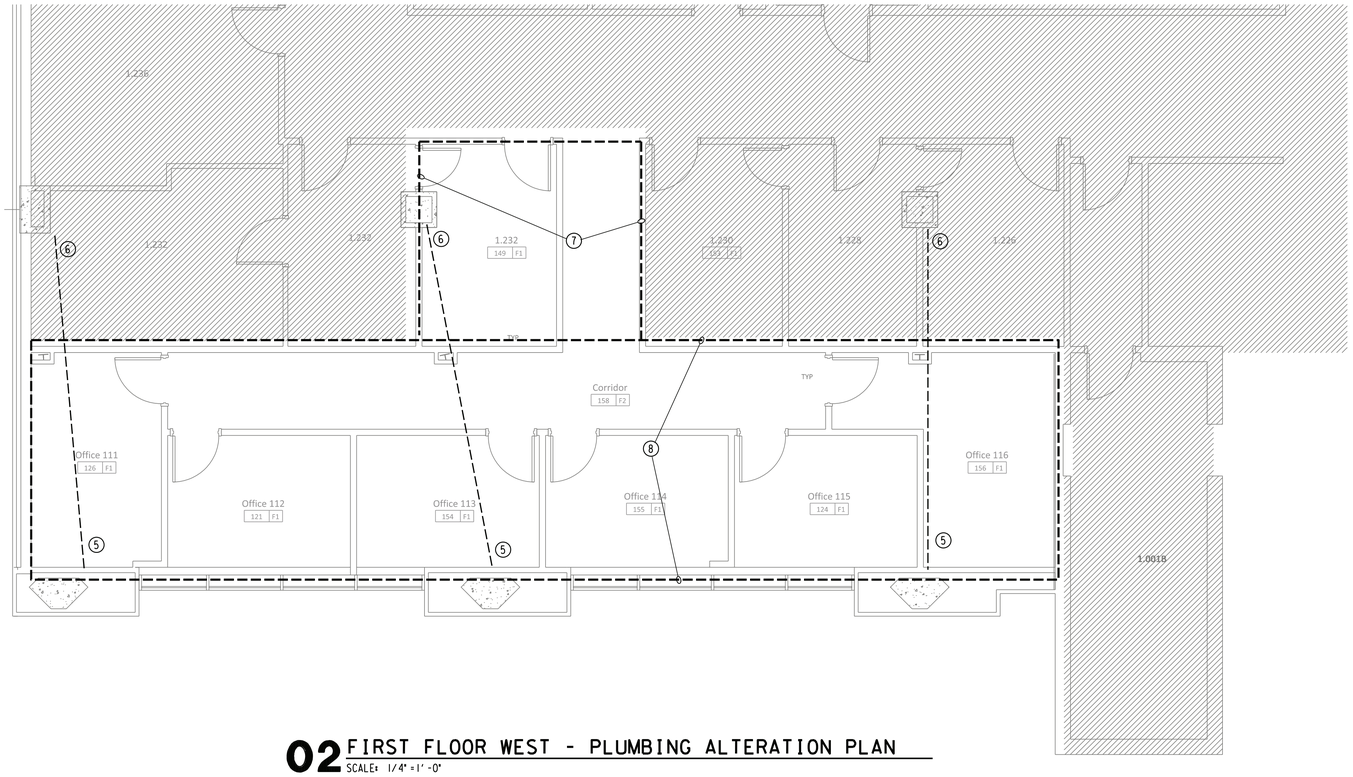
This document and the information herein is the property of E&C Engineers. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by E&C Engineers. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by E&C Engineers.

Print Date / Time: 7/8/2016 9:04:34 AM

P&W Commission Number: 3339.00

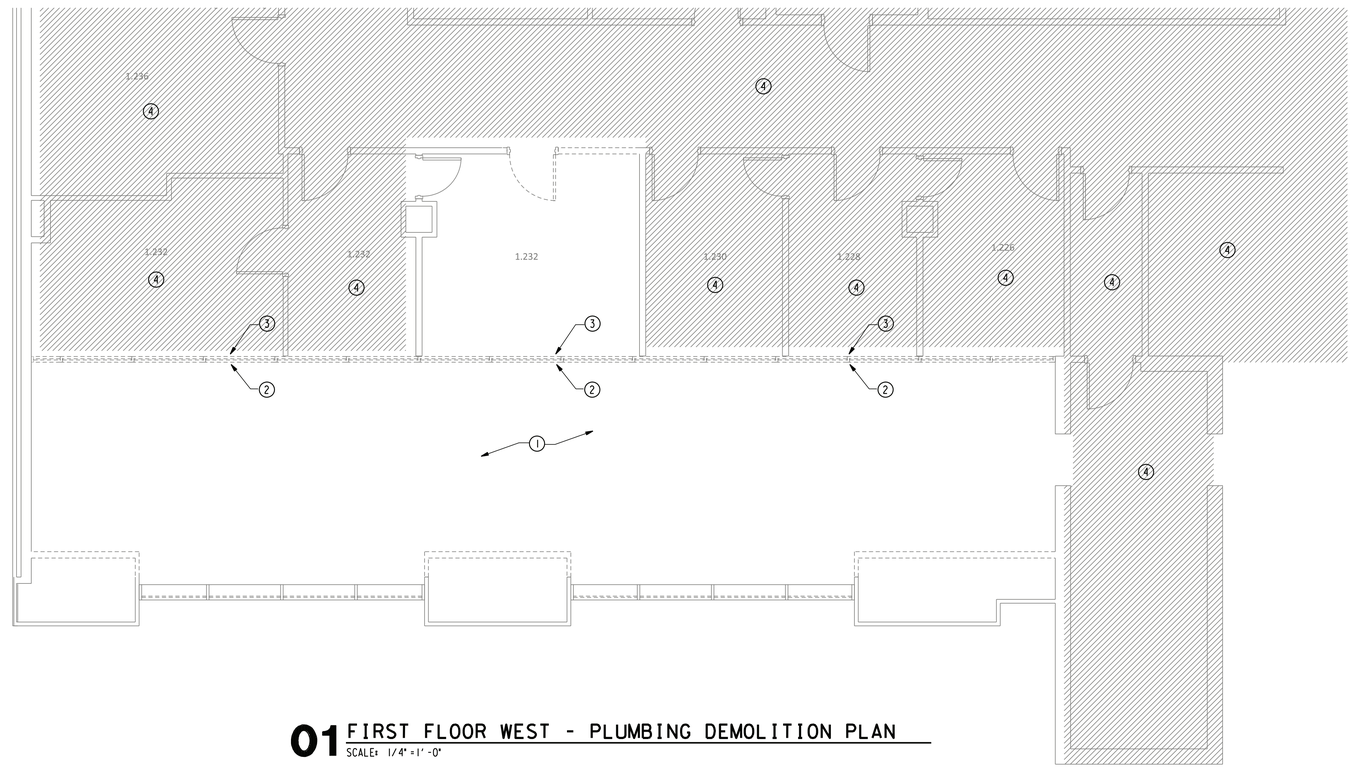
Sheet Number: P1.01AE

I:\3300\3339\MPlumb\3339 P1.01AE.dgn
7/8/2016 9:04:34 AM



02 FIRST FLOOR WEST - PLUMBING ALTERATION PLAN

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



01 FIRST FLOOR WEST - PLUMBING DEMOLITION PLAN

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

GENERAL NOTES:

A. RE: MEP0.0 FOR ADDITIONAL GENERAL NOTES.

B. MODIFICATIONS AND ADDITIONS TO THE EXISTING BUILDING FIRE PROTECTION AND FIRE SPRINKLER SYSTEMS SHALL BE DESIGNED, PREPARED AND SIGNED BY A STATE OF TEXAS LICENSED FIRE SPRINKLER CONTRACTOR/RME IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND APPLICABLE CODES AND STANDARDS. THE FIRE PROTECTION AND FIRE SPRINKLER SYSTEM MODIFICATION AND ADDITION SCOPE SHOWN ON THE DRAWINGS ARE FOR GENERAL SCOPE AND COORDINATION ONLY AND ALL FIRE PROTECTION AND FIRE SPRINKLER SYSTEM MODIFICATIONS AND ADDITIONS REQUIRED BY THE PROJECT SPECIFICATIONS AND APPLICABLE CODES AND STANDARDS SHALL BE PROVIDED.

DRAWING NOTES:

1. REMOVE EXISTING FIRE SPRINKLER HEADS AND SPRINKLER PIPING SERVED FROM THE GROUND FLOOR FIRE SPRINKLER SYSTEM.
2. REMOVE EXISTING CURTAIL WALL GLAZING FIRE SPRINKLER HEADS AND SPRINKLER PIPING SERVED FROM THE GROUND FLOOR FIRE SPRINKLER SYSTEM.
3. REMOVE EXISTING CURTAIL WALL GLAZING FIRE SPRINKLER HEADS AND SPRINKLER PIPING SERVED FROM THE FIRST FLOOR FIRE SPRINKLER SYSTEM.
4. EXISTING FIRE SPRINKLER HEADS AND SPRINKLER PIPING TO REMAIN.
5. NEW STRUCTURAL BEAM AT THE FIRST FLOOR, RE: STRUCTURAL DRAWINGS.
6. RELOCATE EXISTING FIRE SPRINKLER PIPING AND OTHER ABOVE CEILING PIPING AS REQUIRED TO ALLOW THE NEW STRUCTURAL BEAM TO BE INSTALLED AT THE FIRST FLOOR.
7. RECONFIGURE EXISTING FIRE SPRINKLER HEADS AND PIPING SERVED FROM THE EXISTING FIRST FLOOR FIRE SPRINKLER SYSTEM IN THIS AREA TO SUIT NEW SPACE PLANNING.
8. PROVIDE NEW FIRE SPRINKLER HEADS AND PIPING SERVED FROM THE EXISTING FIRST FLOOR FIRE SPRINKLER SYSTEM IN NEW OFFICES AND CORRIDOR.

Philo Wilke Partnership
11275 S. Sam Houston Parkway W.
Suite 200
Houston, Texas 77031
(832) 554-1130
www.pwarch.com

Consultants

Structural Engineer
Walter P. Moore
1301 McKinney, Suite 1100
Houston, TX 77010
(P) 713-630-7300

MEP Engineer
E&C Engineers and Consultants
TX Firm Registration No. F-003068
1010 Lamar St
Houston, TX 77002
(P) 713-580-8800

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY WILLIAM C. CLIFFORD 44368 REGISTERED PROFESSIONAL ENGINEER

William C. Clifford
2016.07.08
11:42:58 -05'00'

E&C Engineers & Consultants Inc.
Texas Firm Registration No: F-003068

Issues / Revisions

No.	Date	Description
1	07/08/2016	Issue for Construction

Project

UT Health MSB 1st Floor Infill LRC 3 & 4

UTHealth™
The University of Texas
Health Science Center at Houston

Drawing Name

Plumbing
Demolition and
Alteration Plans
First Floor West

Copyright (C) 2015 by E&C Engineers. All rights reserved.

This document and the information herein is the property of E&C Engineers. No part hereof shall be copied, duplicated, distributed, disclosed or used to any extent whatsoever except as expressly authorized by E&C Engineers. Any Person, firm, or corporation receiving this document, however obtained, shall by virtue hereof, be deemed to have agreed to the forgoing restrictions and that this document will be held in trust and confidence subject only to the private use expressly authorized by E&C Engineers.

Print Date / Time: 7/8/2016 9:04:50 AM

P&W Commission Number: 3339.00

Sheet Number: P1.01AW

I:\3300\3339\MEPlumb\3339 P1.01AW.dgn
7/8/2016 9:04:50 AM