U OF U BLDG. 303 SEISMIC UPGRADE, PROJ. #22649 - PHASE 5

PERMIT SET



ABBREVIATIONS

AFF	ABOVE FINISH FLOOR
CMU	CONCRETE MASONRY UNIT
EIFS	EXTERIOR INSULATED FINISH
EQ	EQUAL
MAX	MAXIMUM
MIN	MINIMUM
NIC	NOT IN CONTRACT
O.C.	ON CENTER
SPEC	SPECIFICATION
SIM	SIMILIAR
TYP	TYPICAL
T.O.	TOP OF
B.O.	BOTTOM OF

MATERIAL LEGEND

- GYPSUM BOARD OR CONCRETE SURFACE
- CONCRETE
- STUD WALL
- GRAVEL
- COMPACTED FILL AND/OR EARTH
- CMU (CONCRETE MASONRY UNIT)
- BATT INSULATION
- RIGID INSULATION

SYMBOLS LEGEND

ROOM IDENTIFICATION NUMBER — ROOM NAME / NUM — ROOM NAME / ROOM NUMBER

DOOR NUMBER — XXX

REFERENCE NOTE — XX.XX

GLAZING TYPE — X

PARTITON WALL TYPE — XX

INTERIOR ELEVATION — A1 (SHADE INDICATES ELEVATED WALL), A4 / A2 (ELEVATION NUMBER / SHEET NUMBER), A3

BUILDING SECTION — SECTION NUMBER / SHEET NUMBER

WALL SECTION — SECTION NUMBER / SHEET NUMBER

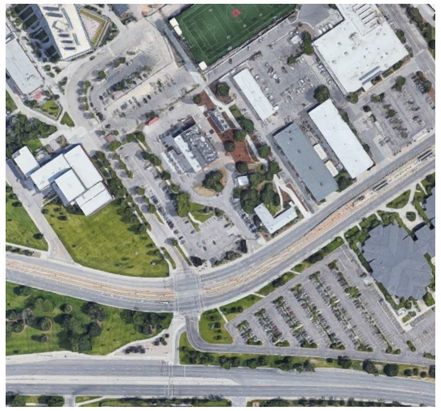
EXTERIOR ELEVATION — ELEVATION NUMBER / SHEET NUMBER

DETAIL — DETAIL NUMBER / SHEET NUMBER

DETAIL TITLE — A1 DETAIL, SCALE:

REVISION DELTA — 2 — REVISION NUMBER

SITE MAP



VICINITY MAP



PROJECT TEAM

PROJECT ARCHITECT
FFKR ARCHITECTS
730 PACIFIC AVE
SALT LAKE CITY, UTAH 84104
801-521-6186

STATE OF UTAH — JACKSON FERGUSON, AIA — #334047-0301 — LICENSED ARCHITECT — 10.10.22

CIVIL ENGINEER
TALISMAN CIVIL CONSULTANTS
5217 S. STATE ST.
MURRAY, UT 84107
(801) 743-1308

STRUCTURAL ENGINEER
ARW ENGINEERS
1594 PARK CIRCLE
OGDEN, UTAH 84404
(801) 782-6008

MECHANICAL ENGINEER
RMH ENGINEERS
12600 W. COLFAX AVE., STE A-400
LAKEWOOD, CO 80215
(303) 239-0909

ELECTRICAL ENGINEER
RMH ENGINEERS
12600 W. COLFAX AVE., STE A-400
LAKEWOOD, CO 80215
(303) 239-0909

GEOTECHNICAL ENGINEER
AGEC
600 WEST SANDY PARKWAY
SANDY, UTAH 84070
(801) 566-6399

DRAWING INDEX

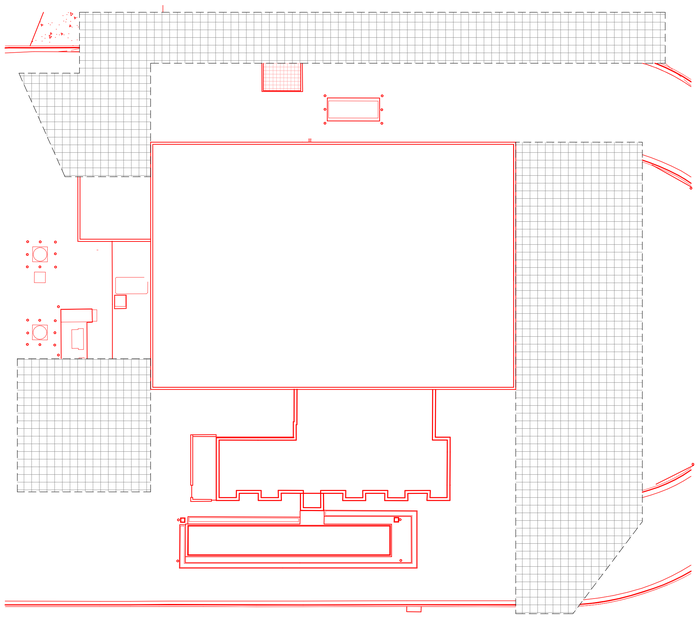
PHASE 5

SHEET NO.	SHEET NAME
GENERAL INFORMATION	
G-001-5	COVER SHEET
G-002-5	PHASING SCHEDULE
G-003-5	CODE REVIEW
G-004	PARKING PLAN
ARCHITECTURAL SITE DRAWINGS	
AS-101-5	OVERALL SITE PLAN PHASE 5
DEMO DRAWINGS	
AD-101-5	DEMO FLOOR & ROOF PLANS PHASE 5
AD-201-5	DEMO EXTERIOR ELEVATIONS PHASE 5
AD-302	DEMO WALL SECTIONS
AD-501	DEMO DETAILS
ARCHITECTURAL	
AE-101-5	OPERATING LEVEL FLOOR PLAN PHASE 5
AE-102-5	PIPING LEVEL FLOOR PLAN PHASE 5
AE-103-5	FAN LEVEL FLOOR PLAN PHASE 5
AE-104-5	ROOF PLAN PHASE 5
AE-201-5	EXTERIOR ELEVATIONS PHASE 5
AE-312	WALL SECTIONS
AE-410	ENLARGED STAIRS PLANS AND SECTIONS
AE-501	PLAN DETAILS
AE-506	ROOF DETAILS
AE-601	DOORS AND WINDOW SCHEDULE
AE-602	PARTITION TYPES & DETAILS
STRUCTURAL DRAWINGS	
SG-001	STRUCTURAL NOTES AND SCHEDULES
SG-002	SCHEDULES
SG-003	SCHEDULES
SG-004	SCHEDULES
SG-005	SCHEDULES
S-101-5	OPERATING FLOOR PLAN - PHASE 5
S-102-5	PIPING FLOOR PLAN - PHASE 5
S-103-5	FAN FLOOR FRAMING PLAN - PHASE 5
S-104-5	ROOF FRAMING PLAN - PHASE 5
S-201-5	PHASE 5 DETAILS
S-202-5	PHASE 5 DETAILS
S-203-5	PHASE 5 DETAILS
S-301-5	WALL ELEVATIONS
MECHANICAL DRAWINGS	
M-000-5	MECHANICAL LEGEND
M-001-5	EQUIPMENT SCHEDULES
M-002-5	MECHANICAL CONTROLS
M-003-5	MECHANICAL DETAILS
M-100-5	BASEMENT FLOOR - MECHANICAL PLAN
M-101-5	OPERATING FLOOR - MECHANICAL PLAN
M-102-5	PIPING FLOOR - MECHANICAL PLAN
M-103-5	FAN FLOOR - MECHANICAL PLAN
M-104-5	ROOF - MECHANICAL PLAN
M-300-5	DUCT RISER DIAGRAM
ELECTRICAL DRAWINGS	
E-000-5	ELECTRICAL LEGEND
E-100-5	BASEMENT FLOOR - POWER PLAN
E-103-5	FAN FLOOR - POWER PLAN
E-104-5	ROOF - POWER PLAN
E-201-5	ELECTRICAL ONE-LINE
E-202-5	ELECTRICAL SCHEDULES
EL-103-5	FAN FLOOR - LIGHTING PLAN

FFKR ARCHITECTS

U OF U BLDG. 303 SEISMIC UPGRADE - #22649 - PHASE 5
SALT LAKE CITY UTAH

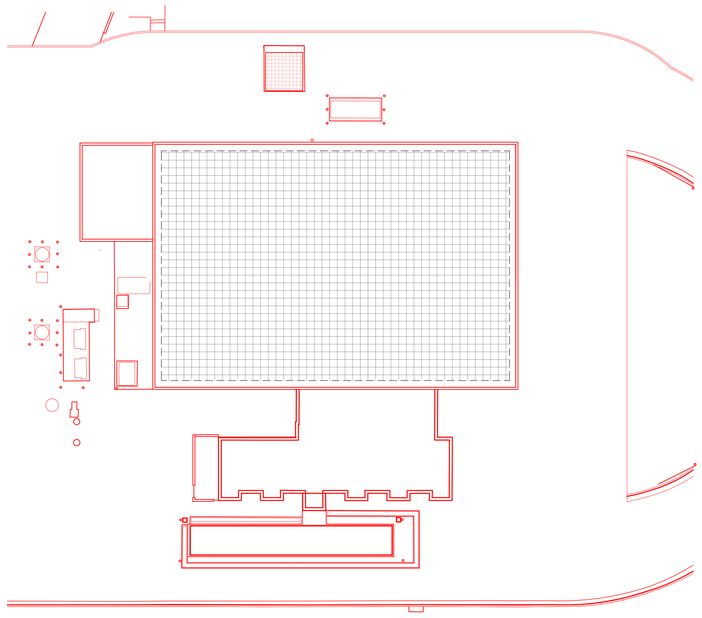
PROJECT NUMBER: 18136



PHASE I

Demo: Existing curb, NW- Brine tank, electric, NE- Gas Line, chill water line, dumpster enclosure, MCC #5 (Gen 5/9 project)

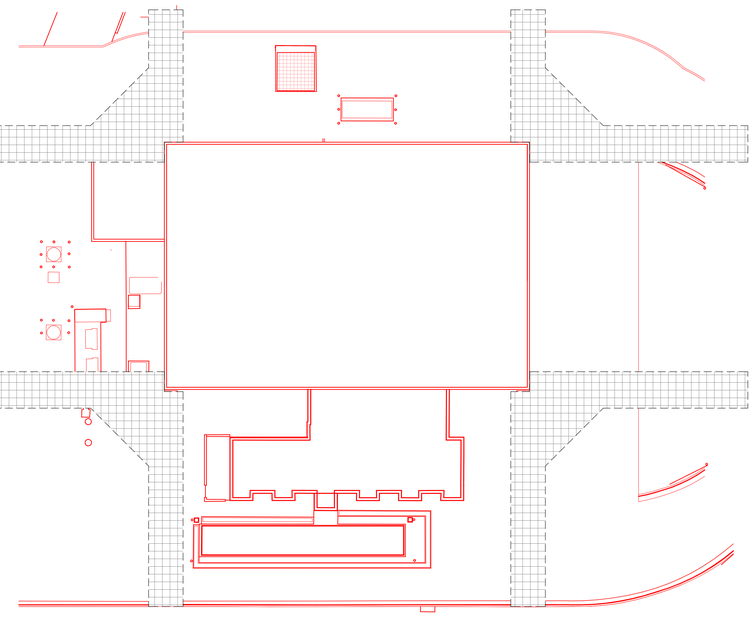
New: Civil curb alignment, NW- Brine tank, electric, NE- Gas Line, chill water line; water lines cap off (inside the bldg)



PHASE II

DEMO: ROOF SCREEN WALL, ROOF ASSEMBLY, REMOVE ROOF EXHAUST FANS, OIL COOLER, CONDENSATE TANK, HOPPERS. STAIRS BY GEN 4.

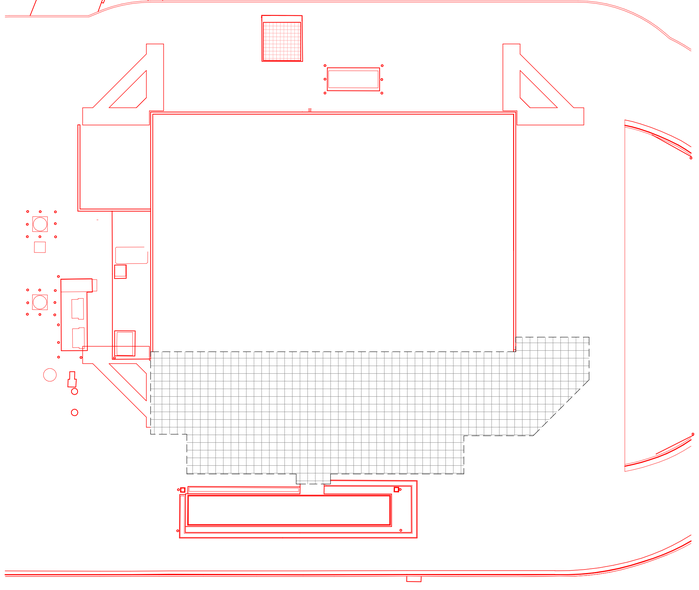
NEW: OIL COOLER, ROOF ASSEMBLY (CURB, ROOF DRAINS, PARAPET, ROOF BRACING, INT. DIAPHRAM, CONDENSATE TANK, INTERIOR DIAPHRAM, ROOF TOP EXHAUST FANS, WATER TANK FOR A RESEARCH PROJECT



PHASE III

DEMO: ASPHALT REMOVAL AT 4 BUILDING CORNERS.

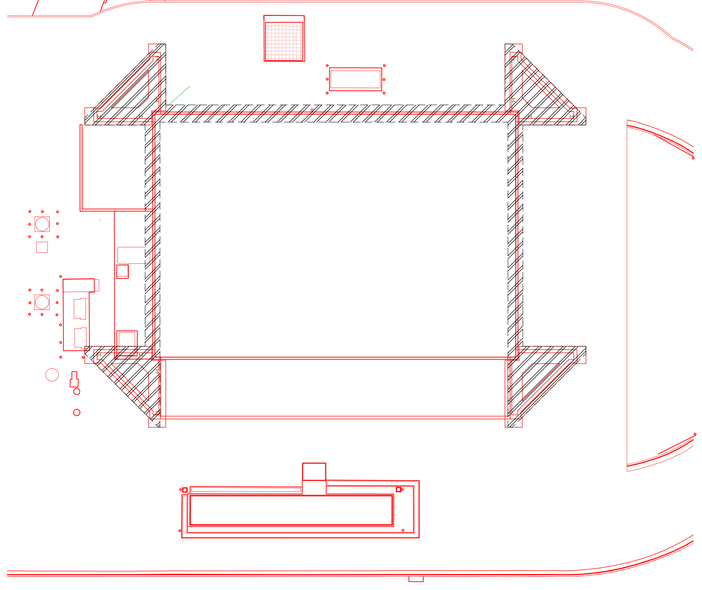
NEW: ALL 4 BUTTRESS FOUNDATIONS, MICRO PILE, UNDERPIN, CONCRETE CAP, STEEL BEAMS, COLUMNS, AND LINKS.



PHASE IV

DEMO: CONTROL ROOM EAST OF GRID A, OFFICE BUILDING, WEST BRICK WALL.

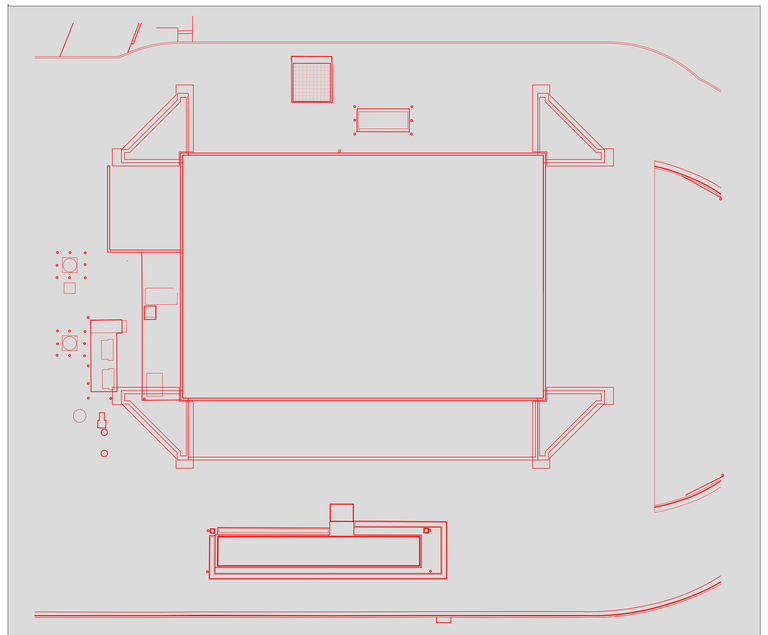
NEW: OFFICE WING, W BUILDING ENVELOPE & EXO STEEL; SW BUTTRESS ENVELOPE, FIRE SPRINKLER THROUGHOUT.



PHASE V

DEMO: EAST, NORTH & SOUTH BRICK WALLS

NEW: EAST, NORTH & SOUTH BUILDING ENVELOPE & EXO STEEL, ROOF TOP EXHAUST FANS, FIRE SPRINKLER THROUGHOUT, HIGH PERFORMANCE PAINT @ STEEL BUTTRESSES



PHASE VI

DEMO: CLEAN UP REST OF THE SITE

NEW: EQUIP & PIPE BRACING & INSULATION, MISC. BUILDING AND ASPHALT REPAIR

PHASING LEGEND

- CURRENT PHASE, AREA OF WORK
- FUTURE PHASE
- PAST PHASE

1 PHASING PLAN Phase 5

SCALE: 3/64" = 1'-0"

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U OF U BLDG. 303 SEISMIC UPGRADE - #22649 - PHASE 5

SALT LAKE CITY UTAH

PERMIT SET - 3-5-2024

STATE OF UTAH · JACKSON FERGUSON, AIA · #9340847-0301 · LICENSED ARCHITECT · 10.10.22

△ DATE REVISION

PROJECT NUMBER 18136

PHASING SCHEDULE

G-002-5

3/5/2024 2:09:28 PM

THE UNIVERSITY OF UTAH

CODE ANALYSIS FORM – 2021 INTERNATIONAL BUILDING CODE

BUILDING IDENTIFICATION:	U303 –High Temperature Water Plant
	1705 E. South Campus Dr.
	SLC UT 84112

CODE ANALYSIS COMPLETION DATE:	3/05/2024

PART 1

APPLICABLE CODE	YEAR	APPLICABLE CODE	YEAR
International Building Code (IBC)	2021	ADA (ADAAG)	2010
International Existing Building Code	2021	ICC/ANSI A117.1	2017
International Fire Code (IFC)	2021	NFPA 101 Life Safety Code (State)	2018
International Mechanical Code (IMC)	2021	NFPA 101 Life Safety Code (Federal)	2015
International Energy Conservation Code (IECC)	2021	NFPA 99 Health Care Facilities Code	2018
International Plumbing Code (IBC)	2021	FGI Health Care Guidelines	2018
National Electric Code	2020		

PART 2

Occupancy Group (Chapter 3)			(T601) Const Type (*1)	Area (506)(*5				Height (T504.3) *6		Stories (T504.4) *5		(508) Mixed Use Type (*3)	(508.4.2) *4 Area Ratio
Floor	Name	Group		Tabular NS (T506.2)	Tabular SM or S1 (T506.2)	Aa (*2)	Actual ft²	Tabular T504.3 ft	Actual ft	Tabular (T504.4)	Actual		
	Mech. space (ext'g)	F-1	IIB				10,880						
Basement - Floor Total:							10,880						
	Mech. space (ext'g)	F-1	IIB				12,800		15		1		
1st - Floor Total:							12,800		15		1		
	Mech. space (ext'g)	F-1	IIB				4,300		15		1		
Mezzanine Total:							4,300		15		1		
	Mech. space (ext'g)	F-1	IIB				7,125		15		1		
2nd Floor Total:							7,125		15		1		
Building Total (*2)				15,500	62,000	64,635	30,805	75	49		2		

*(*1) Construction Type shall be the most restrictive occupancy requirement for the entire building (508.3 & 508.4)*
*(*2) Area- Total building Area dependent on Single or Mixed Occupancy Building (506.2.1 through 506.2.4) & Frontage Increase (506.3)*
*(*3) Mixed Use - IAO=Incidental Accessory Occupancy / AO=Accessory Occupancy / SO=Separated Occupancies / NSO=Nonseparated Occupancies; gsf= gross square feet; nsf= net square feet; (E) = Existing*
*(*4) IBC Section 508.4.2: In each story, the building area shall be such that the sum of the ratios of the actual building area of each separated occupancy divided by the allowable building area of each separated occupancy shall not exceed 1.*
*(*5) 506.2.4 Mixed-occupancy, multistory buildings more than 3 stories above grade plan: Total building area shall be such that the aggregate sum of the ratios of the actual area of each story divided by the allowable area of such stories shall not exceed three for NS and four for S.*
*(*6) IBC 504.2 Mixed occupancy: In a building containing mixed occupancies in accordance with Section 508, no individual occupancy shall exceed the height and number of story limits specified in this section for the applicable occupancies.*

PART 3 - ALLOWABLE AREA DETERMINATION (506.2.1 through 506.2.4 & 506.3)

FRONTAGE INCREASE: If = [F/P- 0.25]W/30 = (Provide Analysis)

SINGLE-OCCUPANCY, ONE STORY BUILDINGS (506.2.1):
Allowable Area: Aa = At + (NS × If) = (Provide Analysis)
Level X, X Occupancy: Aa = At + (NS × If) = SF

MIXED-OCCUPANCY, ONE-STORY BUILDINGS (506.2.2):
Allowable Area: Aa = At + (NS× If) and provisions of Section 508.1 = (Provide Analysis)
Level X, X Occupancy: Aa = At + (NS × If) = SF

SINGLE-OCCUPANCY, MULTISTORY BUILDINGS (506.2.3):
Allowable Area: Aa = [At + (NS× If)] × Sa = (Provide Analysis)
Level X, X Occupancy: Aa = [At + (NS × If)] x Sa = SF

If = [F/P – 0.25] W/30
If = [121'/284' – 0.25] W/30
If = [0.42 – 0.25] 30/30
If = 0.17 x 1
If = 0.17

Aa = [At + (NS x If) Sa
Aa = [62,000 + (15,500 x 0.17) x 1
Aa = [62,000 + 2,635] x 1
Aa = 64,635

Sa = Actual number of building stories above grade plane, not to exceed three. For buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.2, use the actual number of building stories above grade plane, not to exceed four.

MIXED-OCCUPANCY, MULTISTORY BUILDINGS (506.2.4):
Allowable Area: Aa = [At+(NS× If)] = (Provide Analysis)
Level X, X Occupancy: Aa = [Af + (NS × If)] = SF

>3 Story Bldgs: Total Bldg Area = Aggregate SUM of the Ratios (Actual Floor Area / Allowable Floor Area) = <3 for NS and <4 for S:
Aggregate Sum of the Ratios: = X

UNLIMITED AREA (507) =

SPECIAL PROVISIONS (510) =

PART 4 - GRADE PLANE ELEVATION & HEIGHT & STORIES (504)

BUILDING WALL	AVERAGE ELEVATION	GRADE PLANE ELEVATION
NORTH	49'-9"	49'-9"
SOUTH	49'-9"	49'-9"
EAST	49'-9"	49'-9"
WEST	49'-9"	49'-9"
	TOTAL BUILDING G.P.E.	49'-9"

STORY	FINISHED FLOOR ELEVATION	STORY ABOVE G.P.E.	HEIGHT
BASEMENT	-12'		12'
1ST FLOOR	0'	1	15'
MEZZANINE	15'		30'
2ND FLOOR	30'	1	45'
TOTAL BUILDING		2-STORIES	49'-9"

PART 5 - AUTOMATIC FIRE SPRINKLER (903 & T903.2.11.6)

ITEM	REFERENCE	COMMENTS
Required		

PART 6 - OCCUPANCY SEPARATIONS (T508.4)

OCCUPANCY/OCCUPANCY	RATING	IBC/UL DESIGN #
F-1	Not required	

PART 7 - OTHER BUILDING ELEMENTS (T601 and T602)

ELEMENT	MATERIAL	RATING	IBC/UL DESIGN #
Interior Bearing Wall		0	
Interior Non-Bearing Wall	Metal stud assembly	0	N/A
Structural Frame	Steel	0	N/A
Exterior Structural Frame	Steel	0	N/A
Shaft Enclosure a,b		N/A	N/A
Floor / Ceiling Assembly		N/A	N/A
Roof / Ceiling Assembly		N/A	N/A
Vertical Exit Enclosure a,b		N/A	N/A

a. Fire-resistance rating not less than the floor assembly penetrated (713.4) (1023.2).
b. 2 hours where connecting four stories or more and 1 hour where connecting less than four stories, including basements. (713.4) (1023.2).

PART 8 - EXTERIOR WALL & OPENING PROTECTION (T705.8)

WALL LOCATION	PROTECTED	UNPROTECTED	PARAPET REQ'D (705.11)
NORTH	N/A		
SOUTH	N/A		
EAST	N/A		
WEST	N/A		

PART 9 - EXIT REQUIREMENTS

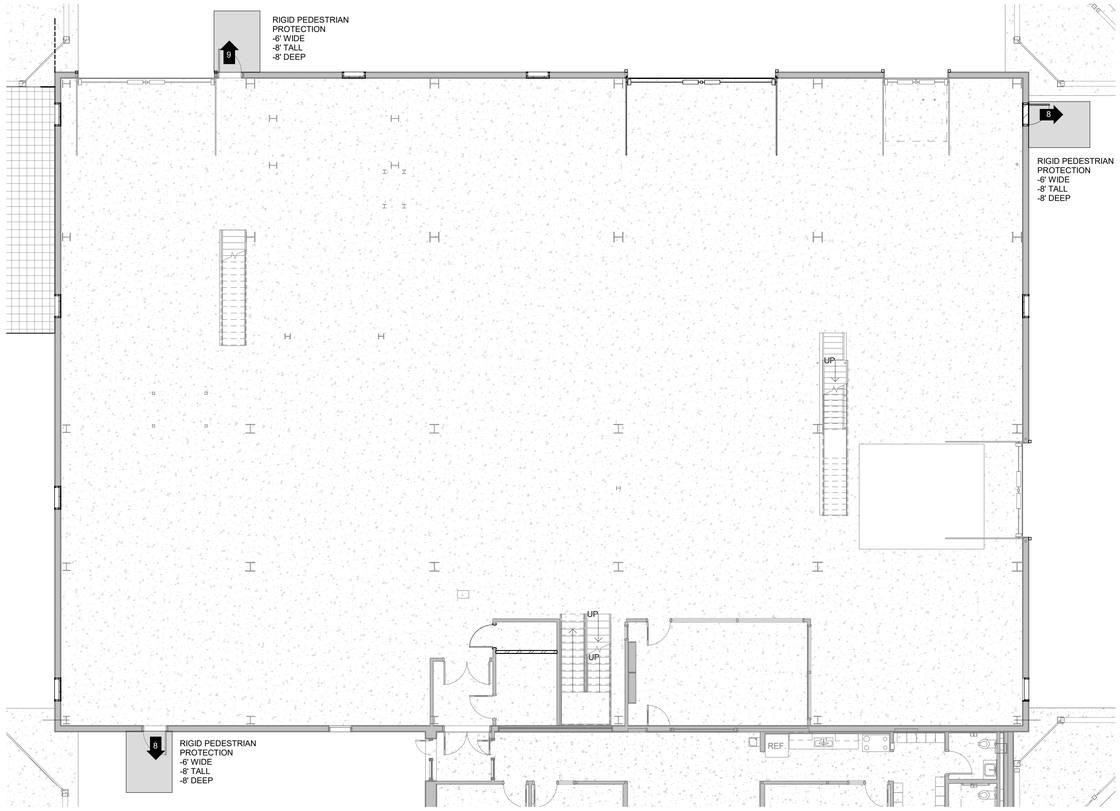
FLOOR LEVEL	ROOM OCCUPANCY GROUPS	AREA (Occupiable space)	OCCUPANT LOAD FACTOR (T1004.5)	# OF OCCUPANTS (1004)	# OF EXITS (1006)	REQ'D EGRESS WIDTH (1005)	REQ'D STAIR WIDTH (1005.3)	REQ'D AISLE WIDTH (1018)	COMMON PATH OF TRAVEL DISTANCE (T1006.2.1) (Worst case)	TOTAL TRAVEL DISTANCE (1017) (Worst case)
Level 1 Total:										
	Mechanical space	3000	300	10	3					
Mezzanine Total:										
	Mechanical space	1500	300	5			1.5			
Level 2 Total:										
	Mechanical space	3000	300	10			3			
Level 3 Total:										
Building Total:		7500		25	3	N/A	4.5	N/A	26'	98'

PART 10 - ADDITIONAL REQUIREMENTS

ACCESSIBLE MEANS OF EGRESS (1009):	
ACCESSIBLE ROUTE (1104 & INTERNATIONAL EXISTING BUILDING CODE):	Complied
SPECIAL OCCUPANCY REQUIREMENTS (CHAPTER 4):	Complied

NOTE: THIS PHASE IS NOTHING MORE THAN A SIMPLE REPLACEMENT OF THE 3 EXTERIOR WALLS, THERE ARE **NO CHANGES** TO THE EXISTING:

- BUILDING USE
- SQUARE FOOTAGE
- BUILDING OCCUPANCY TYPES
- OCCUPANT COUNT
- PLUMBING COUNT
- NUMBER OF EXITS
- EGRESS PATH



A4 OPERATING LEVEL LIFE SAFETY PLAN
SCALE: 1/8" = 1'-0"

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U OF U BLDG. 303 SEISMIC UPGRADE - #22649 - PHASE 5
SALT LAKE CITY UTAH
PERMIT SET - 3-5-2024

STATE OF UTAH · JACKSON FERGUSON, AIA · #9340947-0301 · LICENSED ARCHITECT · 5.10.22

△ DATE REVISION

PROJECT NUMBER 18136

CODE REVIEW

G-003-5

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PROJECT PARKING PLAN WORKSHEET

The objective of a Project Parking Plan is to establish the parking impact during and after a construction Project. This Plan is to be done during the design process to provide direction in the contract documents that will inform the bidding and successful contractor what the project during construction. This plan is to be developed jointly by the Design Team, Project Manager, Project Planner, and Commuter Services. Once prepared, the Project Manager should submit it to Commuter Services for review and approval before including it in contract documents.

General Contractor - Reference this form to request permits electronically via our website @ commuterservices.utah.edu

PROJECT MANAGEMENT INFORMATION:

Project Name: HTW High temperature water plant seismic upgrade

Project Number: 22210 Project Client/User: FM

Project Manager & Phone: Stephen Laraway Project Planner: _____

Design Team: FFKRArchitects

Is there Abatement: ◯ YES ◉ NO If yes, list firm: _____

PARKING IMPACT OF PROJECT:

Describe Project Limit Lines:

The staging area will be on the north side of building 303, and the parking area in the lot to the west of 303.

List all Parking lot #(s) being impacted by project scope N/A

Final Parking space changes as result of Project: Eliminated 0 Added 0 Net (add+/loss-) 0

CONSTRUCTION CONTRACTOR & SUBCONTRACTOR PARKING IMPACT: (Include information in contract documents)

Construction Start date: Aug 1st 2019 Duration: March 30 , (months)

Describe Construction Staging Area Limit Lines:

see attached map

Number of spaces (at contractor discretion) estimated available within the construction staging area 0

Number of Permits requested for purchase in campus lots per month (expand table as needed)

Permit type	Month:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CV	# of Permits >	11	11	11	11											
	# of Permits >															
	# of Permits >															

Permit types explained on following pages.

COMMUTER SERVICES REVIEW/APPROVAL:

Approved 7/3/19

Revision/notes:

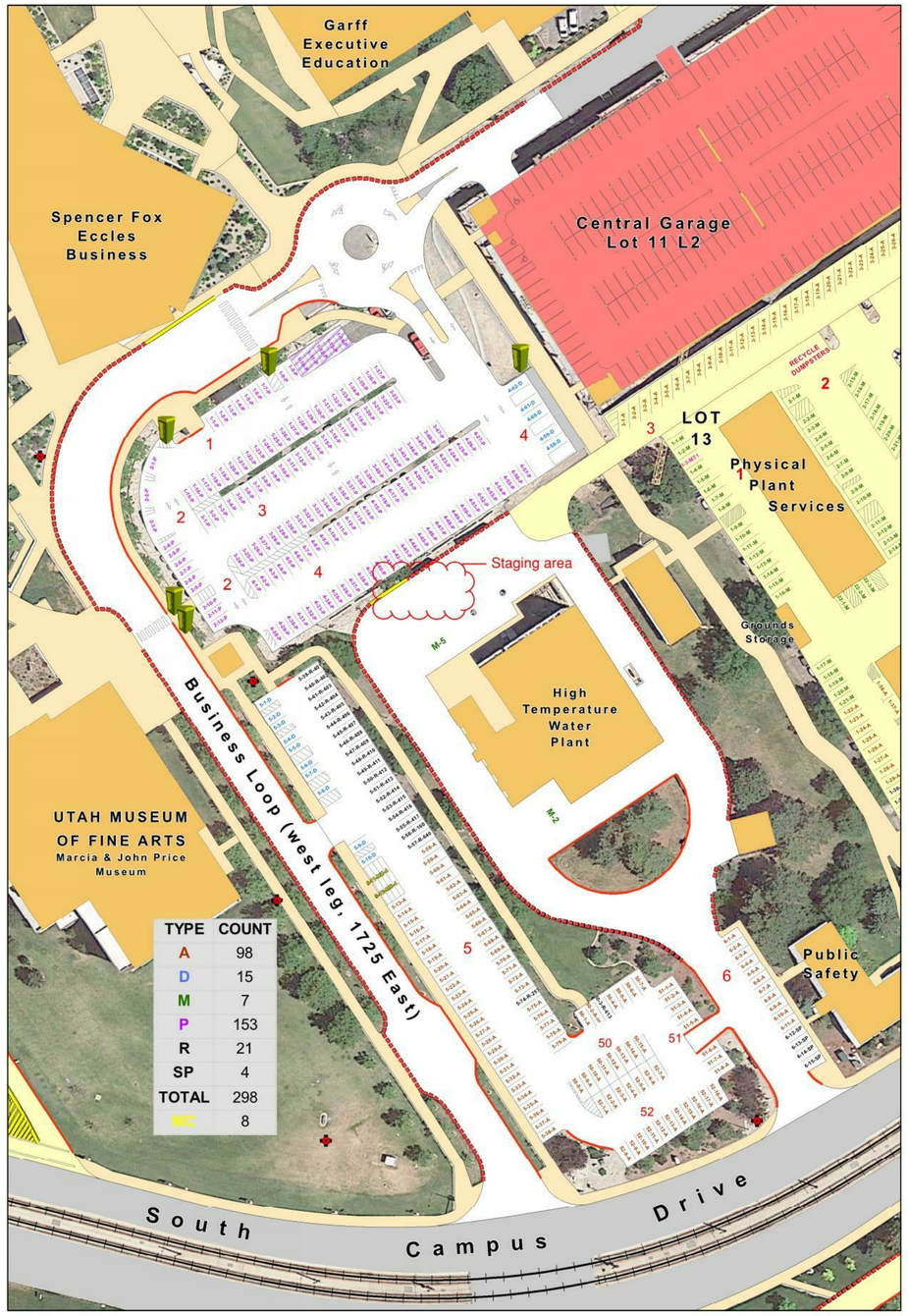
Commuter Services
Parking • Shuttles • Transit
1901 E South Campus Drive Room 101
Salt Lake City, Utah 84112-9350

PERMIT DESCRIPTIONS

1. "CS" (staging) Permits –virtual permit
   a. Staging permit, available for FREE
   b. Location specific
      i. Location will be identified on permit
      ii. Vehicle must be parked in:
         1. Loading dock (include building number)
         2. Construction area designated with cones, fencing, bollards, etc...
         3. Sidewalk with cones, fencing, bollards, etc. without blocking pedestrian access
   c. Used only for construction vehicles, no personal/commuter cars

2. "Con" (regular) Permits – virtual permit
   a. Call (801)581-6415 for current pricing
   b. Available in monthly or daily terms
   c. Valid in A and U stalls
      i. Only valid in lots 32, 40, and/or 75

3. "CV" (vendor/maintenance) Permits –virtual permit
   a. Call (801)581-6415 for current pricing
   b. Available in monthly or daily terms
   c. Valid in A, U, E, Maintenance Stalls and Meters/Pay-by-phone without payment
      i. May not park in Load Zone meters
      ii. Campus wide excluding LDSI parking lots (15,17,18,19,21)



12 : April 29, 2019 map print date

Edit: 22aug18. non-MC Stalls: 298. 13 Count DECREASE Area: 16,634. Area DECREASE. Sq. METERS

Lot 12
BUSINESS

File: Z:\LOT MAPS PHOTOS\map_comps\lot12.mxd Scale 1:800
(C) Commuter Services UofU. User: u0103012

REFERENCE NOTES

DATUM NOTES

1. THE ELEVATION MARKERS ON THE ARCH., STRUCT., MECH. ELEC. AND PLUMB. DRAWINGS ARE 3'-0" LOWER THAN THE SURVEY (UNIV. BENCHMARK). DO NOT USE THESE MARKERS OUTSIDE OF THE BUILDING ENVELOPE.
2. THE CIVIL DRAWINGS ARE INLINE WITH THE CURRENT UNIV. BENCHMARK.

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U OF U BLDG. 303 SEISMIC UPGRADE - #22649 - PHASE 5
SALT LAKE CITY UTAH
PERMIT SET - 3-5-2024

△ DATE REVISION

PROJECT NUMBER 18136

PARKING PLAN

G-004

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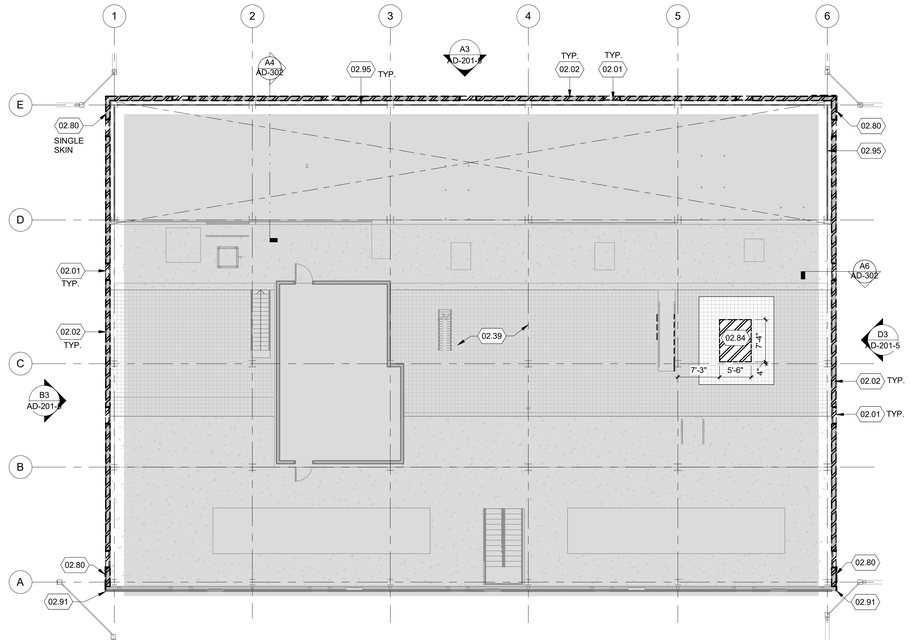
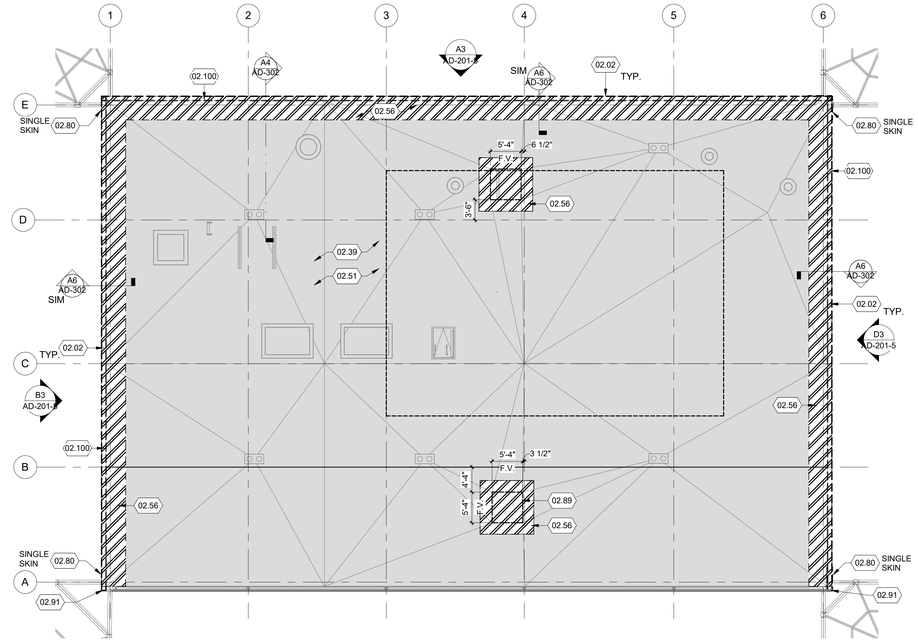


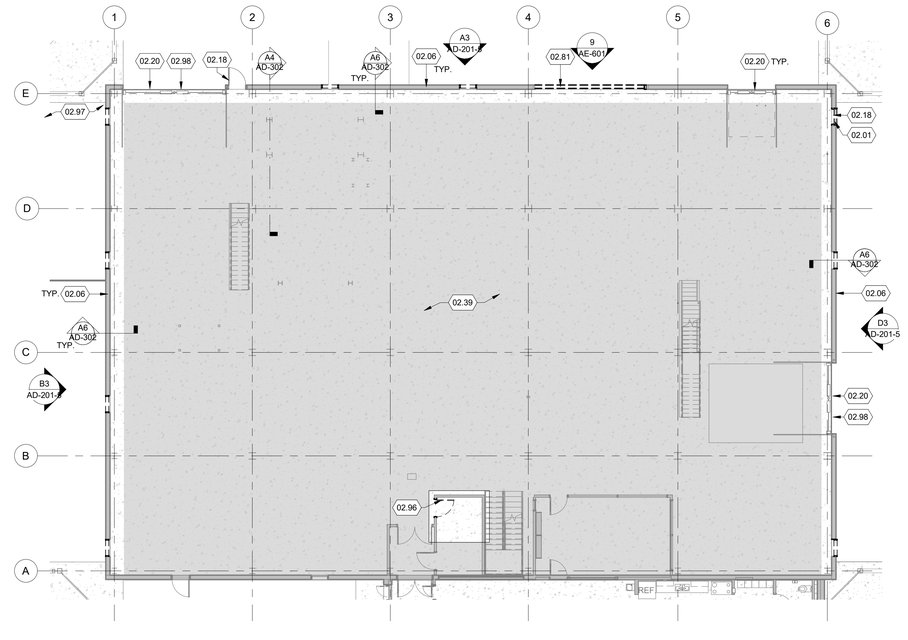
C1 DEMO-FAN FLOOR PLAN (EL. 4772'-0") - PHASE 5

SCALE: 3/32" = 1'-0"



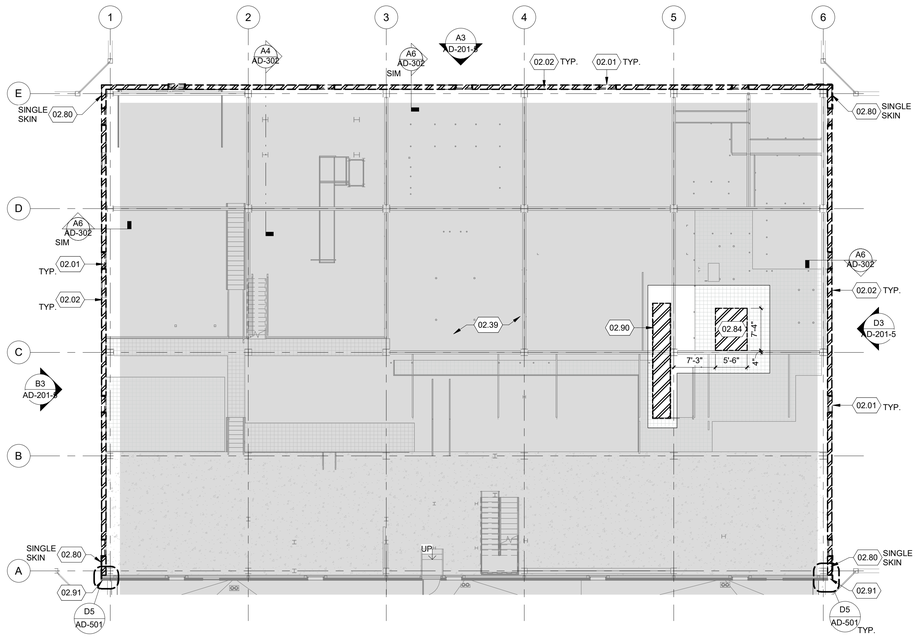
C4 DEMO-ROOF PLAN (EL. VARIES) - PHASE 5

SCALE: 3/32" = 1'-0"



A1 DEMO-OPERATING FLOOR PLAN - PAHSE 5

SCALE: 3/32" = 1'-0"



A4 DEMO-PIPING FLOOR PLAN (EL. 4757'-0") - PHASE 5

SCALE: 3/32" = 1'-0"

REFERENCE NOTES

- 02.01 REMOVE EXISTING WINDOW
- 02.02 REMOVE EXISTING MASONRY WALL FROM 11'-0" A.F.F. AND UP, BRACE EXISTING MASONRY, MEP EQUIPMENT, CONDUITS, PIPES, ETC. AS REQ'D. SALVAGE @ 40 SF FOR PATCH & REPAIR
- 02.06 EXISTING MASONRY WALL TO REMAIN TO 11'-0" A.F.F.
- 02.18 REMOVE EXISTING DOOR
- 02.20 EXISTING DOOR TO REMAIN
- 02.35 EXISTING BUTTRESS FRAMEWORK FROM PREVIOUS PHASE TO REMAIN AND PROTECT
- 02.39 NO WORK PERFORMED IN THIS AREA
- 02.51 EXISTING ROOF SYSTEM, PROTECT
- 02.56 PEEL ROOFING BACK 3'-0" OR AS REQ'D, TO BE REUSED WITH NEW ROOFING OR WALL ASSEMBLY
- 02.80 REMOVE EXISTING METAL WALL PANEL, PREP FOR NEW INSULATED METAL PANEL
- 02.81 REMOVE EXISTING TEMPORARY WALL
- 02.84 REMOVE EXISTING METAL GRATING AND ASSOCIATED STRUCTURAL SUPPORT BELOW, SHORE FOR FUTURE REBUILD; SALVAGE FOR REUSE
- 02.89 ROOF EXHAUST OPENING, REMOVE EXISTING ROOF ASSEMBLY FOR A NEW ROOF EXHAUST UNIT, CONFIRM EXACT OPENING DIMENSIONS, MECH. CURB WIDTH, ETC., WITH MECH. SUBMITTAL
- 02.90 REMOVE EXISTING STAIRS, HANDRAILS, AND SUPPORT, SPANNING FROM PIPING TO FAN FLOOR
- 02.91 PROTECT INSULATED METAL PANEL WALL FROM PREVIOUS FACE, ONLY REMOVE THE CORNER TRIM FOR REBUILD
- 02.95 EXISTING COAL HOPPER STEEL PLATE TO REMAIN
- 02.96 REMOVE EXISTING DOOR AND FRAME, SALVAGE FOR REUSE
- 02.97 REMOVE EXT'G 'HODGE PODGE' TEMPORARY PROTECTION, CLEAN AND PREP FOR NEW CHAIN LINK FENCE. SAW CUT EXT'G CONCRETE SLAB TO PROVIDE A STRAIGHT JOINT IF REQ'D
- 02.98 REMOVE EXISTING BRICK INFILL AT THE EXISTING OVEREHEAD DOOR SUPPORT STRU. BEAM, CLEAN AND PREP STRU. BEAM FOR FUTURE USE
- 02.100 REMOVE AND PROTECT LIGHTNING PROTECTION FOR FUTURE REINSTALLATION

DEMO LEGEND

- EXISTING TO BE REMOVED
- CONCRETE FLOOR
- FLOOR GRATE

GENERAL NOTES

1. REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION
2. BRACE EXISTING MEP CONDUITS, PIPES, ETC., AS REQ'D DURING DEMOLITION, REATTACH TO THE NEW STRUCTURAL FRAME, NOT INSULATED METAL PANEL
3. ONLY THE MODIFICATONS ARE CLOUDED ON THE SHEETS THAT WERE ISSUED IN PR #2
4. SHEETS NOT ISSUED WITH PR #2 DO NOT HAVE CLOUDS INDICATING MODIFICATIONS
5. MUST COORDINATE OR INFORM THE GAS COMPANY PRIOR TO BEGIN WORK IN THE HIGH PRESSURE GAS YARD
6. KEEP THE CAULKING AT THE TOP END OF THE BRB IN GOOD SHAPE AND APPLY AND MAINTAIN A GOOD, HIGH QUALITY PAINT SYSTEM, TYPICAL FOR ALL EXPOSED STRUCTURAL STEEL

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U OF U BLDG. 303 SEISMIC UPGRADE - #22649 - PHASE 5

SALT LAKE CITY UTAH

PERMIT SET - 3-5-2024

JACKSON FERGUSON, AIA #534047-2301 LICENSED ARCHITECT 10.10.22

△ DATE REVISION

PROJECT NUMBER 18136

DEMO FLOOR & ROOF PLANS PHASE 5

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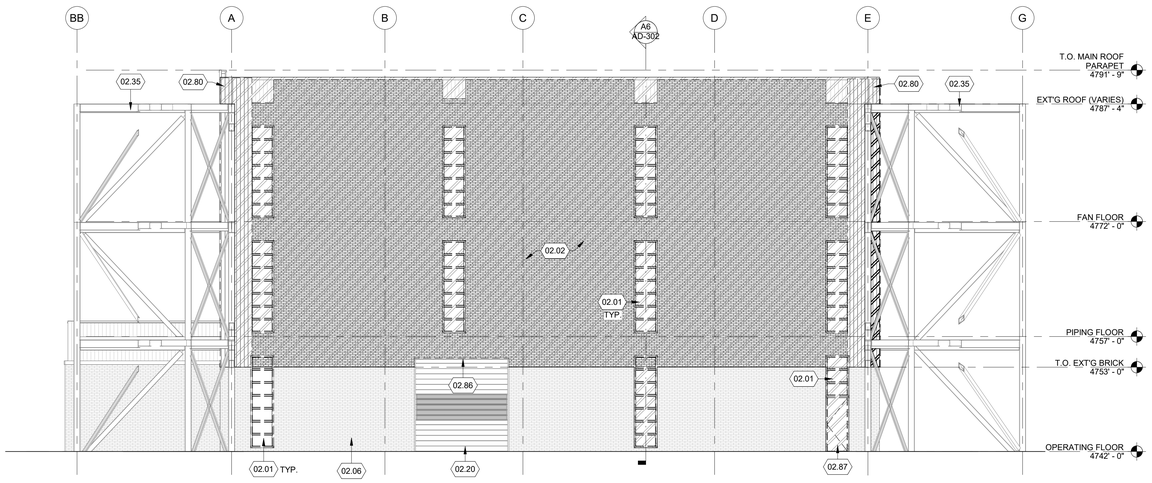
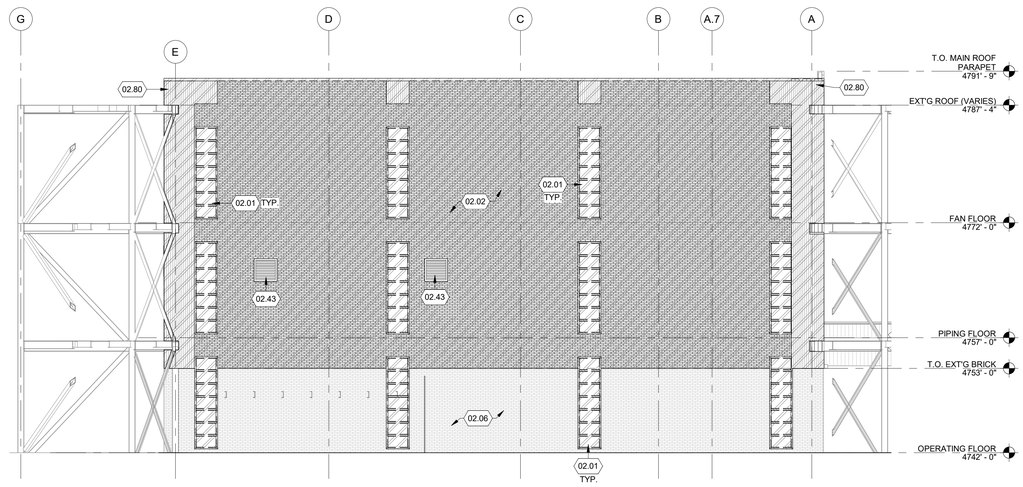


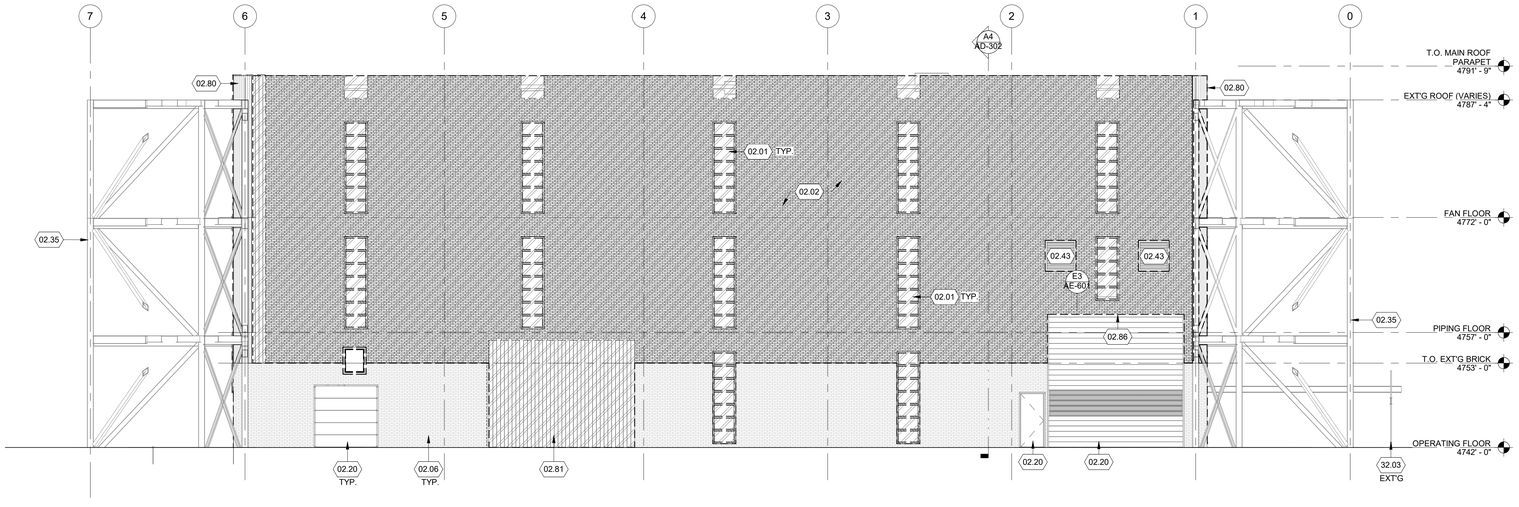
D3 SOUTH DEMO ELEVATION

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



B3 NORTH DEMO ELEVATION

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



A3 EAST DEMO ELEVATION

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

REFERENCE NOTES

02.01 REMOVE EXISTING WINDOW
02.02 REMOVE EXISTING MASONRY WALL FROM 11'-0" A.F.F. AND UP. BRACE EXISTING MASONRY. MEP EQUIPMENT, CONDUITS, PIPES, ETC. AS REQ'D. SALVAGE @ 40 SF FOR PATCH & REPAIR
02.06 EXISTING MASONRY WALL TO REMAIN TO 11'-0" A.F.F.
02.20 EXISTING DOOR TO REMAIN
02.35 EXISTING BUTTRESS FRAMEWORK FROM PREVIOUS PHASE TO REMAIN AND PROTECT
02.43 EXISTING LOUVER TO REMAIN. PROTECT, PROVIDE A CLEAN/CLEAR AIR FLOW
02.80 REMOVE EXISTING METAL WALL PANEL. PREP FOR NEW INSULATED METAL PANEL
02.81 REMOVE EXISTING TEMPORARY WALL
02.86 BRACE EXISTING OPENING, FRAME, ETC. AS REQ'D
02.87 REMOVE EXISTING DOOR AND FRAME. PREP FOR NEW BUILD
32.03 CHAIN LINK FENCE

PHASE 5 DEMO LEGEND

EXISTING TO BE REMOVED

GENERAL NOTES

1. REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION
2. BRACE EXISTING MEP CONDUITS, PIPES, ETC., AS REQ'D DURING DEMOLITION, REATTACH TO THE NEW STRUCTURAL FRAME, NOT INSULATED METAL PANEL
3. ONLY THE MODIFICATONS ARE CLOUDED ON THE SHEETS THAT WERE ISSUED IN PR #2
4. SHEETS NOT ISSUED WITH PR #2 DO NOT HAVE CLOUDS INDICATING MODIFICATIONS
5. MUST COORDINATE OR INFORM THE GAS COMPANY PRIOR TO BEGIN WORK IN THE HIGH PRESSURE GAS YARD
6. KEEP THE CAULKING AT THE TOP END OF THE BRB IN GOOD SHAPE AND APPLY AND MAINTAIN A GOOD, HIGH QUALITY PAINT SYSTEM, TYPICAL FOR ALL EXPOSED STRUCTURAL STEEL

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SALT LAKE CITY UTAH

PERMIT SET - 3-5-2024

STATE OF UTAH
JACKSON FERGUSON, AIA
#534047-0301
LICENSED ARCHITECT
3.10.22

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PROJECT NUMBER 18136

DEMO EXTERIOR ELEVATIONS PHASE 5

AD-201-5

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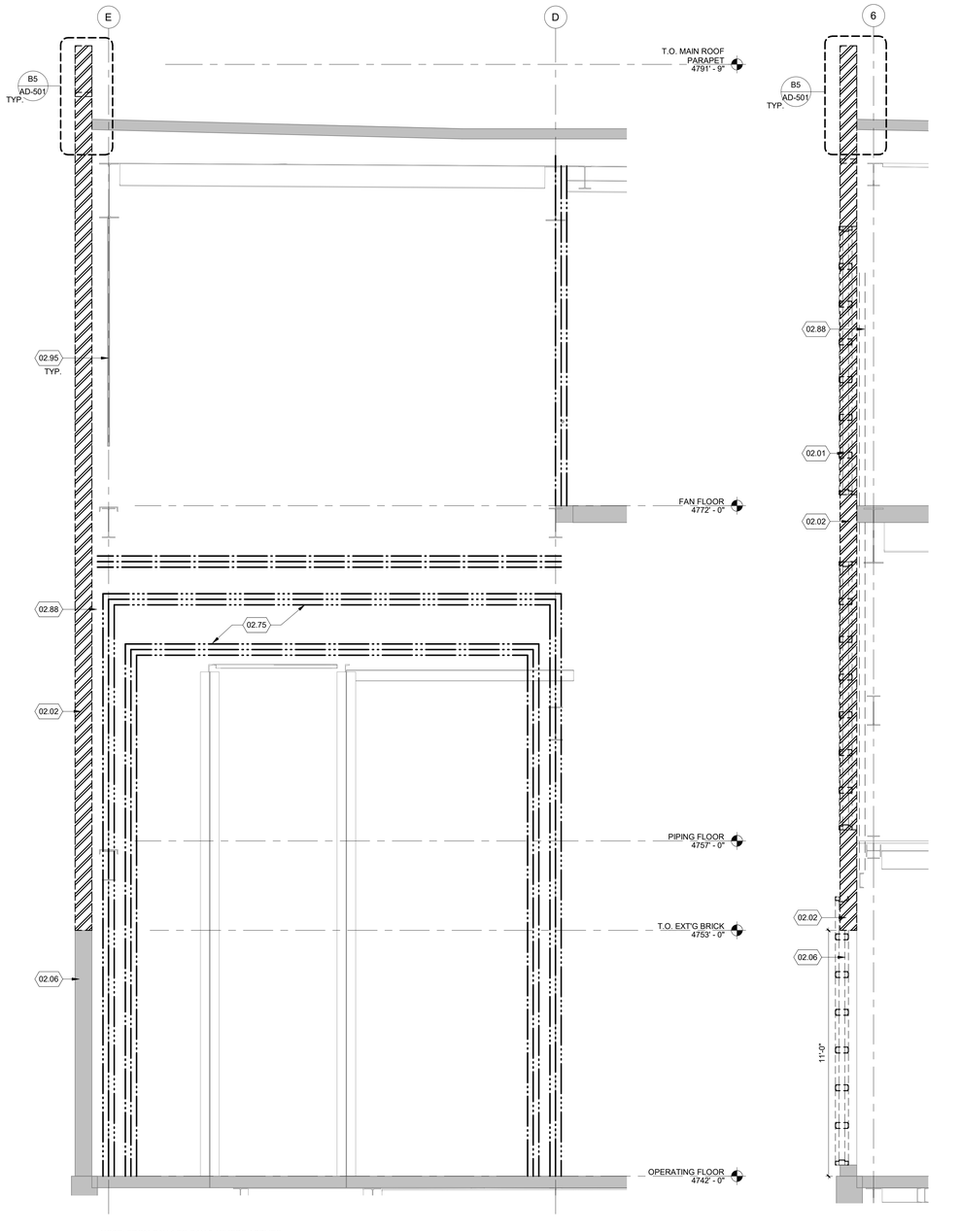

NOTE: FROM BAY 1 TO BAY 5, WHERE APPLIES

A4 DEMO BUILDING SECTION
SCALE: 3/8" = 1'-0"

A6 DEMO WALL SECTION
SCALE: 3/8" = 1'-0"

REFERENCE NOTES

02.01 REMOVE EXISTING WINDOW
02.02 REMOVE EXISTING MASONRY WALL FROM 11'-0" A.F.F. AND UP, BRACE EXISTING MASONRY, MEP EQUIPMENT, CONDUITS, PIPES, ETC. AS REQ'D. SALVAGE @ 40 SF FOR PATCH & REPAIR
02.06 EXISTING MASONRY WALL TO REMAIN TO 11'-0" A.F.F.
02.26 EXISTING COAL HOPPER TO BE REMOVED BY OTHER, GC TO COORDINATE
02.75 SOLID & DUST PROOF CONSTRUCTION BARRIER
02.88 SECURE EXISTING MEP PIPES, CONDUITS, EQUIPMENT AS REQ'D PRIOR TO DEMOLITION OF MASONRY WALL, TYP.
02.95 EXISTING COAL HOPPER STEEL PLATE TO REMAIN

PROTECTION LEGEND PHASE 5

3/4" PLYWOOD
PLASTIC SHEATHING
SCAFFOLDING. ANCHOR TO BUILDING FRAME

GENERAL NOTES

1. REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION
2. BRACE EXISTING MEP CONDUITS, PIPES, ETC., AS REQ'D DURING DEMOLITION, REATTACH TO THE NEW STRUCTURAL FRAME, NOT INSULATED METAL PANEL
3. ONLY THE MODIFICATONS ARE CLOUDED ON THE SHEETS THAT WERE ISSUED IN PR #2
4. SHEETS NOT ISSUED WITH PR #2 DO NOT HAVE CLOUDS INDICATING MODIFICATIONS
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10.10.22

△	DATE	REVISION

PROJECT NUMBER 18136

DEMO WALL SECTIONS

AD-302

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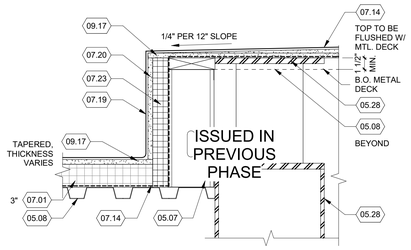
REFERENCE NOTES

02.02	REMOVE EXISTING MASONRY WALL FROM 11'-0" A.F.F. AND UP, BRACE EXISTING MASONRY, MEP EQUIPMENT, CONDUITS, PIPES, ETC. AS REQ'D. SALVAGE @ 40 SF FOR PATCH & REPAIR
02.07	EXISTING MASONRY WALL TO REMAIN
02.10	EXISTING DECKING TO REMAIN FROM GRID A TO B
02.24	REMOVE EXISTING ROOFING AND INSULATION
02.30	EXISTING ROOFING AND INSULATION TO REMAIN
02.33	EXISTING WALL TO REMAIN
02.45	REMOVE EXISTING RAIL AT CUTOUT
02.46	EXISTING STRUCTURE TO REMAIN
02.56	PEEL ROOFING BACK 3'-0" OR AS REQ'D, TO BE REUSED WITH NEW ROOFING OR WALL ASSEMBLY
02.58	REMOVE EXISTING METAL COPING AND ASSOCIATED BLOCKING
02.59	REMOVE EXISTING ROOFING, INSULATION AND DECKING BELOW
02.81	REMOVE EXISTING TEMPORARY WALL
02.82	REMOVE EXISTING CORNER, PROTECT PREVIOUSLY INSTALL INSULATED PANEL
05.07	6" METAL STUD
05.08	METAL ROOF DECKING, PAINTED IF EXPOSED
05.28	STEEL STUB, RE. STR. DWG.
07.01	RIGID ROOF INSULATION. MIN. R 32,, THICKNESS VARIES
07.14	VAPOR RETARDER, TO SPAN CONTINUOUSLY BELOW NEW CONCRETE SLAB ON GRADE, ABOVE METAL ROOF DECK, AND ON THE INSIDE OF METAL STUD WALL, TAPE AT ALL EXPOSED JOINTS
07.19	SINGLE PLY ROOFING MEMBRANE TO WRAP OVER CURB WALL
07.20	1/2" EXTERIOR GLASS MAT SHEATHING
07.23	2" RIGID INSULATION, MIN. R12
09.17	5/8" COVER BOARD

REMOVE/DEMOLISH PENTHOUSE CURB FROM THE PHASE 2 PROJECT SCOPE



NOTE: TOP OF THE PENTHOUSE CURB TO BE LEVELED, SLOPING IS ACHIEVED THROUGH TAPERED INSULATION OR SLOPED METAL DECK

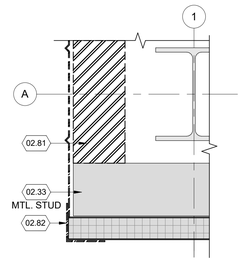
C4 PENTHOUSE CURB @ CORNER-DEMO

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

NOTE: TOP OF THE PENTHOUSE CURB TO BE LEVELED, UNIFORMED THROUGHOUT, SLOPING IS ACHIEVED THROUGH TAPERED INSULATION OR SLOPED METAL DECK

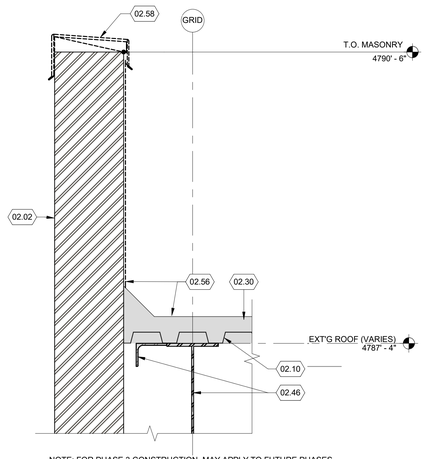
B4 PENTHOUSE CURB-DEMO

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



D5 METAL PANEL CORNER-DEMO

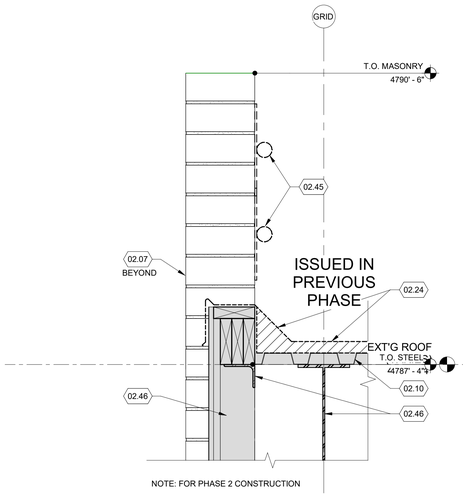
SCALE: 1 1/2" = 1'-0"



NOTE: FOR PHASE 3 CONSTRUCTION, MAY APPLY TO FUTURE PHASES

B5 PARAPET DEMO SECTION

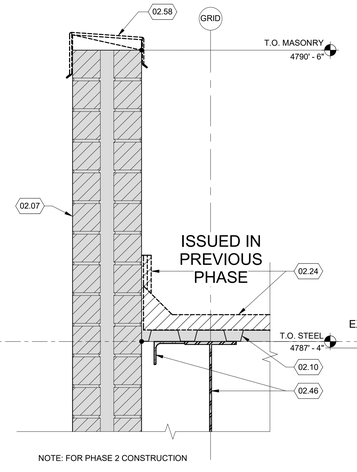
SCALE: 1 1/2" = 1'-0"



NOTE: FOR PHASE 2 CONSTRUCTION

A2 PARAPET DEMO SECTION GRIDS A-B (ABOVE EXISTING WINDOWS)

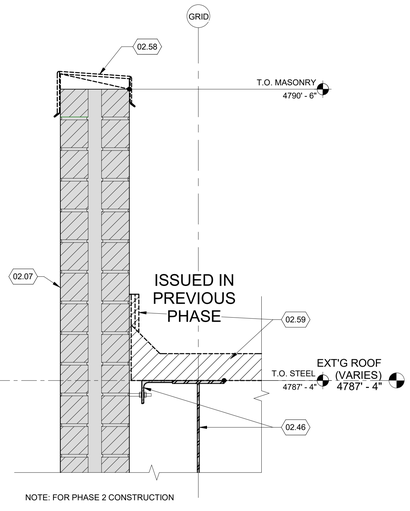
SCALE: 1 1/2" = 1'-0"



NOTE: FOR PHASE 2 CONSTRUCTION

A3 PARAPET DEMO SECTION GRIDS A-B

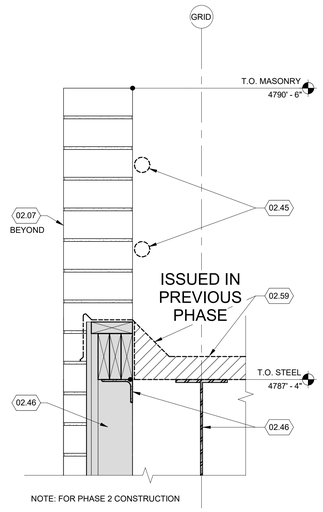
SCALE: 1 1/2" = 1'-0"



NOTE: FOR PHASE 2 CONSTRUCTION

A4 PARAPET DEMO SECTION GRIDS B-E

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



NOTE: FOR PHASE 2 CONSTRUCTION

A5 PARAPET DEMO SECTION (ABOVE EXISTING WINDOWS)

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

PHASE 5 NOTES

1. NOT ALL SECTIONS NOR DETAILS ARE APPLIED TO THIS PHASE. CERTAIN INFORMATION WERE ISSUED PREVIOUSLY.
2. ALL ROOFING RELATED COMPONENTS MUST CONFORM TO DFCM DESIGN STANDARD, RE. SPEC..

PHASE 4 NOTES

1. NO FURRING NOR TILE BEHIND THE LOWER MILLWORK AT THE EXISTING WALL @ WARMING KITCHEN.
2. NOT ALL SECTIONS NOR DETAILS ARE APPLIED TO THIS PHASE. CERTAIN INFORMATION WERE ISSUED PREVIOUSLY

DATUM NOTES

1. THE ELEVATION MARKERS ON THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS ARE 3'-0" LOWER THAN THE SURVEY (UNIVERSITY BENCHMARK). DO NOT USE THESE MARKERS OUTSIDE OF THE BUILDING ENVELOPE.
2. THE CIVIL DRAWINGS ARE INLINE WITH THE CURRENT UNIVERSITY BENCHMARK.

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U OF U BLDG. 303 SEISMIC UPGRADE - #22649 - PHASE 5

SALT LAKE CITY UTAH

PERMIT SET - 3-5-2024

STATE OF UTAH · JACKSON FERGUSON, AIA · #9340847-0301 · LICENSED ARCHITECT

△	DATE	REVISION
2	5-3-21	Phase 3 PR #4
10	Date 10	Prev phase

PROJECT NUMBER 18136

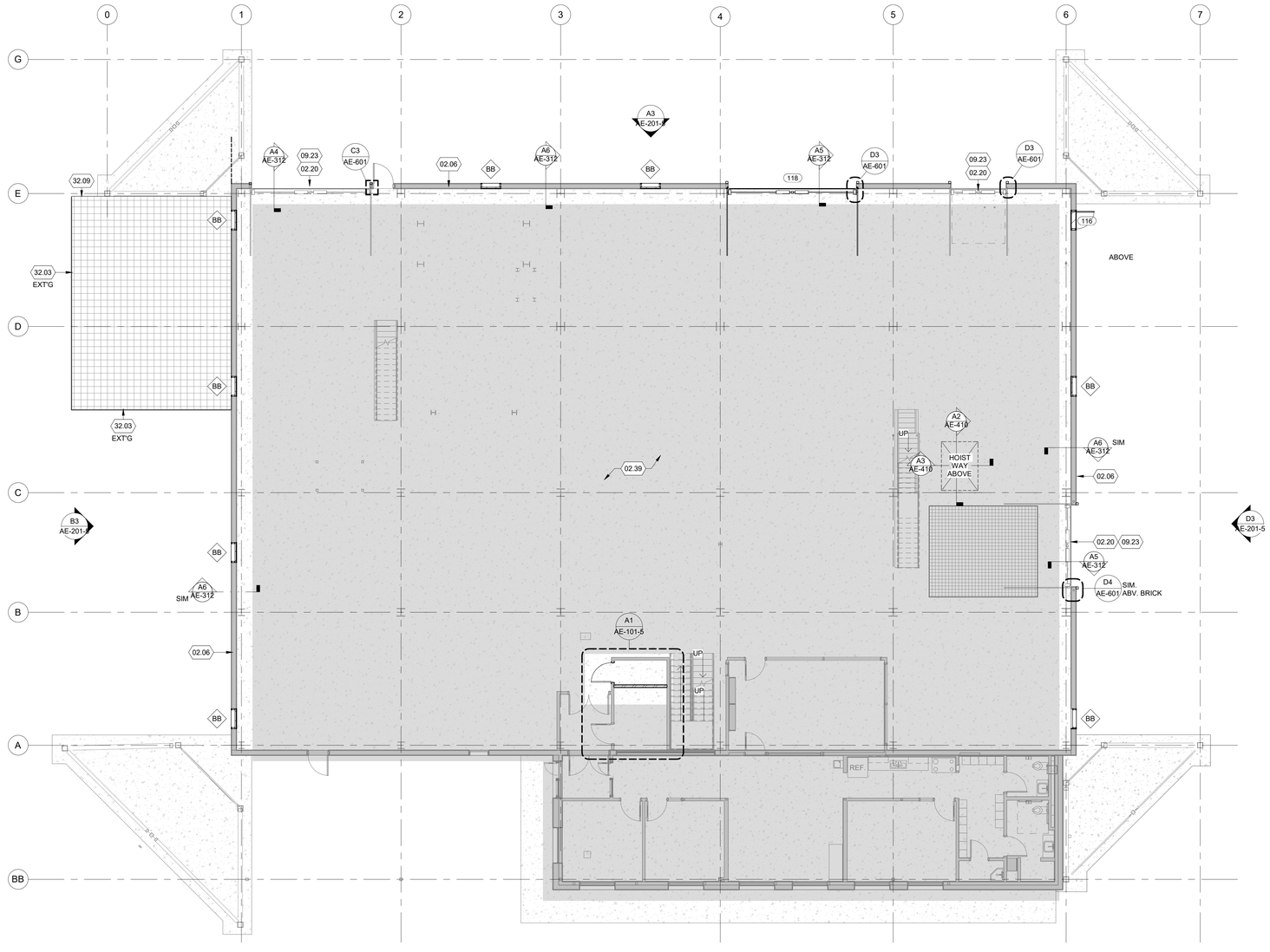
DEMO DETAILS

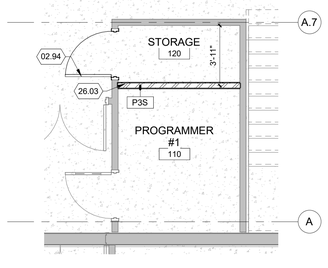
AD-501

3/5/2024 2:09:17 PM

REFERENCE NOTES

02.06	EXISTING MASONRY WALL TO REMAIN TO 11'-0" A.F.F.
02.20	EXISTING DOOR TO REMAIN
02.39	NO WORK PERFORMED IN THIS AREA
02.94	REINSTALLATION OF EXISTING DOOR AND FRAME, REVERSE HARDWARE AS REQ'D
09.23	HIGH PERFORMANCE EXTERIOR PAINT, ALSO RE. GEN. NOTE #6
26.03	REROUTE ELECTRICAL CONTROL, SENSOR, SWITCHES, ETC., AS REQ'D
32.03	CHAIN LINK FENCE
32.09	10' TALL GALVANIZED CHAIN LINK FENCE TO MATCH EXISTING, ATTACHED TO EXISTING CORNER POST AND TERMINATE AT THE BUILDING EXTERIOR WALL. PROVIDE A STEEL CHANNEL AT TOP OF FENCE POST, MATCH EXISTING





A1 STORAGE ROOM
SCALE: 1/4" = 1'-0"

A2 OPERATING LEVEL FLOOR PLAN PHASE 5
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION
2. BRACE EXISTING MEP CONDUITS, PIPES, ETC., AS REQ'D DURING DEMOLITION, REATTACH TO THE NEW STRUCTURAL FRAME, NOT INSULATED METAL PANEL
3. ONLY THE MODIFICATONS ARE CLOUDED ON THE SHEETS THAT WERE ISSUED IN PR #2
4. SHEETS NOT ISSUED WITH PR #2 DO NOT HAVE CLOUDS INDICATING MODIFICATIONS
5. MUST COORDINATE OR INFORM THE GAS COMPANY PRIOR TO BEGIN WORK IN THE HIGH PRESSURE GAS YARD
6. KEEP THE CAULKING AT THE TOP END OF THE BRB IN GOOD SHAPE AND APPLY AND MAINTAIN A GOOD, HIGH QUALITY PAINT SYSTEM, TYPICAL FOR ALL EXPOSED STRUCTURAL STEEL

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SALT LAKE CITY UTAH

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STATE OF UTAH
JACKSON FERGUSON, AIA
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△ DATE REVISION

PROJECT NUMBER 18136

OPERATING LEVEL FLOOR PLAN PHASE 5

AE-101-5

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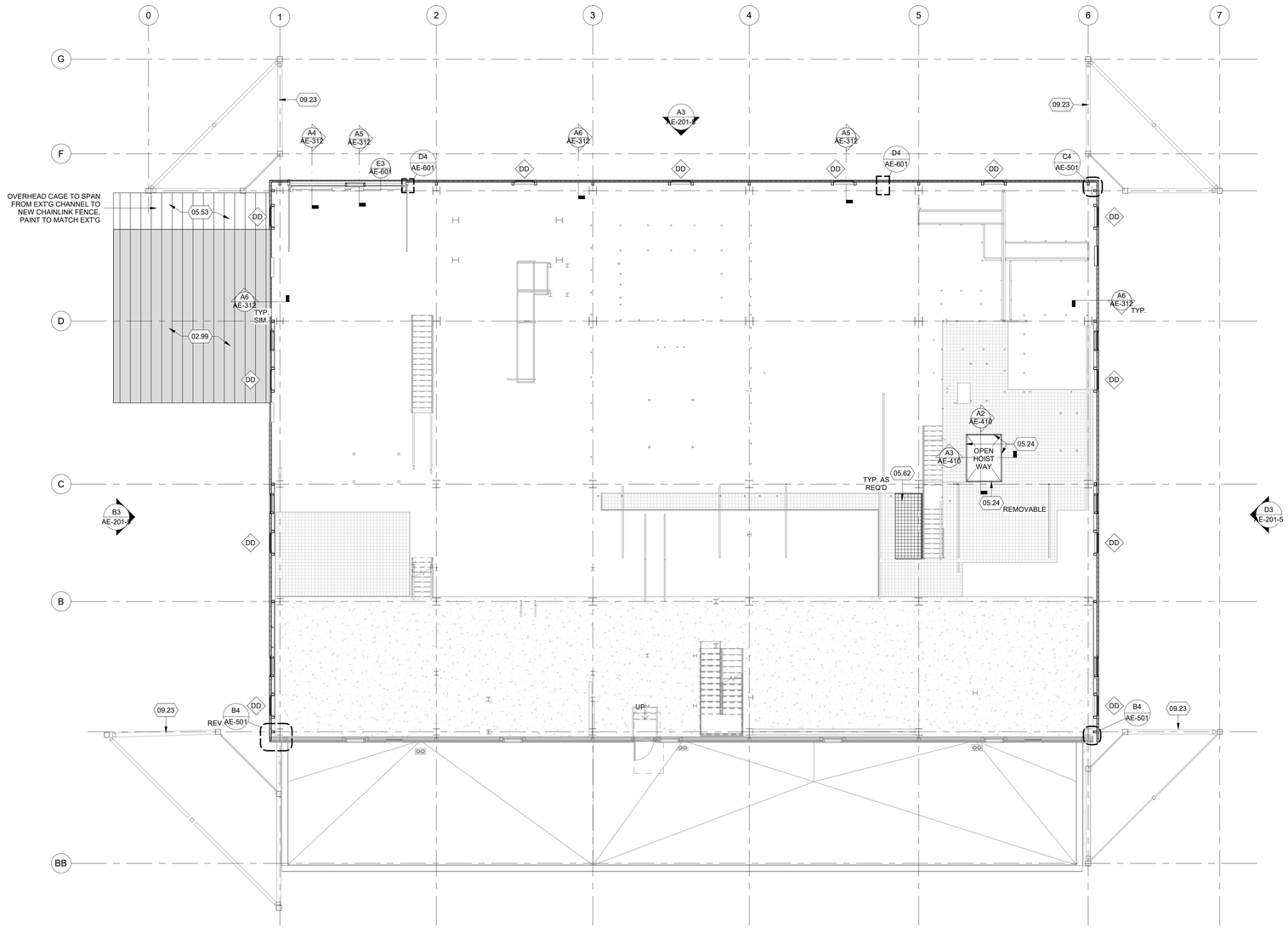

A1 PIPING LEVEL FLOOR PLAN - PHASE 5

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

REFERENCE NOTES

02.99	EXT'G OVERHEAD CAGE
05.24	42" HIGH GUARDRAIL, MATCH EXISTING DESIGN, PAINTED
05.53	1 1/2" DIA. METAL PIPE 18" O.C. WELDED TO STRUCTURAL W BEAMS, HOT DIPPED GALVANIZED, PAINTED
05.62	INFILL WITH METAL GRATING, LEVEL WITH ADJACENT SURFACE
09.23	HIGH PERFORMANCE EXTERIOR PAINT, ALSO RE. GEN. NOTE #6

PHASE 5 FLOOR LEGEND

CONCRETE FLOOR

FLOOR GRATE

GENERAL NOTES

1. REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION
2. BRACE EXISTING MEP CONDUITS, PIPES, ETC., AS REQ'D DURING DEMOLITION, REATTACH TO THE NEW STRUCTURAL FRAME, NOT INSULATED METAL PANEL
3. ONLY THE MODIFICATONS ARE CLOUDED ON THE SHEETS THAT WERE ISSUED IN PR #2
4. SHEETS NOT ISSUED WITH PR #2 DO NOT HAVE CLOUDS INDICATING MODIFICATIONS
5. MUST COORDINATE OR INFORM THE GAS COMPANY PRIOR TO BEGIN WORK IN THE HIGH PRESSURE GAS YARD
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PERMIT SET - 3-5-2024

JACKSON FERGUSON, AIA #9340843-0301 LICENSED ARCHITECT STATE OF UTAH

△ DATE REVISION

PROJECT NUMBER 18136

PIPING LEVEL FLOOR PLAN PHASE 5

AE-102-5

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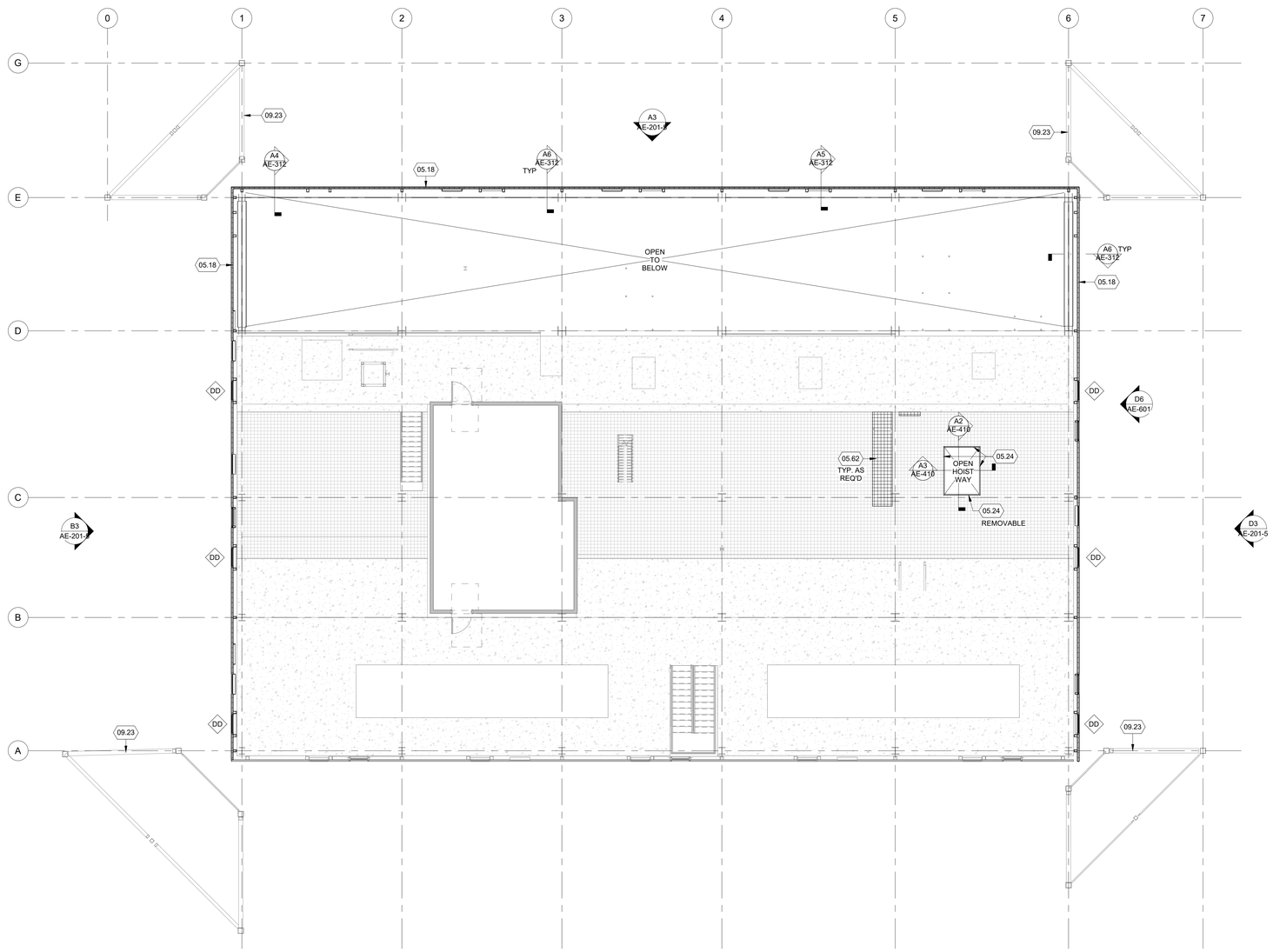

A1 FAN LEVEL FLOOR PLAN - PHASE 5

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

REFERENCE NOTES

05.18 3" INSULATED METAL PANEL (R25) TO SPAN VERTICALLY, ATTACH TO STEEL FRAME OR METAL STUDS, ALSO RE. STRU. DWG.

05.24 42" HIGH GUARDRAIL, MATCH EXISTING DESIGN, PAINTED

05.62 INFILL WITH METAL GRATING, LEVEL WITH ADJACENT SURFACE

09.23 HIGH PERFORMANCE EXTERIOR PAINT, ALSO RE. GEN. NOTE #6

PHASE 5 FLOOR LEGEND

CONCRETE FLOOR

FLOOR GRATE

GENERAL NOTES

1. REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION
2. BRACE EXISTING MEP CONDUITS, PIPES, ETC., AS REQ'D DURING DEMOLITION, REATTACH TO THE NEW STRUCTURAL FRAME, NOT INSULATED METAL PANEL
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4. SHEETS NOT ISSUED WITH PR #2 DO NOT HAVE CLOUDS INDICATING MODIFICATIONS
5. MUST COORDINATE OR INFORM THE GAS COMPANY PRIOR TO BEGIN WORK IN THE HIGH PRESSURE GAS YARD
6. KEEP THE CAULKING AT THE TOP END OF THE BRB IN GOOD SHAPE AND APPLY AND MAINTAIN A GOOD, HIGH QUALITY PAINT SYSTEM, TYPICAL FOR ALL EXPOSED STRUCTURAL STEEL

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U OF U BLDG. 303 SEISMIC UPGRADE - #22649 - PHASE 5

SALT LAKE CITY UTAH

PERMIT SET - 3-5-2024

STATE OF UTAH · JACKSON FERGUSON, AIA · #9340947-0301 · LICENSED ARCHITECT · 5.10.24

△ DATE REVISION

PROJECT NUMBER 18136

FAN LEVEL FLOOR PLAN PHASE 5

AE-103-5

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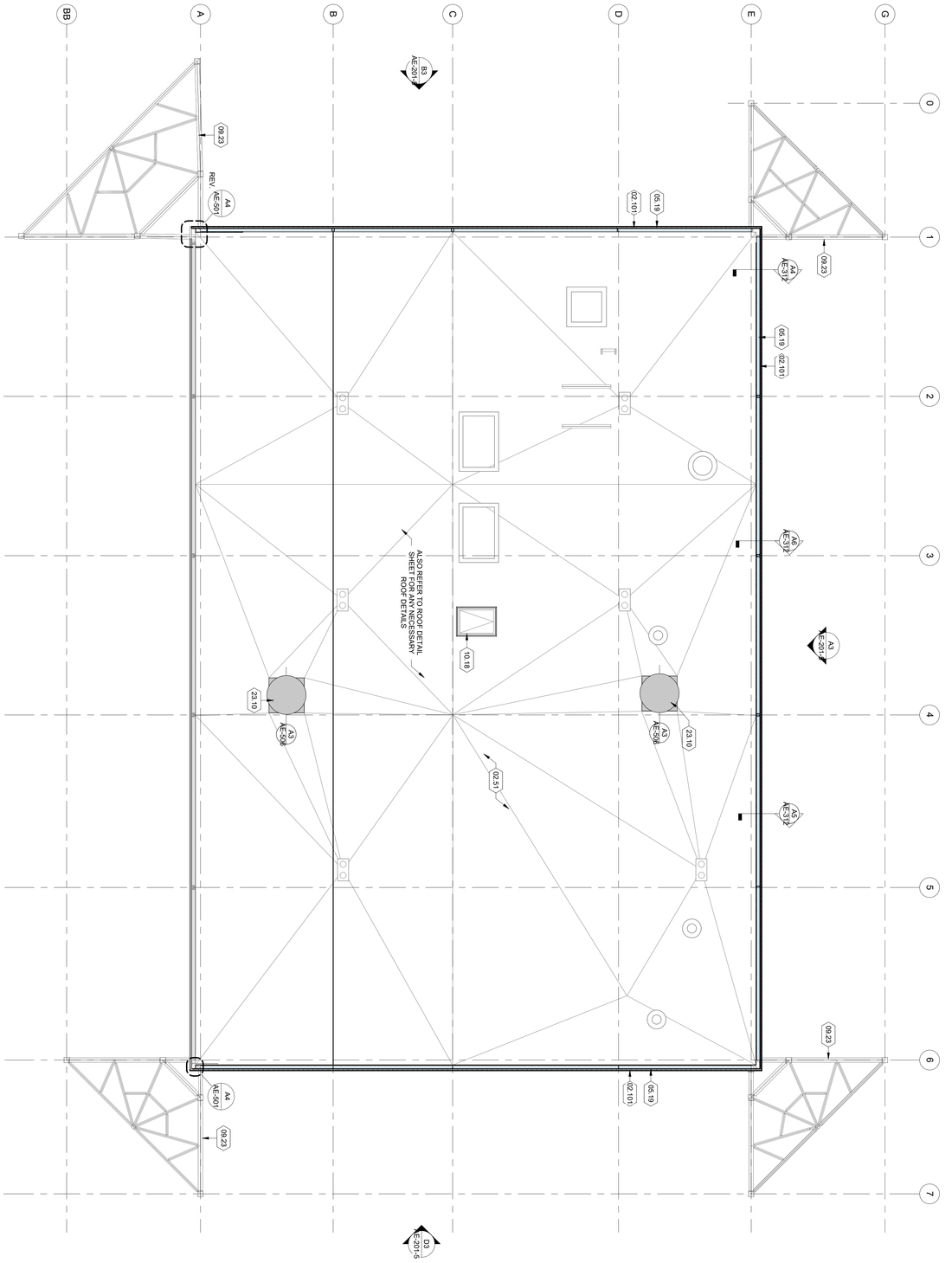

REFERENCE NOTES

02.51 EXISTING ROOF SYSTEM. PROTECT
02.101 REMOVE ROOFING AS NECESSARY TO PERFORM WORK. PROTECTION, WATER TIGHT. MUST MEET CURRENT DFCM STANDARD
05.19 PREPAINTED METAL CAP/FLASHING. CAULK AS REQD
09.23 HIGH PERFORMANCE EXTERIOR PAINT. ALSO RE: GEN. NOTE #6
10.18 PREFABRICATED METAL FALL PROTECTION WITH SELF CLOSING GATE ATTACHED TO SIDES OF THE ROOF HATCH CURB
23.10 ROOF TOP EXHAUST FAN. RE: MECH DWG.

GENERAL NOTES

1. REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION
2. REMOVE EXISTING MEP CONDUITS, PIPES, ETC. AS REQD DURING DEMOLITION. REATTACH TO THE NEW STRUCTURAL FRAME. NOT INSULATED
3. ONLY THE MODIFICATIONS ARE CLOUDED ON THE SHEETS. THEREFORE SHEETS MAY NOT HAVE CLOUDS INDICATING MODIFICATIONS
4. SHEETS MARKED WITH (N) ARE NEW WORK
5. COORDINATE WITH QUESTAR GAS COMPANY PRIOR TO BEGIN WORK IN THE HIGH PRESSURE GAS YARD
6. REFER TO DETAILS FOR ADDITIONAL INFO ON HOW TO PREP, CLEAN, REPAIR AND REPLACE AS NEEDED, SHAPE AND REPLY AND MAINTAIN A GOOD, HIGH QUALITY PAINT SYSTEM, TYPICAL FOR ALL EXPOSED STRUCTURAL STEEL

A1
ROOF PLAN (EL. VARIES) PHASE 5
SCALE: 1/8" = 1'-0"

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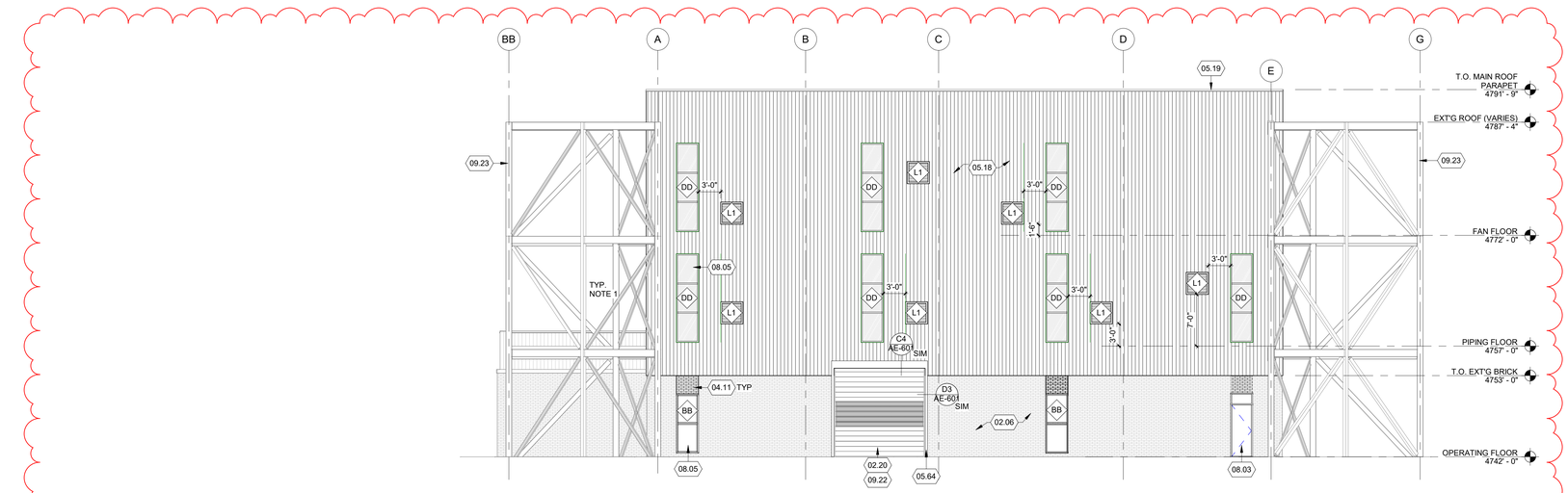
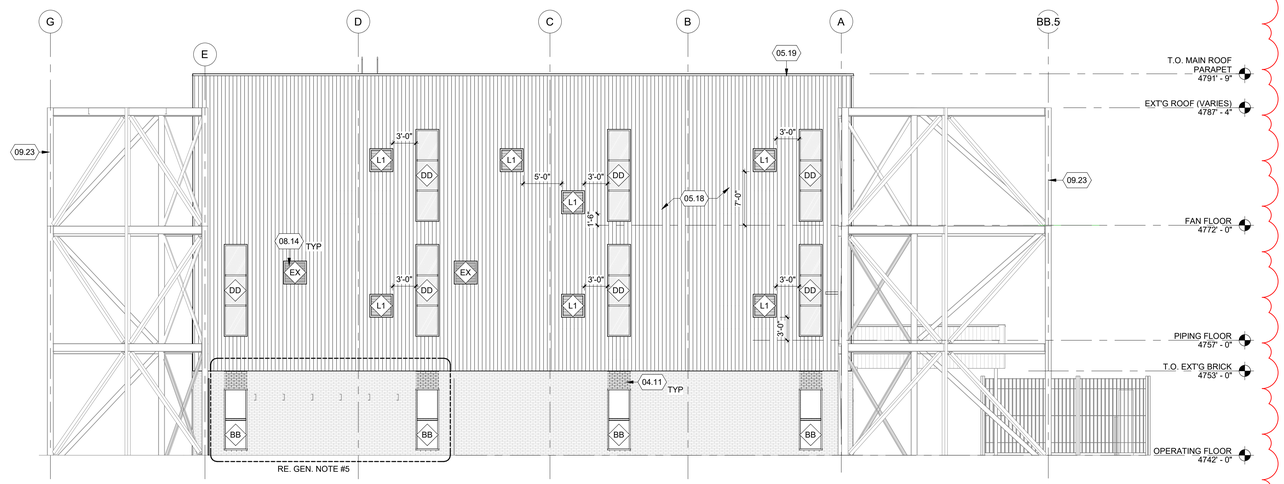
ROOF PLAN PHASE 5

AE-104-5



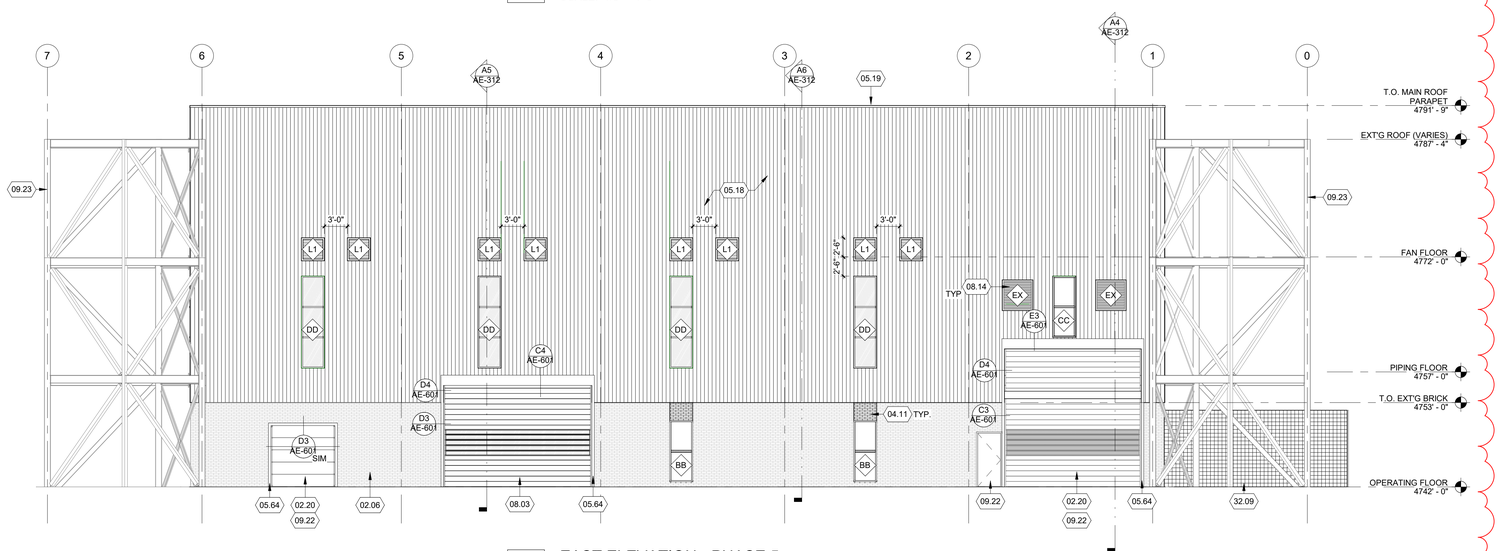
D3 SOUTH ELEVATION - PHASE 5

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



B3 NORTH ELEVATION - PHASE 5

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



A3 EAST ELEVATION - PHASE 5

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

REFERENCE NOTES

02.06 EXISTING MASONRY WALL TO REMAIN TO 11'-0" A.F.F.
02.20 EXISTING DOOR TO REMAIN
04.11 PATCH & REPAIR WITH SALVAGED BRICK
05.18 3" INSULATED METAL PANEL (R25) TO SPAN VERTICALLY, ATTACH TO STEEL FRAME OR METAL STUDS, ALSO RE. STRU. DWG.
05.19 PREPAINTED METAL CAP/FLASHING, CAULK AS REQ'D
05.64 PAINTED HSS FRAME W/ END CAPS, REFER TO AE-601 DETAILS
08.03 DOOR. RE DOOR SCHEDULE
08.05 WINDOW, RE WINDOW SCHEDULE
08.14 REFINISH TO MATCH ADJ. NEW LOUVERS, ADD STEEL SUPPORT AS REQ'D
09.22 PREP & PAINT TO MATCH NEW DOORS, SERVICE & LUBE ALL MECHANICAL COMPONENTS
09.23 HIGH PERFORMANCE EXTERIOR PAINT, ALSO RE. GEN. NOTE #6
32.09 10' TALL GALVANIZED CHAIN LINK FENCE TO MATCH EXISTING, ATTACHED TO EXISTING CORNER POST AND TERMINATE AT THE BUILDING EXTERIOR WALL. PROVIDE A STEEL CHANNEL AT TOP OF FENCE POST, MATCH EXISTING

GENERAL NOTES

1. REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION
2. BRACE EXISTING MEP CONDUITS, PIPES, ETC., AS REQ'D DURING DEMOLITION, REATTACH TO THE NEW STRUCTURAL FRAME, NOT INSULATED METAL PANEL
3. ONLY THE MODIFICATONS ARE CLOUDED ON THE SHEETS THAT WERE ISSUED IN PR #2
4. SHEETS NOT ISSUED WITH PR #2 DO NOT HAVE CLOUDS INDICATING MODIFICATIONS
5. MUST COORDINATE OR INFORM THE GAS COMPANY PRIOR TO BEGIN WORK IN THE HIGH PRESSURE GAS YARD
6. KEEP THE CAULKING AT THE TOP END OF THE BRB IN GOOD SHAPE AND APPLY AND MAINTAIN A GOOD, HIGH QUALITY PAINT SYSTEM, TYPICAL FOR ALL EXPOSED STRUCTURAL STEEL

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PERMIT SET - 3-5-2024

STATE OF UTAH · JACKSON FERGUSON, AIA · #9340947-0301 · LICENSED ARCHITECT · 5.10.24

△	DATE	REVISION
17	11-15-23	Ph. 5 PR #1 PR #2
18	12-6-23	Ph. 5 PR #2-R1
19	2-14-24	Ph. 5 PR #2-R2

PROJECT NUMBER 18136

EXTERIOR ELEVATIONS PHASE 5

AE-201-5

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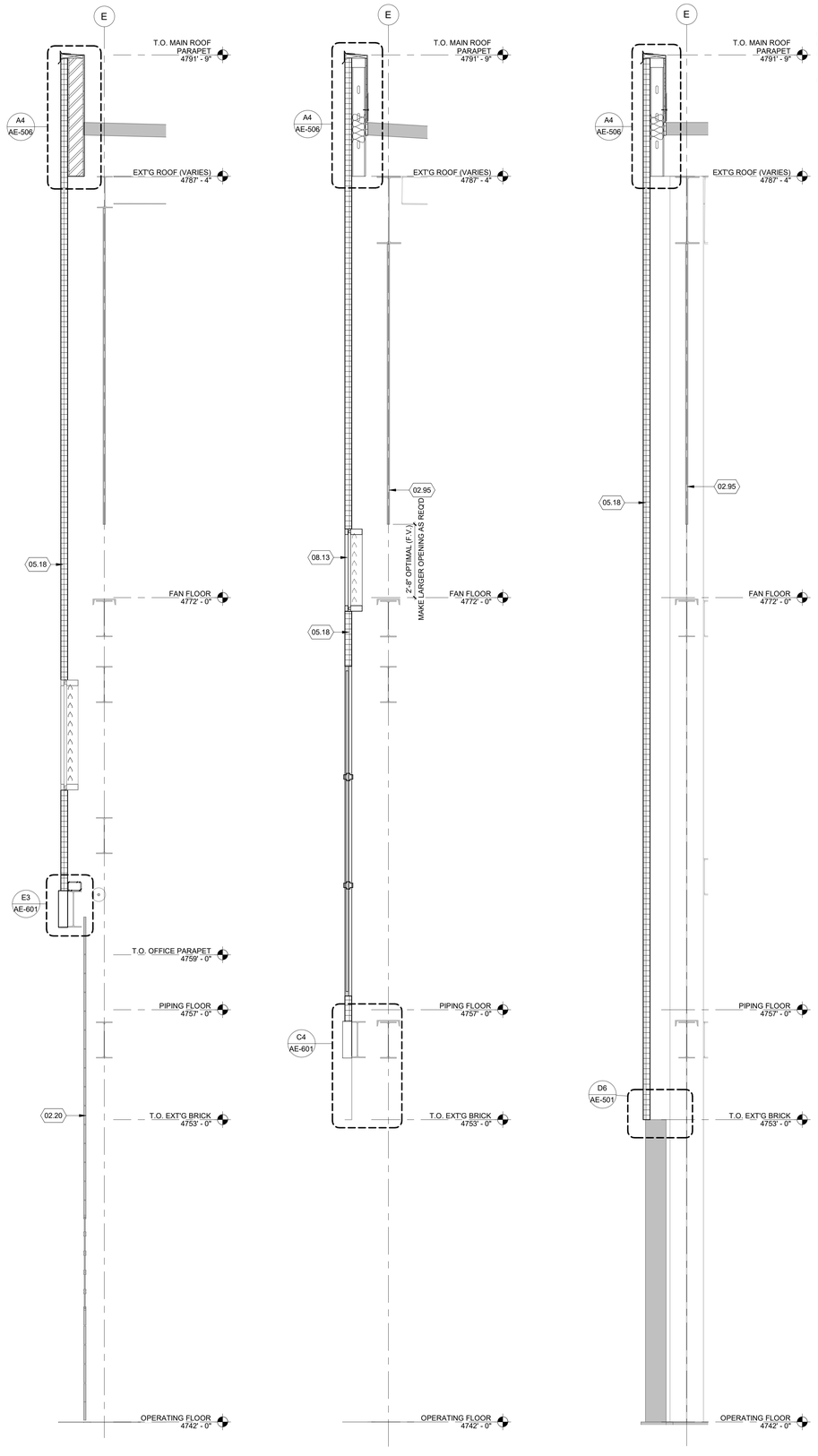

A4 WALL SECTON
SCALE: 1/2" = 1'-0"

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

A6 WALL SECTION
SCALE: 1/2" = 1'-0"

REFERENCE NOTES

02.20 EXISTING DOOR TO REMAIN
02.95 EXISTING COAL HOPPER STEEL PLATE TO REMAIN
05.18 3" INSULATED METAL PANEL (R25) TO SPAN VERTICALLY, ATTACH TO STEEL FRAME OR METAL STUDS. ALSO RE. STRU. DWG.
08.13 FIXED LOUVER

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PERMIT SET - 3-5-2024

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JACKSON FERGUSON, AIA
#9340843-0301
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△	DATE	REVISION
18	12-6-23	Ph. 5 PR #2-R1

PROJECT NUMBER 18136

WALL SECTIONS

AE-312

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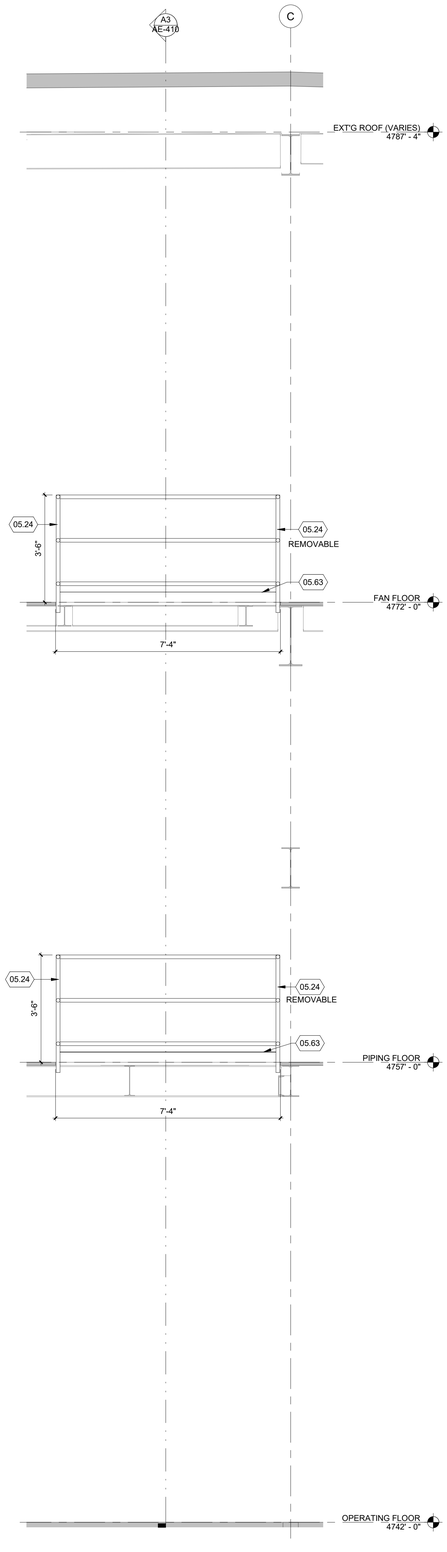
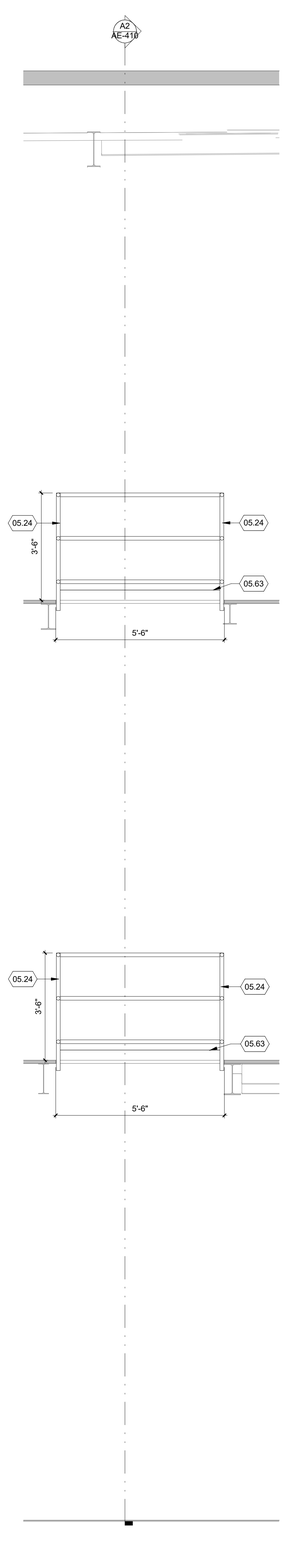
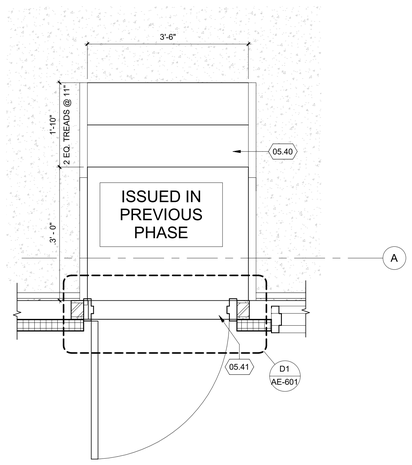


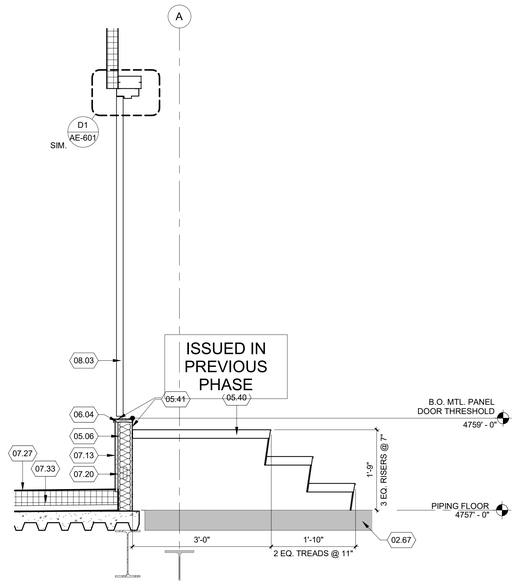
A2 HOIST WAY SECTION
SCALE: 1/2" = 1'-0"



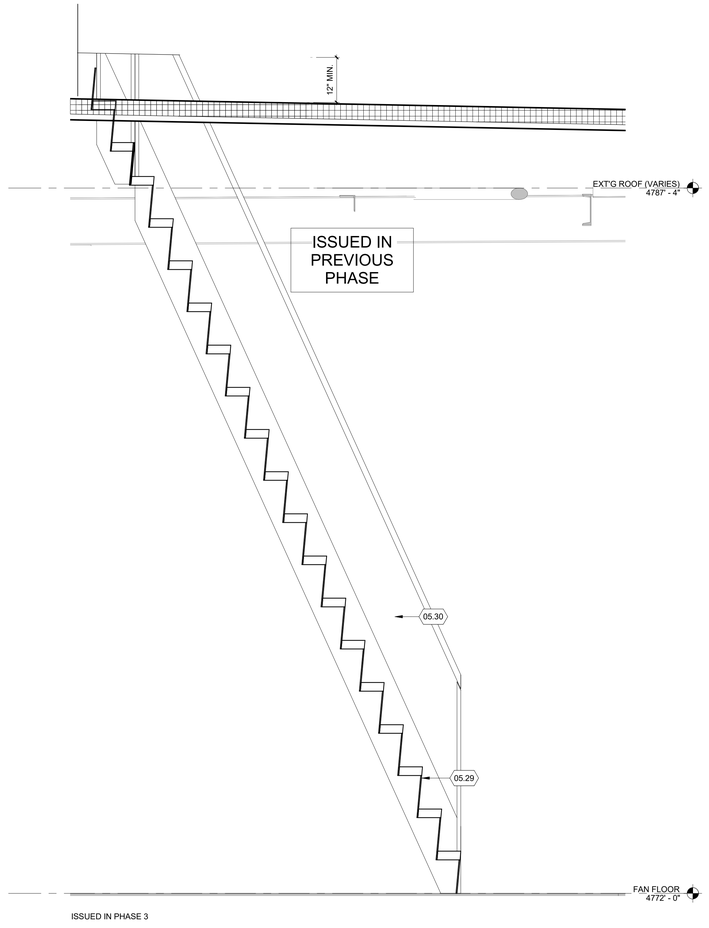
A3 HOST WAY SECTION
SCALE: 1/2" = 1'-0"



D4 ROOF ACCESS STAIR PLAN
SCALE: 3/4" = 1'-0"



D5 ROOF ACCESS STAIR SECTION
SCALE: 3/4" = 1'-0"



ISSUED IN PHASE 3

A4 ROOF LADDER SECTION
SCALE: 3/4" = 1'-0"

REFERENCE NOTES

02.67	EXISTING CONCRETE FLOOR/SLAB OR ASPHALT PAVING TO REMAIN
05.06	3 5/8" METAL STUD
05.24	42" HIGH GUARDRAIL, MATCH EXISTING DESIGN, PAINTED
05.29	REINSTALLATION OF EXISTING ROOF STAIR, ADD ADDITIONAL RISER(S) AND EXTEND HAND RAIL AS REQUIRED, PAINT
05.30	1 1/2" STEEL HANDRAIL, EXTEND AS REQUIRED, PAINTED
05.40	METAL STAIRS, PAINTED, RE. STR. DWG
05.41	ALUMINUM DIAMOND PLATE
05.63	4" HIGH, 1/4" THICK STEEL TOE KICK, PAINTED
06.04	WOOD BLOCKING
07.13	SINGLE PLY ROOFING, MIN. 6" OVERLAP AT JOINTS
07.20	1/2" EXTERIOR GLASS MAT SHEATHING
07.27	3' WIDE (UNO) SINGLE PLY WALKWAY PAD, FULLY ADHERED. VERIFY AND FIELD ADJUST FOR ALL EXISTING/NEW ROOF TOP UNITS, PIPES, ETC.
07.33	ROOF ASSEMBLY, RE. TYP. ROOF DETAIL E4/AE-506
08.03	DOOR. RE DOOR SCHEDULE

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PERMIT SET - 3-5-2024

STATE OF UTAH
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#534067-2301
LICENSED ARCHITECT
10.10.22

△	DATE	REVISION
10	Date 10	Prev phase

PROJECT NUMBER 18136

ENLARGED STAIRS PLANS AND SECTIONS

AE-410

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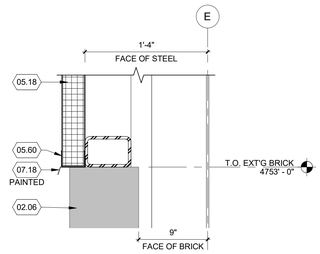
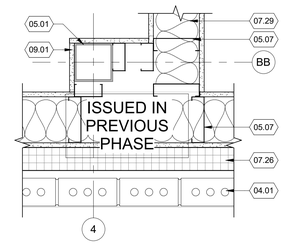
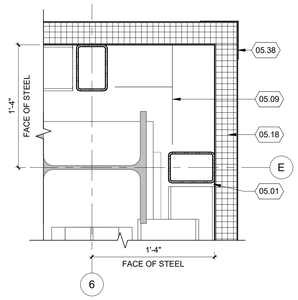


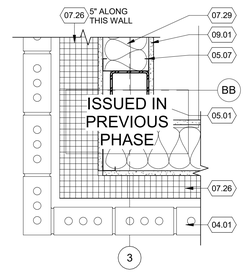
D6 WALL DETAIL
SCALE: 1 1/2" = 1'-0"



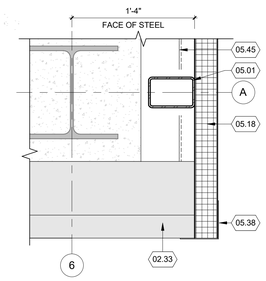
C6 COLUMN WRAP DETAIL
SCALE: 1 1/2" = 1'-0"



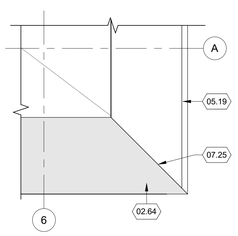
C4 CORNER DETAIL
SCALE: 1 1/2" = 1'-0"



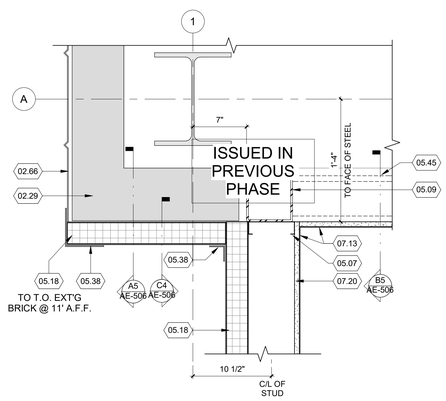
B6 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"



B4 CORNER DETAIL
SCALE: 1 1/2" = 1'-0"



A4 PARAPET CORNER DETAIL
SCALE: 1 1/2" = 1'-0"



A5 METAL PANEL CORNER DETAIL
SCALE: 1 1/2" = 1'-0"

REFERENCE NOTES

02.06	EXISTING MASONRY WALL TO REMAIN TO 11'-0" A.F.F.
02.29	EXISTING STUD WALL TO REMAIN
02.33	EXISTING WALL TO REMAIN
02.64	EXISTING PARAPET CAP
02.66	EXISTING METAL PANEL WALL
04.01	STANDARD BRICK - 3/8" JOINT
05.01	STRUCTURAL COLUMN, PRIMED; PAINTED IF EXPOSED
05.07	6" METAL STUD
05.09	STEEL TUBE, PRIMED & PAINTED
05.18	3" INSULATED METAL PANEL (R25) TO SPAN VERTICALLY, ATTACH TO STEEL FRAME OR METAL STUDS, ALSO RE. STRU. DWG.
05.19	PREPAINTED METAL CAP/FLASHING, CAULK AS REQ'D
05.38	PAINTED METAL PANEL CLOSURE TRIM, COLOR TO MATCH, TYP AT ALL CONNECTION POINTS
05.45	GALVANIZED Z GIRT; SIZE, GA. AND SPACING AS PER METAL PANEL MANUFACTURER'S REQUIREMENT
05.60	PAINTED MTL. CLOSURE TRIM
07.13	SINGLE PLY ROOFING, MIN. 6" OVERLAP AT JOINTS
07.18	METAL FLASHING WITH DRIP EDGE
07.20	1/2" EXTERIOR GLASS MAT SHEATHING
07.25	CAULK AS REQ'D
07.26	3" (MIN. R18) RIGID INSULATION, UNO
07.29	BATT INSULATION, MIN. R3 PER 1 INCH
09.01	5/8" TYPE 'X' GYPSUM BOARD, PAINT

BUILDING ENVELOPE NOTES

1. VAPOR RETARDER, TO SPAN CONTINUOUSLY BELOW NEW CONCRETE SLAB ON GRADE, ABOVE METAL ROOF DECK, AND ON THE INSIDE OF METAL STUD WALL, TAPE AT ALL EXPOSED JOINTS.
2. FLUID APPLIED AIR BARRIER TO BE APPLIED ON ALL SOLID VERTICAL WALL SUBSTRATES.
3. VAPOR BARRIER TO BE APPLIED ON WALLS WHERE THERE IS NOT A SOLID SUBSTRATE; CONTINUOUS, TAPE AT ALL JOINTS.

PHASE 4 NOTES

1. NO FURRING NOR TILE BEHIND THE LOWER MILLWORK AT THE EXISTING WALL @ WARMING KITCHEN.
2. NOT ALL SECTIONS NOR DETAILS ARE APPLIED TO THIS PHASE, CERTAIN INFORMATION WERE ISSUED PREVIOUSLY

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SALT LAKE CITY UTAH
PERMIT SET - 3-5-2024

STATE OF UTAH
JACKSON FERGUSON, AIA
#534047-0301
LICENSED ARCHITECT
3.10.24

△ DATE REVISION

PROJECT NUMBER 18136

PLAN DETAILS

AE-501

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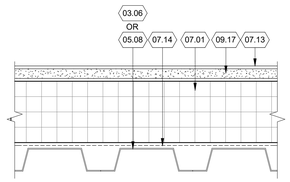
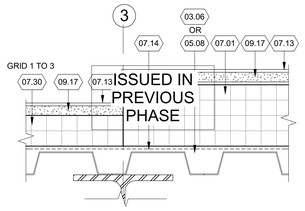
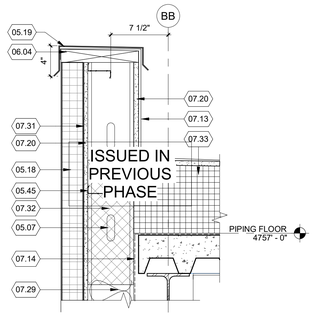


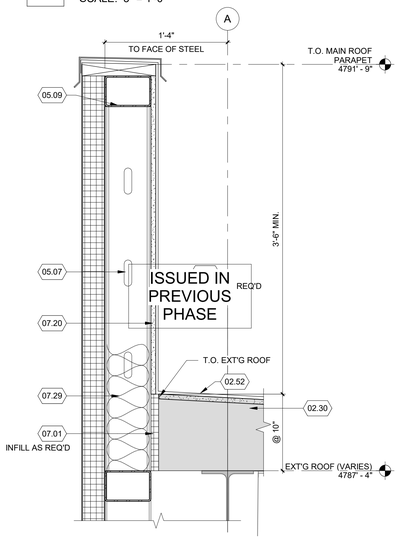
E4 TYP. ROOF DETAIL
SCALE: 3" = 1'-0"



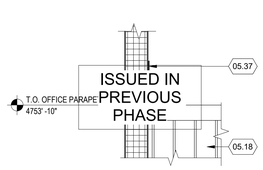
E5 ROOF TRANSITION DETAIL
SCALE: 3" = 1'-0"



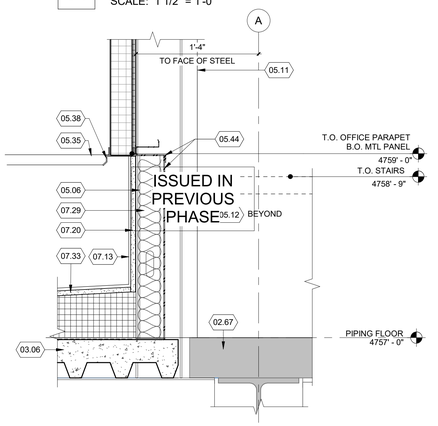
D4 PARAPET DETAIL @ GRID BB
SCALE: 1 1/2" = 1'-0"



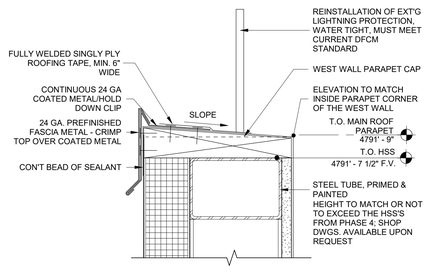
C5 PARAPET DETAIL @ GRID A - HIGH (TYP.)
SCALE: 1 1/2" = 1'-0"



C4 OFFICE PARAPET
SCALE: 1 1/2" = 1'-0"

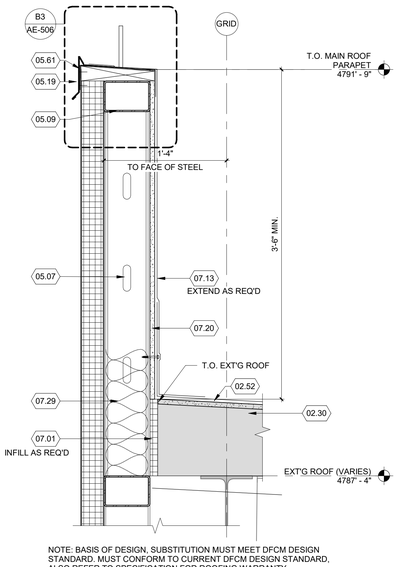


B5 SECTION DETAIL @ GRID A - LOW
SCALE: 1 1/2" = 1'-0"



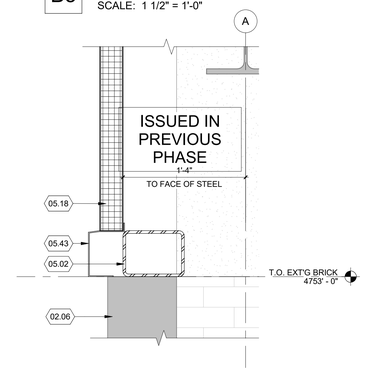
NOTE: MUST CONFORM TO CURRENT DFCM DESIGN STANDARD, ALSO REFER TO SPECIFICATION FOR ROOFING WARRANTY REQUIREMENT

B3 PARAPET CAP DETAIL - PHASE 5
SCALE: 3" = 1'-0"

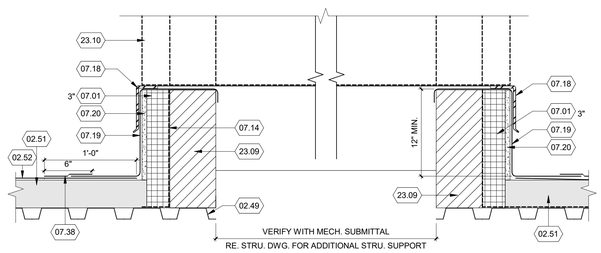


NOTE: BASIS OF DESIGN, SUBSTITUTION MUST MEET DFCM DESIGN STANDARD. MUST CONFORM TO CURRENT DFCM DESIGN STANDARD, ALSO REFER TO SPECIFICATION FOR ROOFING WARRANTY REQUIREMENT

A4 PARAPET DETAIL - PHASE 5
SCALE: 1 1/2" = 1'-0"



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



A3 ROOF CURB DETAIL - PHASE 5
SCALE: 1 1/2" = 1'-0"

REFERENCE NOTES

02.06 EXISTING MASONRY WALL TO REMAIN TO 11'-0" A.F.F.
02.30 EXISTING ROOFING AND INSULATION TO REMAIN
02.49 EXISTING METAL DECK
02.51 EXISTING ROOF SYSTEM, PROTECT
02.52 EXISTING SINGLE PLY ROOFING, MIN. 12" OVERLAP @ SEAM
02.67 EXISTING CONCRETE FLOOR/SLAB OR ASPHALT PAVING TO REMAIN
02.101 REINSTALLATION OF EXT'G LIGHTNING PROTECTION, WATER TIGHT, MUST MEET CURRENT DFCM STANDARD
03.06 CONCRETE SLAB ON METAL DECK, RE. STRU. DWG.
05.02 STRUCTURAL BEAM, PRIMED; PAINTED IF EXPOSED
05.06 3 5/8" METAL STUD
05.07 6" METAL STUD
05.08 METAL ROOF DECKING, PAINTED IF EXPOSED
05.09 STEEL TUBE, PRIMED & PAINTED
05.11 PAINTED STEEL FRAME, RE. STRU. DWG
05.12 NEW STAIR, PAINTED
05.18 3" INSULATED METAL PANEL (R25) TO SPAN VERTICALLY, ATTACH TO STEEL FRAME OR METAL STUDS, ALSO RE. STRU. DWG.
05.19 PREPAINTED METAL CAP/FLASHING, CAULK AS REQ'D
05.35 42" HIGH GUARD RAIL WITH A MID RAIL AND 4" BASE, MATCH EXISTING, PAINTED
05.37 GALVANIZED RIGLET, FLASHING, ETC., CAULK, TYP.
05.38 PAINTED METAL PANEL CLOSURE TRIM, COLOR TO MATCH, TYP AT ALL CONNECTION POINTS
05.43 POWDER COATED ALUMINUM TRIM
05.44 14 GA DIAMOND PLATE
05.45 GALVANIZED Z GIRT; SIZE,, GA. AND SPACING AS PER METAL PANEL MANUFACTURER'S REQUIREMENT
05.61 EXTRUDED ALUMINUM COUNTER FLASHING, CONTINUOUS
06.04 WOOD BLOCKING
07.01 RIGID ROOF INSULATION. MIN. R 32,, THICKNESS VARIES
07.13 SINGLE PLY ROOFING, MIN. 6" OVERLAP AT JOINTS
07.14 VAPOR RETARDER, TO SPAN CONTINUOUSLY BELOW NEW CONCRETE SLAB ON GRADE, ABOVE METAL ROOF DECK, AND ON THE INSIDE OF METAL STUD WALL, TAPE AT ALL EXPOSED JOINTS
07.18 METAL FLASHING WITH DRIP EDGE
07.19 SINGLE PLY ROOFING MEMBRANE TO WRAP OVER CURB WALL
07.20 1/2" EXTERIOR GLASS MAT SHEATHING
07.29 BATT INSULATION, MIN. R3 PER 1 INCH
07.30 RIGID ROOF INSULATION, 1/4" PER FOOT SLOPE
07.31 FLUID APPLIED AIR BARRIER
07.32 SPRAY FOAM INSULATION
07.33 ROOF ASSEMBLY, RE. TYP. ROOF DETAIL E4/AE-506
07.38 FULLY WELDED SINGLY PLY ROOFING TAPE, MIN. 6" WIDE
09.17 5/8" COVER BOARD
23.09 PREMANUFACTURED MECHANICAL CURB, VERIFY THICKNESS WITH SUBMITTAL
23.10 ROOF TOP EXHAUST FAN, RE. MECH DWG.

BUILDING ENVELOPE NOTES

1. VAPOR RETARDER, TO SPAN CONTINUOUSLY BELOW NEW CONCRETE SLAB ON GRADE, ABOVE METAL ROOF DECK, AND ON THE INSIDE OF METAL STUD WALL, TAPE AT ALL EXPOSED JOINTS.
2. FLUID APPLIED AIR BARRIER TO BE APPLIED ON ALL SOLID VERTICAL WALL SUBSTRATES.
3. VAPOR BARRIER TO BE APPLIED ON WALLS WHERE THERE IS NOT A SOLID SUBSTRATE; CONTINUOUS, TAPE AT ALL JOINTS.

PHASE 4 NOTES

1. NO FURRING NOR TILE BEHIND THE LOWER MILLWORK AT THE EXISTING WALL @ WARMING KITCHEN.
2. NOT ALL SECTIONS NOR DETAILS ARE APPLIED TO THIS PHASE, CERTAIN INFORMATION WERE ISSUED PREVIOUSLY

PHASE 5 NOTES

1. NOT ALL SECTIONS NOR DETAILS ARE APPLIED TO THIS PHASE, CERTAIN INFORMATION WERE ISSUED PREVIOUSLY.
2. ALL ROOFING RELATED COMPONENTS MUST CONFORM TO DFCM DESIGN STANDARD, RE. SPEC..

GENERAL NOTES

1. SHORE ALL ROOF TOP EQUIPMENT, PIPES, ETC., AS REQUIRED
2. REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION
3. TAPERED INSULATION IS REQUIRED AT THE ROOF LEVEL TO ACHIEVE SLOPES INDICATED ON ROOF PLAN
4.

DATUM NOTES

1. THE ELEVATION MARKERS ON THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS ARE 3'-0" LOWER THAN THE SURVEY (UNIVERSITY BENCHMARK). DO NOT USE THESE MARKERS OUTSIDE OF THE BUILDING ENVELOPE.
2. THE CIVIL DRAWINGS ARE INLINE WITH THE CURRENT UNIVERSITY BENCHMARK.

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U OF U BLDG. 303 SEISMIC UPGRADE - #22649 - PHASE 4 - PHASE 5 PROJECT #22508 - PHASE 4

SALT LAKE CITY UTAH

PERMIT SET - 3-5-2024

STATE OF UTAH
JACKSON FERGUSON, AIA
#13406421-0301
LICENSED ARCHITECT
05.10.22

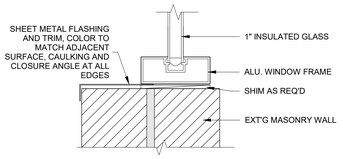
△	DATE	REVISION
18	12-6-23	Ph. 5 PR #2-R1

PROJECT NUMBER 18136

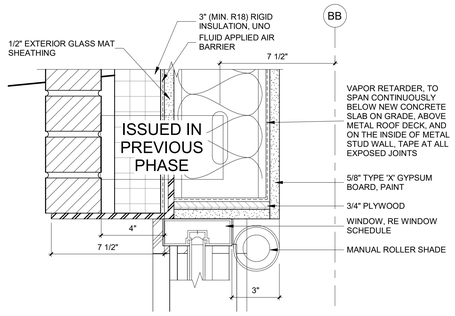
ROOF DETAILS

AE-506

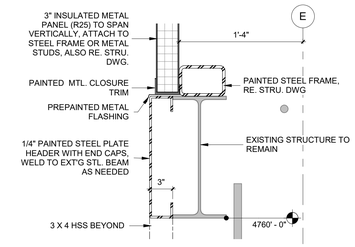
3/5/2024 2:09:26 PM



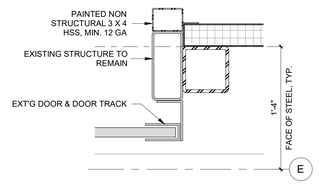
E1 ALU. SILL DETAIL
SCALE: 3" = 1'-0"



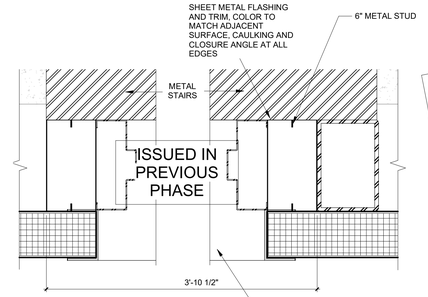
E2 ALU. HEAD DETAIL
SCALE: 3" = 1'-0"



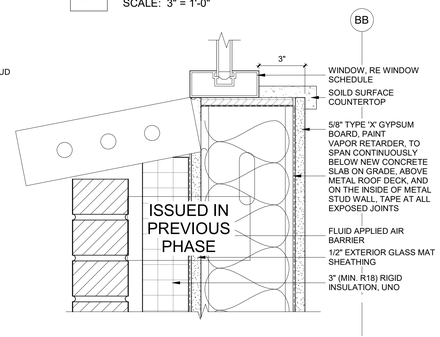
E3 EXT'G OVERHEAD DOOR HEADER
SCALE: 1 1/2" = 1'-0"



D4 DOOR JAMB @ PIPING LEVEL @ EXT'G OVERHEAD DOOR
SCALE: 1 1/2" = 1'-0"



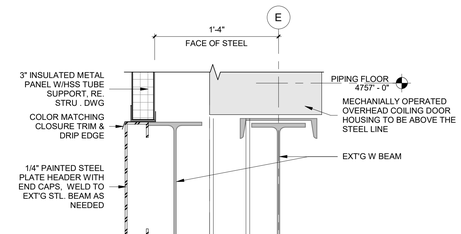
D1 ROOF DOOR JAMB DETAIL
SCALE: 3" = 1'-0"



D2 ALU. SILL DETAIL
SCALE: 3" = 1'-0"

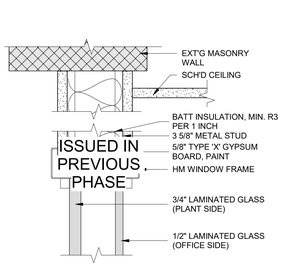


D3 NEW OVERHEAD DOOR TRACK @ OPERATION FLOOR
SCALE: 1 1/2" = 1'-0"

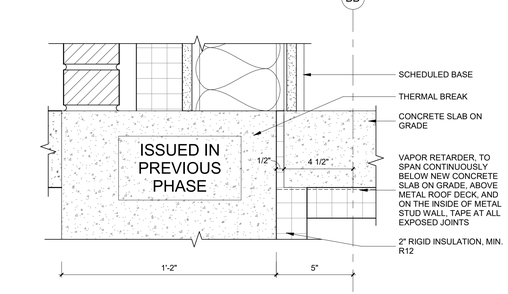


D5 NEW OVERHED DOOR HEADER
SCALE: 1 1/2" = 1'-0"

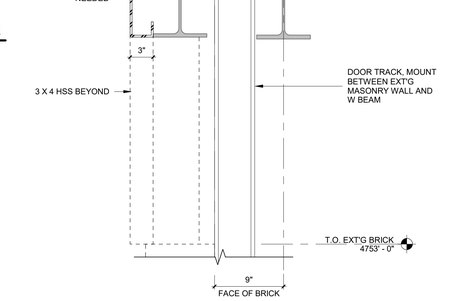
C3 EXT'G OVERHEAD DOOR TRACK @ OPERATION FLOOR
SCALE: 1 1/2" = 1'-0"



C1 SOUND GLASS DETAIL
SCALE: 3" = 1'-0"



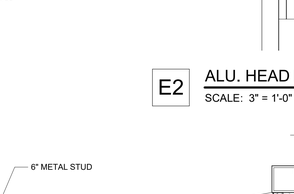
C2 SLAB EDGE DETAIL
SCALE: 3" = 1'-0"



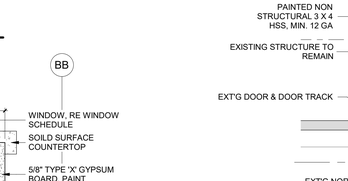
C4 NEW OVERHED DOOR HEADER
SCALE: 1 1/2" = 1'-0"



B1 SOUND GLASS DETAIL
SCALE: 3" = 1'-0"

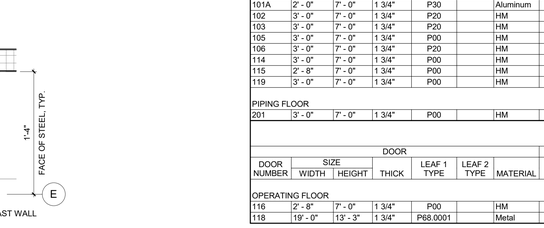


B2 TYP. ALU. SILL DETAIL
SCALE: 3" = 1'-0"

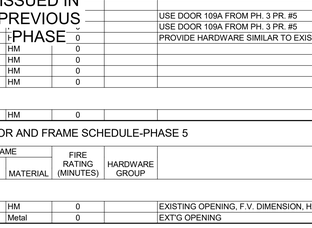


NOTE: FILL TYPE A, B & C FRAME CAVITY WITH SPRAY FOAM

B3 INTERIOR WINDOW TYPES (HOLLOW METAL)
SCALE: 1/4" = 1'-0"



B4 EXTERIOR WINDOW TYPES (FIXED ALUMINUM)
SCALE: 1/4" = 1'-0"

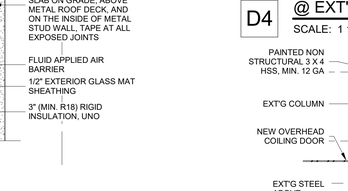


NOTE: RE. DOOR SCHEDULE FOR SOUND GLASS LOCATIONS

B6 DOOR PANELS
SCALE: 1/4" = 1'-0"

A1 SOUND GLASS DETAIL
SCALE: 3" = 1'-0"

A2 TYP. ALU. HEAD/JAMB DETAIL
SCALE: 3" = 1'-0"



A3 HOLLOW METAL DOOR FRAMES
SCALE: 1/4" = 1'-0"

A5 ALUMIUN DOOR FRAME
SCALE: 1/4" = 1'-0"

PREVIOUSLY ISSUED WITH PHASE 3

DOOR AND FRAME SCHEDULE-PHASE 3

DOOR NUMBER	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	DOOR THICK	DOOR LEAF 1 TYPE	DOOR LEAF 2 TYPE	DOOR MATERIAL	FRAME TYPE	FRAME MATERIAL	FIRE RATING (MINUTES)	HARDWARE GROUP	NOTES*
OPERATING FLOOR											
109A	6' - 0"	7' - 0"	1 3/4"	P20	P20	HM	F00	HM	0		INSULATED SLAB WITH SOUND PROOF GLAZING
110	3' - 0"	7' - 0"	1 3/4"	P01		HM	F00	HM	0		INSULATED SLAB WITH SOUND PROOF GLAZING
110A	3' - 0"	7' - 0"	1 3/4"	P20		HM	F00	HM	0		INSULATED SLAB WITH SOUND PROOF GLAZING
112	3' - 0"	7' - 0"	1 3/4"	P20		HM	F22.2	HM	0		INSULATED SLAB WITH SOUND PROOF GLAZING
112A	3' - 0"	7' - 0"	1 3/4"	P20		HM	F22.1A	HM	0		INSULATED SLAB WITH SOUND PROOF GLAZING
153	3' - 0"	7' - 0"	1 3/4"	P01		HM	F00	HM	0		INSULATED SLAB WITH SOUND PROOF GLAZING

ISSUED IN PREVIOUS PHASE

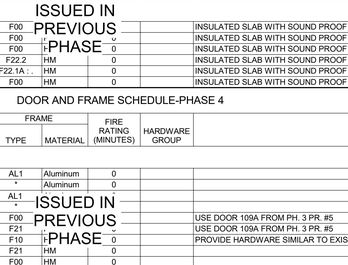
DOOR AND FRAME SCHEDULE-PHASE 4

DOOR NUMBER	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	DOOR THICK	DOOR LEAF 1 TYPE	DOOR LEAF 2 TYPE	DOOR MATERIAL	FRAME TYPE	FRAME MATERIAL	FIRE RATING (MINUTES)	HARDWARE GROUP	NOTES*
OPERATING FLOOR											
100	6 19/32"	7' - 0"	1 3/4"	P30		Aluminum	AL1	Aluminum	0		
100A	2' - 0"	7' - 0"	1 3/4"	P30		Aluminum	"	Aluminum	0		
101	5 1/4"	7' - 0"	1 3/4"	P30		Aluminum	AL1				
101A	2' - 0"	7' - 0"	1 3/4"	P30		Aluminum	"				
102	3' - 0"	7' - 0"	1 3/4"	P20		HM	F00	HM	0		USE DOOR 109A FROM PH. 3 PR. #5
103	3' - 0"	7' - 0"	1 3/4"	P20		HM	F21	HM	0		USE DOOR 109A FROM PH. 3 PR. #5
105	3' - 0"	7' - 0"	1 3/4"	P00		HM	F10	HM	0		PROVIDE HARDWARE SIMILAR TO EXISTING DOOR
106	3' - 0"	7' - 0"	1 3/4"	P20		HM	F21	HM	0		
114	3' - 0"	7' - 0"	1 3/4"	P00		HM	F00	HM	0		
115	2' - 8"	7' - 0"	1 3/4"	P00		HM	F00	HM	0		
119	3' - 0"	7' - 0"	1 3/4"	P00		HM	F00	HM	0		
PIPING FLOOR											
201	3' - 0"	7' - 0"	1 3/4"	P00		HM	F00	HM	0		

ISSUED IN PREVIOUS PHASE

DOOR AND FRAME SCHEDULE-PHASE 5

DOOR NUMBER	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	DOOR THICK	DOOR LEAF 1 TYPE	DOOR LEAF 2 TYPE	DOOR MATERIAL	FRAME TYPE	FRAME MATERIAL	FIRE RATING (MINUTES)	HARDWARE GROUP	NOTES*
OPERATING FLOOR											
116	2' - 8"	7' - 0"	1 3/4"	P00		HM	F10	HM	0		EXISTING OPENING, F.V. DIMENSION, HARDWARE SET TO MATCH EXISTING
118	19' - 0"	13' - 3"	1 3/4"	P68.0001		Metal	F65	Metal	0		EXT'G OPENING



P68.0001
ELECTRICALLY OPERATED COILING, PREPAINTED STEEL
NO LITES

GLAZING SCHEDULE

G-1 GLAZING TYPE

G-1	FLOAT GLASS
G-1T	FLOAT GLASS - TEMPERED
G-2	INSULATED GLASS U-VALUE 0.22, SHGC 0.39
G-2T	INSULATED GLASS - TEMPERED U-VALUE 0.22, SHGC 0.39
G-3	LAMINATED SOUND GLASS
G-3T	LAMINATED SOUND GLASS - TEMPERED

ALL INSULATED GLASS TO BE SOLARBAN 60 W/ A U-FACTOR OF 0.22 AND SHGC 0.39 OR BETTER

DATUM NOTES

1. THE ELEVATION MARKERS ON THE ARCH., STRUCT., MECH. ELEC. AND PLUMB. DRAWINGS ARE 3'-0" LOWER THAN THE SURVEY (UNIV. BENCHMARK). DO NOT USE THESE MARKERS OUTSIDE OF THE BUILDING ENVELOPE.
2. THE CIVIL DRAWINGS ARE INLINE WITH THE CURRENT UNIV. BENCHMARK.

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U OF U BLDG. 303 SEISMIC UPGRADE - #22649 - PHASE 5
SALT LAKE CITY UTAH

PERMIT SET - 3-5-2024

△	DATE	REVISION
4	10-27-21	Ph. 3 PR #5
6	3-30-22	Phase 4 RC #1
10	Date 10	Prev phase
13	3-28-23	Ph. 4 RFI #5
16	10-19-23	Ph. 4 RFI #31

PROJECT NUMBER 18136

DOORS AND WINDOW SCHEDULE

AE-601

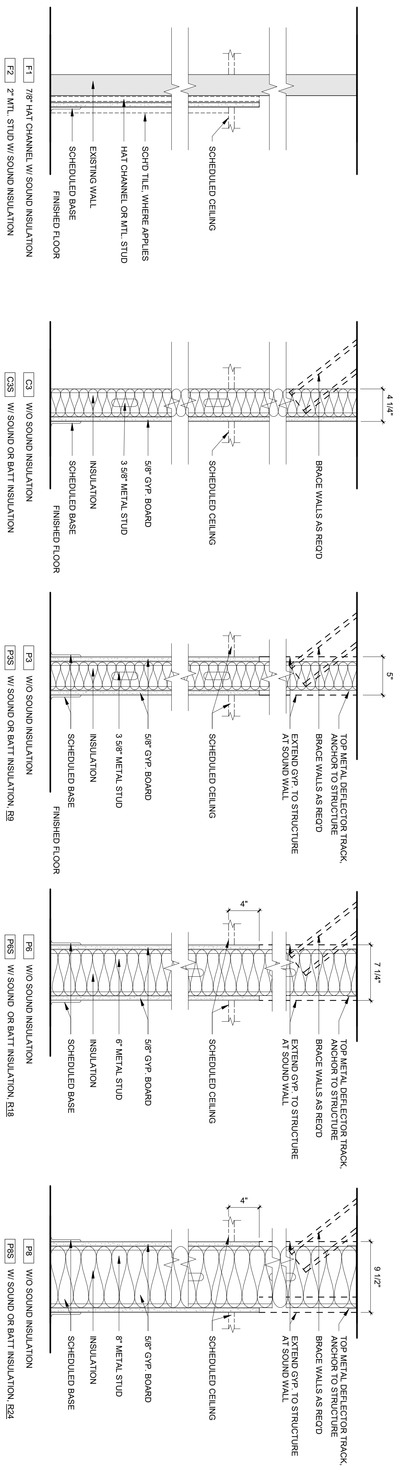
3/5/2024 2:09:28 PM

3/6/2024 9:43:51 AM

0" 1" 2"

A3 PARTITION TYPES

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



U OF U BLDG. 303 SEISMIC UPGRADE - #22649 - PHASE 5 PROJECT #22508 - PHASE 4

SALT LAKE CITY UTAH

PERMIT SET - 3-5-2024

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△	DATE	REVISION
6	3-30-22	Phase 4 RC #1
8	4-15-22	Phase 4 RC #2

PROJECT NUMBER 18136

PARTITION TYPES & DETAILS

AE-602

STRUCTURAL NOTES :

A. GENERAL

1. THE STRUCTURAL NOTES ARE INTENDED TO COMPLEMENT THE PROJECT SPECIFICATIONS WHICH ARE PART OF THE CONSTRUCTION DOCUMENTS. SPECIFIC NOTES AND DETAILS ON THE DRAWINGS SHALL GOVERN OVER THE STRUCTURAL NOTES AND TYPICAL DETAILS.
2. THESE DRAWINGS (AND, WHERE APPLICABLE, ACCOMPANYING WRITTEN SPECIFICATIONS) ARE THE ONLY CONTRACT DOCUMENTS PROVIDED BY ARW ENGINEERS FOR THE PROJECT REPRESENTED HEREIN. NOTHING IN ANY DIGITAL MODEL OR DIGITAL FILE RELATED TO THIS PROJECT SHALL BE TAKEN TO SUPERSEDE ANY INFORMATION SHOWN IN THESE DRAWINGS (INCLUDING, BUT NOT LIMITED TO, DIMENSIONS, SIZES, ETC).
3. THE ARCHITECTURAL DRAWINGS ARE THE PRIME CONTRACT DRAWINGS. THE STRUCTURAL DRAWINGS ARE SUPPLEMENTARY TO AND MUST BE USED IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS AND OTHER CONSULTANTS DRAWINGS. ALL OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY WORK INVOLVED. IN CASE OF CONFLICT, FOLLOW THE MOST STRINGENT REQUIREMENT AS DIRECTED BY THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
4. SEE SPECIFICATIONS FOR REQUIRED SUBMITTALS. SUBMITTALS SHALL BE MADE IN A TIMELY MANNER AS INDICATED IN SPECIFICATIONS. REVIEW OF SUBMITTALS BY ARW ENGINEERS IS FOR GENERAL COMPLIANCE ONLY AND IS NOT INTENDED AS APPROVAL. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL SIZES, DIMENSIONS, AND ELEVATIONS ON SUBMITTALS AS RELATED TO DESIGN DOCUMENTS. PREPARATION OF SHOP DRAWINGS FOR STRUCTURAL ELEMENTS WILL REQUIRE INFORMATION (I.E. DIMENSIONS, ETC.) FOUND IN THE ARCHITECTURAL, STRUCTURAL, AND OTHER CONSULTANTS DRAWINGS.
5. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE SITE. IF ACTUAL CONDITIONS DIFFER FROM THOSE SHOWN ON CONTRACT DOCUMENTS, CONTRACTOR SHALL NOTIFY ARCHITECT PRIOR TO FABRICATION OR CONSTRUCTION OF ANY AFFECTED ELEMENTS.
6. THE CONTRACTOR SHALL COORDINATE AND VERIFY ALL LOCATIONS AND SIZES OF MECHANICAL EQUIPMENT OR OTHER EQUIPMENT REQUIRING OPENINGS AND BRACING STRUCTURAL ELEMENTS. SIZES AND LOCATIONS THAT DIFFER FROM THOSE SHOWN ON THE CONTRACT DOCUMENTS SHALL BE REPORTED TO THE ARCHITECT.
7. THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST TO THE ARCHITECT FOR ARCHITECT AND/OR ENGINEER APPROVAL BEFORE PROCEEDING WITH ANY CHANGES, MODIFICATIONS, OR SUBSTITUTIONS.
8. OBSERVATION VISITS TO THE SITE BY ARW ENGINEERS FIELD REPRESENTATIVES SHALL NEITHER BE CONSTRUED AS INSPECTION NOR APPROVAL OF CONSTRUCTION.
9. DURING AND AFTER CONSTRUCTION, BUILDER AND/OR OWNER SHALL KEEP LOADS ON STRUCTURE WITHIN THE LIMITS OF DESIGN LOADS AS NOTED IN THESE DOCUMENTS.
10. TYPICAL OR SIMILAR DETAILS AND SECTIONS SHALL APPLY WHERE SPECIFIC DETAILS ARE NOT SHOWN, TYPICAL OR SIMILAR DETAILS REFER TO THE CONDITION ADDRESSED AND ARE NOT NECESSARILY DETAILS LABELED "TYPICAL" OR "SIMILAR" IN THE PLANS AND DOCUMENTS.
11. DRAWINGS AND DETAILS HAVE BEEN PREPARED WITH THE INTENT TO VISUALLY REPRESENT INFORMATION PROVIDED IN SCALED FORM. HOWEVER CONTRACTOR/SUPPLIERS SHOULD NOT SCALE PLANS OR DETAILS FOR DIMENSIONAL INFORMATION.
12. THE CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY SHORING AND BRACING FOR ALL STRUCTURAL ELEMENTS UNTIL THE ENTIRE STRUCTURAL SYSTEM IS COMPLETED. DESIGN OF ALL SHORING AND BRACING IS BY OTHERS AT NO ADDITIONAL COST TO THE OWNER.
13. ENGINEER SHALL NOT BE RESPONSIBLE FOR ACTIVITIES UNDER CONTROL OF THE CONTRACTOR SUCH AS CONSTRUCTION SITE SAFETY, MEANS, METHODS AND SEQUENCING OF CONSTRUCTION. ENGINEER SHALL NOT BE RESPONSIBLE FOR FABRICATION, ERECTION AND CONSTRUCTION REQUIREMENTS AS PRESCRIBED BY OSHA OR OTHER REGULATORY AGENCIES REGARDLESS OF INDICATIONS IN THESE DOCUMENTS.
14. NOTICE OF COPYRIGHT: THESE STRUCTURAL DRAWINGS ARE HEREBY COPYRIGHTED BY ARW ENGINEERS, ALL RIGHTS RESERVED. THESE DOCUMENTS DEFINE A STRUCTURE AND ARE INSTRUMENTS OF SERVICE. NO PART OF THIS DOCUMENT SHALL NOT BE REPRODUCED OR COPIED, IN PART OR WHOLE BY ANY PARTY FOR USE IN PREPARATION OF SHOP DRAWINGS OR OTHER SUBMITTALS.

B. STATEMENT OF SPECIAL INSPECTIONS AND SPECIAL INSPECTIONS

1. THE DESIGNATED SEISMIC/WIND SYSTEMS AND SEISMIC/WIND-FORCE-RESISTING SYSTEMS THAT ARE SUBJECT TO SPECIAL INSPECTIONS IN ACCORDANCE WITH IBC SECTION 1705.11 AND 1705.12 ARE IDENTIFIED ON THESE DOCUMENTS WITH A CIRCLE "L". ALL OTHER ITEMS REQUIRING SPECIAL INSPECTION ARE IDENTIFIED IN THE SPECIAL INSPECTION SCHEDULE ON SHEETS SG-003 AND SG-004.
2. SPECIAL INSPECTIONS AND TESTING ARE TO BE PROVIDED AS REQUIRED BY IBC SECTIONS 1704 THROUGH 1705 AND OTHER APPLICABLE SECTIONS OF THE IBC. THE TYPE AND FREQUENCY OF TESTING AND SPECIAL INSPECTIONS SHALL BE AS NOTED IN THE SPECIAL INSPECTION SCHEDULE, JOB SPECIFICATIONS, AND ACCORDANCE WITH IBC SECTION 110 AND CHAPTER 17. CONTRACTOR SHALL COORDINATE AND COOPERATE WITH REQUIRED INSPECTIONS.
3. ALL TESTING AND SPECIAL INSPECTION SHALL BE PROVIDED BY A QUALIFIED INDEPENDENT SPECIAL INSPECTION AGENCY IN ACCORDANCE WITH IBC 1704 AND AS OUTLINED IN THE JOB SPECIFICATIONS. REPORTS OF FINDINGS OR DISCREPANCIES SHALL BE NOTED AND FORWARDED TO THE CONTRACTOR, ARCHITECT, ENGINEERS, AND BUILDING OFFICIAL IN A TIMELY MANNER.
4. STRUCTURAL OBSERVATION VISITS SHALL BE PERFORMED BY A REPRESENTATIVE FROM ARW ENGINEERS IN ACCORDANCE WITH THE CONTRACT AS NEEDED TO OBSERVE THE CONSTRUCTION OF CRITICAL BUILDING ELEMENTS (I.E. FOOTINGS, BRACED FRAMES, MOMENT FRAMES, DRAG STRUTS AND THEIR CONNECTIONS, COLLECTORS, AND ROOF AND FLOOR DIAPHRAGMS). STRUCTURAL OBSERVATION REPORTS FOR EACH VISIT SHALL BE SENT DIRECTLY TO THE ARCHITECT FOR DISTRIBUTION TO THE CONTRACTOR AND BUILDING OFFICIAL. STRUCTURAL OBSERVATION VISITS SHALL NEITHER BE CONSTRUED AS SPECIAL INSPECTION NOR APPROVAL OF COMPLETED CONSTRUCTION.
5. IN ACCORDANCE WITH IBC 1704.4, THE CONTRACTOR SHALL SUBMIT A WRITTEN CONTRACTOR'S STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND OWNER. THE STATEMENT SHALL BE SUBMITTED PRIOR TO THE CONSTRUCTION OF ANY SEISMIC/WIND-FORCE-RESISTING SYSTEM, DESIGNATED SEISMIC/WIND SYSTEM, OR COMPONENT IDENTIFIED IN THESE DOCUMENTS WITH A CIRCLE "L".

C. BASIS OF DESIGN

1. GOVERNING BUILDING CODE : INTERNATIONAL BUILDING CODE (IBC) 2018
   RISK CATEGORY : III
2. SUSPENDED FLOOR LOADS
   a. LIVE LOAD = 125 PSF
   b. DEAD LOAD = SEE KEY PLAN
3. ROOF LOADS
   a. FLAT-ROOF SNOW LOAD, P_f: 36 PSF
      1. GROUND SNOW LOAD, P_g: 47 PSF
      2. SNOW EXPOSURE FACTOR, C_e: 1.0
      3. SNOW LOAD IMPORTANCE FACTOR, I_s: 1.1
      4. THERMAL FACTOR, C_t: 1.0
   b. LIVE LOAD = 20 PSF
   c. DEAD LOAD = 25 PSF
4. WIND DESIGN
   a. BASIC WIND SPEED (3 SECOND GUST) : 109 MPH
   b. WIND EXPOSURE : C
   c. COMPONENT AND CLADDING DESIGN WIND PRESSURE SHALL BE AS REQUIRED PER ASCE 7-16.
5. SEISMIC DESIGN :
   a. SEISMIC IMPORTANCE FACTOR, I_E : 1.25
   b. SITE CLASS : C
   c. MAPPED SPECTRAL RESPONSE ACCELERATIONS : S_S = 1.307 , S_1 = 0.484
   d. SPECTRAL RESPONSE COEFFICIENTS : S_{DS} = 1.045 , S_{D1} = 0.484
   e. SEISMIC DESIGN CATEGORY : D
   f. BASIC SEISMIC-FORCE-RESISTING SYSTEM : BUCKLING RESTRAINED BRACED FRAMES
   g. DESIGN BASE SHEAR : $V_{ASS} = C_S W$, $V_{E/W} = C_S W$
   h. SEISMIC RESPONSE COEFFICIENT, C_S : 0.16
   i. RESPONSE MODIFICATION FACTOR, R : 8
   j. ANALYSIS PROCEDURE : LINEAR DYNAMIC ANALYSIS

D. FOUNDATION

1. DESIGN SOIL PRESSURE : 3500 PSF
2. SOILS REPORT BY : AGEC APPLIED GEOTECH
   PROJECT # : 1180667
   DATED : DECEMBER 21, 2018
3. SOIL PREPARATION UNDER FOOTINGS AND SLABS-ON-GRADE SHALL BE IN ACCORDANCE WITH THE SOILS REPORT.
4. TOP OF FOOTING ELEVATIONS SHOWN ON THE FOOTING AND FOUNDATION PLAN ARE BASED ON PRELIMINARY GRADING INFORMATION AND MUST BE VERIFIED PRIOR TO CONSTRUCTION. STEPS WHERE SHOWN ARE AT APPROXIMATE LOCATIONS. ALL EXTERIOR FOOTINGS MUST BEAR A MINIMUM OF 30 INCHES BELOW LOWEST ADJACENT FINAL GRADE.
5. ALL WALLS (EXCEPT CANTILEVERED RETAINING WALLS) SHALL BE ADEQUATELY BRACED AGAINST LATERAL MOVEMENT PRIOR TO BACKFILLING. DESIGN AND ERECTION OF BRACING/SHORING IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. BRACING SHALL REMAIN IN PLACE UNTIL SUPPORTING STRUCTURAL ELEMENTS ARE IN PLACE AND HAVE ATTAINED FULL STRENGTH.
6. UNLESS NOTED OTHERWISE, ALL FOOTINGS AT COLUMNS TO BE CENTERED BELOW COLUMNS.
   a. UNLESS NOTED OTHERWISE, ALL FOOTINGS SHALL HAVE VERTICAL FACES FORMED WITH STANDARD FORMING MATERIALS (WOOD, METAL, ETC.). WITH PRIOR APPROVAL OF ARCHITECT AND ENGINEER, CONCRETE FOR FOOTINGS CAN BE PLACED IN EXCAVATED "SOIL" FORMS PROVIDED THAT THE DIMENSIONS ARE INCREASED 3" ON EACH SIDE.
7. MICRO-PILE FOUNDATIONS
   a. MICRO-PILE FOUNDATIONS AND THEIR COMPONENTS SHALL BE CONSIDERED A "PILE FOUNDATION" AND SHALL BE SUBJECT TO CONTINUOUS SPECIAL INSPECTION AS REQUIRED BY THE SPECIAL INSPECTION SCHEDULE FOR PILE FOUNDATIONS AND PER IBC CHAPTER 17.
   b. MICRO-PILE FOUNDATION SYSTEMS SHALL BE DESIGNED BY A LICENSED ENGINEER TO RESIST THE LOADS SHOWN ON THE PLANS AND SCHEDULES AND IN ACCORDANCE WITH THE SOILS REPORT AND SPECIFICATIONS PROVIDED BY THE GEOTECHNICAL ENGINEER. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION CONCERNING REQUIREMENTS FOR DESIGN, TESTING, AND INSTALLATION OF MICRO-PILE FOUNDATIONS.
   c. THE NUMBER AND LOCATION OF MICRO-PILES IS SHOWN SCHEMATICALLY ON THE PLANS. MICRO-PILE SUPPLIER IS RESPONSIBLE FOR DETERMINING THE ACTUAL NUMBER AND SIZES OF PILES REQUIRED TO RESIST THE LOADS SHOWN ON THE PLANS AND SCHEDULES. LOADS SHOWN ARE BASED ON ALLOWABLE/DESIGN LEVEL FORCES.
   d. ALL MICRO-PILES SHALL BE PLACED IN UNDISTURBED SOIL TO A MINIMUM DEPTH AS REQUIRED TO REACH THE SPECIFIED LOAD REQUIREMENTS NOTED ON THE PLANS, BUT NO LESS THAN 20 FEET BELOW THE BOTTOM OF THE BASEMENT FOOTINGS.

E. CONCRETE

ALL CONCRETE MIX DESIGNS SHALL COMPLY WITH THE PROJECT SPECIFICATIONS AND THE REQUIREMENTS LISTED BELOW :

a. FOOTINGS, FOUNDATION WALLS :
   1. 28 DAY COMPRESSIVE STRENGTH : 4500 PSI
b. INTERIOR SLABS ON GRADE (EXPOSURE CATEGORY F0) :
   1. 28 DAY COMPRESSIVE STRENGTH : 3000 PSI
c. EXTERIOR SLABS (DOCKS, ETC.) (EXPOSURE CATEGORY F1) :
   1. 28 DAY COMPRESSIVE STRENGTH : 4500 PSI
   2. MAXIMUM W/C RATIO : 0.45
   3. MAXIMUM AGGREGATE SIZE : 1"
   4. MINIMUM AIR CONTENT : 4.5% +/- 1.5%
d. INTERIOR SUSPENDED SLABS ON METAL DECK (EXPOSURE CATEGORY F0) :
   1. 28 DAY COMPRESSIVE STRENGTH : 4500 PSI
e. PILE CAPS AND GRADE BEAMS (EXPOSURE CATEGORY F0)
   1. 28 DAY COMPRESSIVE STRENGTH : 6000 PSI

2. WATER USED IN MIXING CONCRETE SHALL CONFORM TO ASTM C1602.
3. NO PIPES, DUCTS, SLEEVES, ETC. SHALL BE PLACED IN STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER. NO ALUMINUM PRODUCTS SHALL BE EMBEDDED IN CONCRETE. PENETRATIONS THRU STRUCTURAL CONCRETE ELEMENTS MUST BE APPROVED BY THE ENGINEER AND SHALL BE BUILT INTO THE ELEMENT PRIOR TO CONCRETE PLACEMENT.
4. REFER TO ARCHITECTURAL DRAWINGS FOR MOCKS, GROOVES, ORNAMENTS, ETC. TO BE CAST IN TO CONCRETE, AND FOR EXTENT AND LOCATION OF DEPRESSIONS, CURBS, RAMPS, ETC.
5. UNLESS NOTED OTHERWISE, MINIMUM REINFORCING IN ALL CONCRETE FOUNDATION WALLS SHALL BE AS FOLLOWS:

THICKNESS	BOTTOM BARS	VERTICAL	HORIZONTAL
12"	(2) #5	#5 AT 18"O.C. EA. FACE	#5 AT 18"O.C. EA. FACE
15"	(2) #5	#5 AT 18"O.C. EA. FACE	#5 AT 18"O.C. EA. FACE

6. UNLESS NOTED OTHERWISE, CONCRETE SLABS ON EARTH SHALL BE REINFORCED AS FOLLOWS:
   4" THICK - #3 AT 18"O.C. EACH WAY
   REINFORCING SHALL BE CONTINUOUSLY SUPPORTED AT 36"O.C. MAXIMUM SPACING.
7. UNLESS NOTED OTHERWISE, FOR NON-DETAILED OPENINGS IN CONCRETE WALLS LARGER THAN 12" AND SMALLER THAN 24" IN ANY DIRECTION, ADD (2) #5 BARS ON ALL SIDES IN ADDITION TO REGULAR WALL REINFORCING AND EXTEND 24" BEYOND OPENING. IF 24" IS NOT AVAILABLE ON EVERY SIDE, NOTIFY STRUCTURAL ENGINEER FOR FURTHER DIRECTION. OPENINGS SHALL HAVE A MINIMUM OF 12" OF CONCRETE ABOVE THE OPENING, TYP.
8. CONSTRUCTION JOINTS NOT SHOWN ON THE PLANS SHALL BE MADE AND LOCATED SO AS TO NOT IMPAIR THE STRENGTH OF THE STRUCTURE AND AS APPROVED BY THE STRUCTURAL ENGINEER. PROVIDE 2 X 4 (SHAPED) KEYWAY IN ALL VERTICAL AND HORIZONTAL JOINTS UNLESS NOTED OR DETAILED OTHERWISE. ALL STEEL REINFORCING SHALL BE CONTINUOUS THROUGH COLD JOINTS UNLESS NOTED OTHERWISE. SEE TYPICAL DETAILS FOR COLD/CONSTRUCTION JOINTS FOR SLABS ON GRADE.
9. WHERE NEW CONCRETE IS PLACED AGAINST PREVIOUSLY HARDENED CONCRETE, THE JOINT SHALL BE CLEAN AND FREE OF LAITANCE. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, CONSTRUCTION JOINTS SHALL BE PREWETTED AND STANDING WATER REMOVED. WHERE NOTED IN SPECIFIC DETAILS, HARDENED CONCRETE SHALL BE ROUGHENED TO 1/4" AMPLITUDE AND A BONDING AGENT SHALL BE APPLIED TO THE JOINT PRIOR TO PLACING NEW CONCRETE.

F. ANCHOR BOLTS/EMBEDDED BOLTS

1. ALL ANCHOR BOLTS SHALL HAVE ASTM A-563 HEAVY HEX NUT AND ASTM F-436 WASHERS AT STANDARD OR OVERSIZED HOLES PER AISC SPECIFICATION TABLE J3.3. WHERE HOLE SIZES DO NOT COMPLY WITH THE LIMITATIONS FOR OVERSIZED HOLES THE STRUCTURAL ENGINEER SHALL BE NOTIFIED TO DETERMINE STEEL PLATE WASHER REQUIREMENTS. ANCHOR BOLTS SHALL COMPLY WITH THE FOLLOWING:
   a. AT BRACED FRAMES - ASTM F1554 GRADE 105 HEADED BOLTS.(ASTM A449 THREADED ROD MAY BE USED WITH DOUBLE NUT AND WASHER.)
   b. AT ALL OTHER ANCHOR BOLTS (UNLESS NOTED OTHERWISE) - ASTM F1554 GRADE 36 HEADED BOLTS. (ASTM A36 THREADED ROD MAY BE USED WITH DOUBLE NUT AND A WASHER.)
2. SEE TYPICAL ANCHOR BOLT DETAIL FOR DEFINITIONS OF EMBEDMENT LENGTH, ETC.
3. FURNISH TEMPLATES AND OTHER DEVICES AS NECESSARY FOR PRESETTING ALL BOLTS PRIOR TO PLACING CONCRETE OR ANCHOR GROUT.
4. IF THREADED RODS ARE USED AS PERMITTED ABOVE, THEY SHALL BE CLEAR OF SOIL AND DIRT.
5. WHERE REQUIRED FOR ERECTION, HOLES LARGER THAN OVERSIZED MAY BE PERMITTED WITH THE USE OF STEEL PLATE WASHERS AT THE DISCRETION OF THE STRUCTURAL ENGINEER.

G. ADHESIVE/MECHANICAL ANCHORS

1. ALL ADHESIVE/MECHANICAL ANCHORS SHALL BE INSTALLED, INCLUDING HOLE DRILLING AND PREPARATION, IN ACCORDANCE WITH AN APPROVED INDEPENDENT EVALUATION REPORT (ICC-ES, IAPMO, OR APPROVED EQUAL), AS INDICATED BELOW, AND IN ACCORDANCE WITH ALL MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII).
2. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS AT TIME OF ANCHOR INSTALLATION. ADHESIVE ANCHORS SHALL NOT BE FULLY LOADED UNTIL CONCRETE HAS REACHED DESIGN STRENGTH.
3. UNLESS APPROVED BY THE ENGINEER OF RECORD, CONCRETE AND DRILLED ANCHOR HOLES SHALL BE DRY AND FREE OF WATER FOR 24 HOURS PRIOR TO ADHESIVE INSTALLATION. CONTACT THE ENGINEER OF RECORD FOR GUIDANCE IF THE CONTRACTOR CHOOSES TO INSTALL IN WET OR DAMP HOLES.
4. CONCRETE TEMPERATURE AT THE TIME OF INSTALLATION SHALL BE MONITORED BY THE CONTRACTOR. CONTRACTOR SHALL COMPLY WITH ALL MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII) RELATIVE TO SUBSTRATE TEMPERATURE.
5. INSTALLATION OF ADHESIVE ANCHORS HORIZONTALLY OR UPWARDLY INCLINED TO SUPPORT SUSTAINED TENSION LOADS SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY AN APPLICABLE CERTIFICATION PROGRAM. CERTIFICATION SHALL INCLUDE WRITTEN AND PERFORMANCE TESTS IN ACCORDANCE WITH THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM, OR EQUIVALENT IN ACCORDANCE WITH ACI 318-11 D.9.2.2. PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION. CONTINUOUS SPECIAL INSPECTION SHALL BE PROVIDED FOR THESE ANCHORS.
6. UNLESS NOTED OTHERWISE, ALL ADHESIVE ANCHORS INTO CONCRETE SHALL BE:
   a. HILTI HIT-RE 500V3 (ESR-3814), OR HILTI HIT-HY 200 (ESR-3187).
   b. SIMPSON SET-XP (ESR-4057), OR AT-XP (ER-0263).
   c. DEWALT PURE 110+ (ESR-3298), OR AC200+ GOLD (ESR-4027-COLD WEATHER).
7. UNLESS NOTED OTHERWISE, ALL ADHESIVE ANCHORS INTO MASONRY SHALL BE:
   a. HILTI HIT-HY-70 (ESR-2682).
   b. SIMPSON SET-XP (ER-0265), OR AT-XP (ER-0281).
   c. DEWALT AC100+ GOLD (ESR-3200).
8. UNLESS NOTED OTHER WISE, ALL MECHANICAL ANCHORS INTO CONCRETE SHALL BE:
   a. HILTI KWIK BOLT TZ (ESR-1917).
   b. DEWALT POWER STUD+ SD2 (ESR-2502).
   c. SIMPSON STRONG-BOLT 2 (ESR-3037).
9. UNLESS NOTED OTHERWISE, ALL MECHANICAL ANCHORS INTO MASONRY SHALL BE:
   a. HILTI KWIK HUS-EZ (ESR-3056).
   b. SIMPSON STRONG BOLT 2 WEDGE ANCHOR (ER-0240).
   c. DEWALT POWER STUD+ SD1 (ESR-2966), DEWALT SCREWBOLT+ (ESR-1678).
10. UNLESS NOTED OTHERWISE, ALL SCREW ANCHORS INTO CONCRETE SHALL BE:
    a. SIMPSON TITEN HD (ESR-2713).
    b. DEWALT SCREWBOLT+ (ESR-2526).
    c. HILTI KWIK HUS-EZ (ESR-3027).
11. UNLESS NOTED OTHERWISE, ALL SCREW ANCHORS INTO MASONRY SHALL BE:
    a. SIMPSON TITEN HD (ESR-1056).
    b. DEWALT SCREWBOLT+ (ESR-1678).
    c. HILTI KWIK HUS EZ (ESR-3056).
12. ALL MASONRY CELLS WITHIN 8" OF THE ANCHOR SHALL BE SOLID GROUTED.
13. THE TESTING LABORATORY WILL PERFORM VISUAL INSPECTION OF ANCHORS AND DOWELS AS SPECIFIED IN THE SPECIAL INSPECTION SCHEDULE AND THE APPROVED INDEPENDENT EVALUATION REPORT. TENSION TESTING CAN BE REQUIRED AT THE DIRECTION OF THE STRUCTURAL ENGINEER OF RECORD OR THE SPECIAL INSPECTOR.
14. IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON THAT HOLE AND SHIFT THE ANCHOR LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM SPACE OF (2) ANCHOR HOLE DIAMETERS OR 1 INCH, WHICH EVER IS LARGER, OF SOUND CONCRETE/MASONRY BETWEEN THE ANCHOR AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT. AT CONTRACTORS OPTION, LOCATE EXISTING REINFORCEMENT PRIOR TO DRILLING/CORING. IF THE ANCHOR OR DOWEL CANNOT BE SHIFTED AS NOTED ABOVE, THE ENGINEER WILL DETERMINE A NEW LOCATION.
15. LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED WITH MECHANICAL ANCHORS.
16. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS SHALL BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE. SUBSTITUTION REQUESTS SHALL INCLUDE AN ICC ESR OR IAPMO REPORTAND SUPPORTING CALCULATIONS INDICATING COMPLIANCE WITH DESIGN INTENT.

H. SUSPENDED CONCRETE SLABS / SLABS ON METAL DECK

1. UNLESS NOTED OTHERWISE, ALL CONCRETE SLABS ON METAL DECK SHALL BE 5" TOTAL THICKNESS LIGHT WEIGHT CONCRETE WITH A WEIGHT LESS THAN 110 POUNDS PER CUBIC FOOT, REINFORCED WITH #5 BARS AT 12"O.C. EACH WAY, REINFORCING STEEL SHALL BE CHAIRED TO 1" TOP COVER AT ALL BEAM LOCATIONS.
2. SLAB PENETRATIONS LESS THAN 6" IN ALL DIRECTIONS WITH A CLEAR SPACING OF AT LEAST 3 TIMES THE LONGEST DIMENSION, DO NOT REQUIRE SUPPLEMENTAL REINFORCING. OTHERWISE, THE PENETRATIONS SHALL BE FRAMED ON 4 SIDES WITH STEEL ANGLES OR BENT PLATES (SEE TYPICAL DETAIL) UNLESS NOTED OTHERWISE.
3. EVERY EFFORT SHALL BE MADE TO PROVIDE A LEVEL FINISHED FLOOR WHILE MAINTAINING THE MINIMUM INDICATED SLAB THICKNESS. WHEN PLACING CONCRETE, SCREEDS SHALL BE RE-SET AFTER INITIAL SCREEDING TO ACCOUNT FOR DEFLECTION DUE TO CONCRETE WEIGHT.
4. CONTROL JOINTS IN SUSPENDED CONCRETE SLABS AND CONCRETE SLABS ON DECK SHALL NOT BE USED UNLESS SPECIFICALLY APPROVED AND DETAILED BY THE ENGINEER.
5. SEE TYPICAL DETAILS WHEN SLABS ARE MADE COMPOSITE WITH STEEL BEAMS.
6. CONDUIT SHALL NOT BE PLACED IN SLABS ON DECK.
7. WHERE CONDUITS CLUSTERED TOGETHER TO RISE ABOVE SLAB OR PENETRATE SLAB, PENETRATION IN SLAB MUST BE SUPPORTED AS NOTED IN DETAIL.
8. CONTRACTOR SHALL PROVIDE ALL TEMPORARY SHORING, BRACING, AND GUYING AS REQUIRED DURING ERECTION AND PLACEMENT OF SUSPENDED CONCRETE SLABS ON METAL DECK.

I. REINFORCING STEEL

1. REINFORCING BAR STRENGTH REQUIREMENTS:
   a. ALL REINFORCING BARS SHALL CONFORM TO ASTM STANDARD A-615 GRADE 60 AND ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM STANDARD A-1064 AND SHALL BE SUPPLIED IN FLAT SHEETS. ADEQUATELY TIE AND SUPPORT ALL REINFORCING STEEL AS SPECIFIED BY ACI 117, TO MAINTAIN EXACT REQUIRED POSITION.
2. ALL FIELD BENT DOWELS SHALL BE GRADE 40 WITH SPACING INDICATED REDUCED BY 1/3.
3. UNLESS NOTED OTHERWISE, REINFORCEMENT SHALL HAVE THE FOLLOWING CONCRETE COVERAGE :
   a. CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH ..... 3"
   b. EXPOSED TO EARTH OR WEATHER :
      1. #6 & LARGER ..... 2"
      2. #5 & SMALLER ..... 1-1/2"
   c. NOT EXPOSED TO WEATHER OR EARTH :
      1. SLABS, WALLS, JOISTS, #11 & SMALLER ..... 3/4"
      2. BEAMS, COLUMNS: MAIN REINFORCING OR TIES ..... 1-1/2"
   d. SLAB ON GRADE :
      1. PLACE REINFORCING AT CENTER OF SLAB UNLESS INDICATED OTHERWISE.
4. EXCEPT WHERE NOTED ON PLANS OR DETAILS CONTINUOUS REINFORCEMENT SHALL BE SPLICED AT POINTS OF MINIMUM STRESS BY LAPPING PER THE REBAR LAP SCHEDULE.
5. REINFORCING STEEL MAY BE SPLICED WITH MECHANICAL COUPLERS THAT HAVE A TENSION CAPACITY OF AT LEAST 125% OF THE STRENGTH OF THE BAR. MECHANICAL COUPLERS SHALL BE A POSITIVE CONNECTING TYPE COUPLER, AND SHALL BE INSTALLED IN ACCORDANCE WITH AN APPROVED ICC RESEARCH REPORT. WHERE THESE ARE USED, SPLICES ON ADJACENT BARS SHALL BE STAGGERED AT LEAST 24 INCHES ALONG THE LENGTH OF THE BARS.
6. ALL VERTICAL REINFORCING IN STRUCTURAL ELEMENTS ABOVE SHALL BE SPLICED WITH MATCHED DOWELS EMBEDDED WITHIN THE FOOTINGS OR STRUCTURE BELOW. SPLICE LENGTHS SHALL COMPLY WITH REBAR LAP SCHEDULE. DOWELS INTO FOOTINGS SHALL TERMINATE WITH A STANDARD HOOK, AND SHALL EXTEND TO WITHIN 4" OF THE BOTTOM OF FOOTING. DOWELS SHALL EXTEND MINIMUM 20" INTO FOOTING FOR MASONRY CONSTRUCTION SEE STRUCTURAL NOTE L.6.A.
7. DO NOT WELD REINFORCING EXCEPT AS NOTED ON PLANS, WHERE REINFORCING IS WELDED USE ASTM A-706 REINFORCING.
8. REINFORCING BARS, TIES, AND TENDONS SHALL BE SUPPORTED BY NYLON ZONES, PLASTIC-COATED TIE-WIRES, OR PLASTIC-COATED CHAIRS. REINFORCING IN FOOTINGS IS PERMITTED TO BE SUPPORTED ON CONCRETE DOBIES.
9. UNLESS NOTED OTHERWISE, HOOKS, STIRRUPS, TIES, AND OTHER BENDS IN REINFORCING STEEL SHALL MEET THE STANDARDS SET FORTH IN ACI 318/318R-14. UNLESS OTHERWISE PERMITTED BY THE ENGINEER, REINFORCEMENT SHALL BE BENT COLD. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT, EXCEPT AS SHOWN ON THESE DRAWINGS OR OTHERWISE PERMITTED BY THE ENGINEER.
10. UNLESS SPECIFICALLY NOTED AND/OR DETAILED IN THE STRUCTURAL DRAWINGS CONDUIT SHALL NOT BE IN CONTACT WITH REINFORCING STEEL.

J. STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE FOLLOWING:
   a. ANSI/AISC 360-10 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", WITH "COMMENTARY" AND "SUPPLEMENTS" AS REQUIRED BY BUILDING CODE.
   b. AISC 303-10 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" EXCLUDING THE FOLLOWING SECTIONS: 4.4, 4.4.1, 4.4.2.
   c. AISI "SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS".
   d. ASTM SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS".
   e. AWS D1.1 AND 1.3, "STRUCTURAL WELDING CODE" (EXCEPT SPECIFIC ITEMS DO NOT APPLY IF THEY CONFLICT WITH AISC).
   f. ANSI/AISC 341-10 "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS".
2. STRUCTURAL STEEL SHALL COMPLY WITH THE FOLLOWING:
   a. WIDE FLANGE SHAPES AND WT SHAPES - ASTM A992
   b. OTHER SHAPES AND PLATES - ASTM A-36 (UNO)
   c. HOLLOW STRUCTURAL SECTIONS (HSS) - ASTM A-500, GRADE C FOR SQUARE, RECTANGULAR AND ROUND SHAPES (FY = 50 KSI FOR SQUARE AND RECTANGULAR SHAPES AND 46 KSI FOR ROUND SHAPES)
   d. STAINLESS STEEL SHAPES, PLATES, AND FASTENERS – ASTM 304
   e. DEFORMED BAR ANCHORS (DBA) - ASTM A-496, WELDED IN ACCORDANCE WITH AWS D1.1
   f. HEADED STUD ANCHORS (HSA) - ASTM A-108, GRADE 1015 STEEL AND WELDED IN ACCORDANCE WITH AWS D1.1 FOR TYPE "B". USE 3/4" DIAMETER STUDS, UNLESS NOTED OTHERWISE.
   g. THREADED ROD - ASTM A-449.
   h. NON-SHRINK GROUT - ASTM C110. NON-SHRINK GROUT SHALL BE PRE-PACKAGED,

SEISMIC MASS KEY PLAN

PIPING FLOOR

80 PSF (8 PIPES @ 250 PLF EA. ACROSS 26' BAY)
+ 5 PSF (MISC. EQUIPMENT)
+ 10 PSF (STEEL FRAMING)
+ 88 PSF (6" CONC. SLAB & 1" WEARING SURFACE)
+ 2 PSF (FIRE SPRINKLER)
TOTAL = 185 PSF

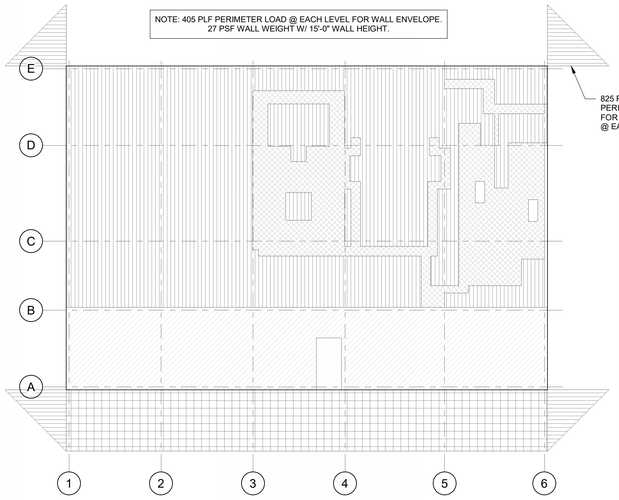
5 PSF GRATING
+ 10 PSF (STEEL FRAMING)
+ 30 PSF (3 PIPES @ 250 PLF EA. ACROSS 26' BAY)
+ 5 PSF (MISC. EQUIPMENT)
+ 2 PSF (FIRE SPRINKLER)
TOTAL = 52 PSF

20 PSF (2 PIPES @ 250 PLF EA. ACROSS 26' BAY)
+ 10 PSF (STEEL FRAMING)
+ 5 PSF (MISC. EQUIPMENT)
+ 2 PSF (FIRE SPRINKLER)
TOTAL = 37 PSF

10 PSF (STEEL FRAMING)
+ 5 PSF (MISC. EQUIPMENT)
TOTAL = 15 PSF

10 PSF (STEEL FRAMING)
+ 5 PSF (MISC. EQUIPMENT)
+ 40 PSF (5" L.W. CONC. SLAB W/ PLB DECK)
+2 PSF (FIRE SPRINKLER)
TOTAL = 57 PSF

NOTE: 405 PLF PERIMETER LOAD @ EACH LEVEL FOR WALL ENVELOPE.
27 PSF WALL WEIGHT W/ 15'-0" WALL HEIGHT.



FAN FLOOR

40 PSF (4 PIPES @ 250 PLF EA. ACROSS 26' BAY)
+ 5 PSF (MISC. EQUIPMENT)
+ 10 PSF (STEEL FRAMING)
+ 125 PSF (9" CONC. SLAB & BEAM ENCASEMENT)
+ 2 PSF (FIRE SPRINKLER)
TOTAL = 182 PSF

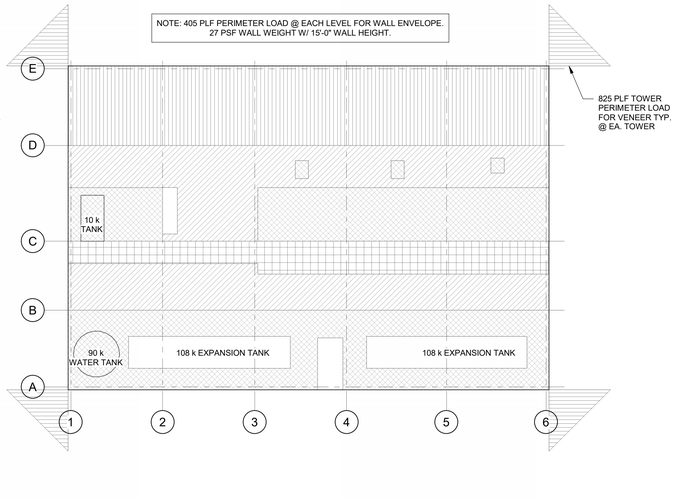
30 PSF (3 PIPES @ 250 PLF EA. ACROSS 26' BAY)
+ 10 PSF (STEEL FRAMING)
+ 5 PSF (MISC. EQUIPMENT)
+ 5 PSF GRATING
+ 2 PSF (FIRE SPRINKLER)
TOTAL = 52 PSF

20 PSF (2 PIPES @ 250 PLF EA. ACROSS 26' BAY)
+ 10 PSF (STEEL FRAMING)
+ 5 PSF (MISC. EQUIPMENT)
+ 2 PSF (FIRE SPRINKLER)
TOTAL = 37 PSF

10 PSF (STEEL FRAMING)
+ 5 PSF (MISC. EQUIPMENT)
TOTAL = 15 PSF

20 PSF (2 PIPES @ 250 PLF EA. ACROSS 26' BAY)
+ 10 PSF (STEEL FRAMING)
+ 5 PSF (MISC. EQUIPMENT)
+ 50 PSF (4" SHOTCRETE)
+ 2 PSF (FIRE SPRINKLER)
TOTAL = 87 PSF

NOTE: 405 PLF PERIMETER LOAD @ EACH LEVEL FOR WALL ENVELOPE.
27 PSF WALL WEIGHT W/ 15'-0" WALL HEIGHT.

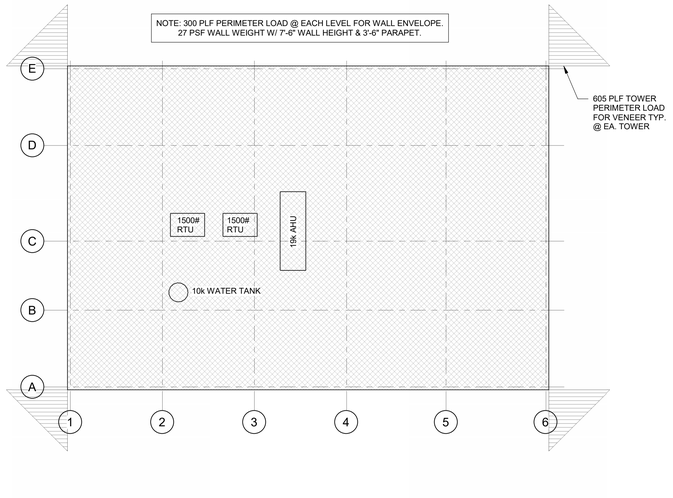


ROOF

10 PSF (1 PIPE @ 250 PLF EA. ACROSS 26' BAY)
+ 10 PSF (STEEL FRAMING)
+ 5 PSF (METAL DECK & MISC. ROOFING)
+ 2 PSF (FIRE SPRINKLER)
+ 1 PSF (COLLATERAL)
+ 7 PSF (SEISMIC SNOW)
TOTAL = 35 PSF

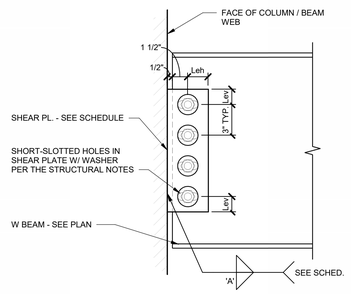
10 PSF (STEEL FRAMING)
+ 3 PSF (MISC. EQUIPMENT)
+7 PSF (SEISMIC SNOW)
TOTAL = 20 PSF

NOTE: 300 PLF PERIMETER LOAD @ EACH LEVEL FOR WALL ENVELOPE.
27 PSF WALL WEIGHT W/ 7'-6" WALL HEIGHT & 3'-6" PARAPET.



BEAM CONNECTION SCHEDULE

BEAM DEPTH	SHEAR PLATE INFORMATION: PL. DIMENSIONS W/ SHORT-SLOTTED HOLES	Lev	Leh	BOLTS W/ STANDARD WASHERS OVER SLOTS: No.	BOLTS W/ STANDARD WASHERS OVER SLOTS: SIZE	WELD 'A'	COMMENTS
W8 x, W10 x, C8 x	PL. 1/4" x 4"	1 1/2"	2"	2	3/4" Ø	3/16"	
W12 x, C12 x	PL. 5/16" x 4"	1 1/2"	2"	3	3/4" Ø	1/4"	
W14 x 90 & LIGHTER	PL. 5/16" x 4"	1 1/2"	2"	3	3/4" Ø	1/4"	
W16 x 77 & LIGHTER	PL. 5/16" x 4"	1 1/2"	2"	4	3/4" Ø	1/4"	
W18 x 65 & LIGHTER	PL. 5/16" x 4"	1 1/2"	2"	5	3/4" Ø	1/4"	
W21 x 73 & LIGHTER	PL. 5/16" x 4"	1 1/2"	2"	6	3/4" Ø	1/4"	
W24 x 94 & LIGHTER	PL. 3/8" x 4"	1 1/2"	2"	7	7/8" Ø	1/4"	



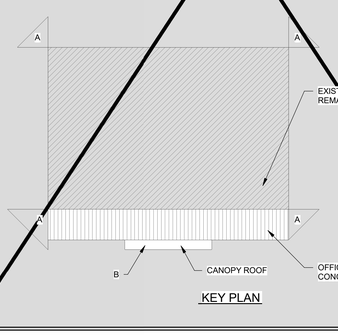
ROOF DECK SCHEDULE (L)

AREA	DECK: DEPTH	DECK: TYPE	DECK: GA.	ATTACHMENT: SUPPORTS: HILTI FASTENER	ATTACHMENT: SUPPORTS: PATTERN	ATTACHMENT: SIDE SEAMS: #12 TEK SCREWS	ATTACHMENT: SIDE SEAMS: TOP SEAM WELD	ATTACHMENT: SIDE SEAMS: PUNCH LOCK	ATTACHMENT: SUPPORTS PARALLEL TO FLUTES: HILTI FASTENER	ATTACHMENT: SUPPORTS PARALLEL TO FLUTES: SPA.	MIN. SHEAR CAPACITY	MAX FLEXIBILITY FACTOR
A	1 1/2"	B	18	ENP19	36/7/4	---	---	18"o.c.	ENP19	18"o.c.	1212 plf	6 + 3R
B	1 1/2"	B	22	ENP19	36/4	---	---	24"o.c.	ENP19	18"o.c.	478 plf	0.4 + 179R

FASTENING PATTERNS



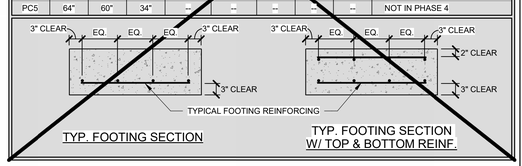
NOTES:
1. USE NESTABLE (OVERLAPPING) SIDE SEAMS AT SCREW ATTACHMENTS AND INTERLOCKING SIDE SEAMS AT WELDS.
2. ALL DECK WITH A PROFILE DEPTH OF 2" OR LESS SHALL HAVE NESTED OR TELESCOPED END LAPS.
3. SUBMIT CURRENT ICC APPROVAL FOR ALL DECKS.
4. ALTERNATE SYSTEMS SHALL MEET OR EXCEED THE MINIMUM SHEAR CAPACITY AND SHALL PROVIDE LESS THAN OR EQUAL TO THE MAXIMUM FLEXIBILITY FACTOR LISTED IN THE SCHEDULE.
5. ALL ALTERNATE SYSTEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.



KEY PLAN

FOOTING SCHEDULE

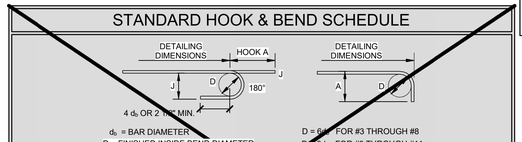
MARK	WIDTH	LENGTH	THICK	LENGTHWISE REINF: NO.	LENGTHWISE REINF: SIZE	CROSSWISE REINF: NO.	CROSSWISE REINF: SIZE	CROSSWISE REINF: SPA.	REMARKS
FC2	2'-0"	CONT.	12"	(2)	#5	--	--	--	
FC6	6'-0"	CONT.	12"	(6)	#5	--	#5	12"o.c.	REINF. TOP & BOTTOM
F3	3'-0"	3'-0"	12"	(3)	#5	(3)	#5	--	
F4	4'-0"	4'-0"	12"	(4)	#5	(4)	#5	--	
GB1	48"	CONT.	18"	(12)	#8	--	--	--	NOT IN PHASE 4
GB2	48"	CONT.	30"	(18)	#8	--	--	--	NOT IN PHASE 4
PC1	60"	60"	60"	--	--	--	--	--	NOT IN PHASE 4
PC2	48"	60"	34"	--	--	--	--	--	NOT IN PHASE 4
PC3	90"	102"	60"	--	--	--	--	--	NOT IN PHASE 4
PC4	78"	90"	60"	--	--	--	--	--	NOT IN PHASE 4
PC5	64"	60"	34"	--	--	--	--	--	NOT IN PHASE 4



TYP. FOOTING SECTION

TYP. FOOTING SECTION W/ TOP & BOTTOM REINF.

STANDARD HOOK & BEND SCHEDULE



BAR SIZE	DIMENSION OF STANDARD 180-DEG HOOKS, ALL GRADES: A	J	D	DIMENSION OF STANDARD 90-DEG HOOKS, ALL GRADES: A	D
#3	5"	3"	2 1/4"	6"	2 1/4"
#4	6"	4"	3"	8"	3"
#5	7"	5"	3 3/4"	10"	3 3/4"
#6	8"	6"	4 1/2"	1'-0"	4 1/2"
#7	10"	7"	5 1/4"	1'-2"	5 1/4"
#8	11"	8"	6"	1'-4"	6"
#9	1'-3"	11 3/4"	9 1/2"	1'-7"	9 1/2"
#10	1'-5"	1'-1 1/4"	10 3/4"	1'-10"	10 3/4"
#11	1'-7"	1'-2 3/4"	12"	2'-0"	12"

LEGEND OF SYMBOLS AND ABBREVIATIONS

AB = ANCHOR BOLT
ABV = ABOVE
ARCH = ARCHITECT
BLW = BELOW
BRB = BUCKLING RESTRAINED BRACE
BRBF = BUCKLING RESTRAINED BRACE FRAME
CJP = COMPLETE JOINT PENETRATION
CL = CENTERLINE
COL = COLUMN
CONC = CONCRETE
CP = CONCRETE PIER
CW = CONCRETE WALL
DC = DEMAND CRITICAL
DIA / Ø = DIAMETER
DBA = DEFORMED BAR ANCHOR
DBE = DECK BEARING ELEVATION
ELEV = ELEVATION
EMU = EXISTING MEMBER UPGRADE
EOD = EDGE OF DECK
FDN = FOUNDATION
FTG = FOOTING
FFE = FINISHED FLOOR ELEVATION
GB = CONCRETE GRADE BEAM
HSA = HEADED STUD ANCHOR
KB = KICKER BRACE
MAX = MAXIMUM
MECH = MECHANICAL
MIN = MINIMUM
NS, FS = NEAR SIDE, FAR SIDE
OAE = OR APPROVED EQUAL
OPP = OPPOSITE
PAF = POWDER ACTUATED FASTENER
PL = PLATE
REINF = REINFORCING
REQ'D = REQUIRED
SIM = SIMILAR
TOB = TOP OF BEAM ELEVATION
TOC = TOP OF CONCRETE SLAB
TOF = TOP OF FOOTING
TOG = TOP OF GIRDER ELEVATION
TOS = TOP OF STEEL ELEVATION
TYP = TYPICAL
UNO = UNLESS NOTED OTHERWISE
NIC = NOT IN CONTRACT
(E) = EXISTING
(N) = NEW
VPG = VERTICAL PILE GROUP
HPG = HORIZONTAL PILE GROUP
BA = BID ALTERNATE

FOOTING MARK
TOP OF FOOTING ELEV.
SECTION MARK
SHEET NUMBER
TOP OF FOUNDATION WALL OR COLUMN PIER ELEV.
S — S FOOTING STEP
DEPRESS FDN./WALL AND POUR FLOOR SLAB OVER AT CONCRETE FOUNDATION WALL
CONCRETE BEAM
ELEVATION
L FRAMING ANGLE SEE TYPICAL DETAIL
C FRAMING CHANNEL SEE TYPICAL DETAIL
L ITEMS, DETAILS, & SYSTEMS WHICH ARE PART OF THE LATERAL FORCE RESISTING SYSTEM.
MOMENT RESISTING CONNECTIONS - SEE DETAIL
MOMENT RESISTING CANTILEVER CONNECTIONS - SEE DETAIL
KB KICKER BRACE
EMU-# UPGRADE ON EXISTING W BEAM - SEE SCHEDULE
NOT IN CONTRACT
DIRECTION DECK IS SPANNING

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U OF U BLDG. 303 SEISMIC UPGRADE - PHASE 5
SALT LAKE CITY UTAH

PERMIT SET - 3-5-2024

PROFESSIONAL STRUCTURAL ENGINEER
3/5/24
No. 276196
Robert M. Moyle
STATE OF UTAH

△	DATE	REVISION
3	2/19/21	PR #2
5	5/10/21	PR #4

PROJECT NUMBER 18923

SCHEDULES

SG-002

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STRUCTURAL STEEL SPECIAL INSPECTION SCHEDULE

ESTABLISHED PER 2018 IBC SECTION 1705.2.1

INSPECTION TASKS PRIOR TO WELDING (TABLE N5.4-1)	FABRICATOR QUALITY CONTROL		SPECIAL INSPECTOR QUALITY ASSURANCE	
	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC
WELDER QUALIFICATION RECORDS AND CONTINUITY RECORDS	●			●
WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	●		●	
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	●		●	
MATERIAL IDENTIFICATION (TYPE / GRADE)		●		●
WELDER IDENTIFICATION SYSTEM[1]		●		●
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY)				
* JOINT PREPARATION				
* DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)		●		●
* CLEANLINESS (CONDITION OF STEEL SURFACES)				
* TACKING (TACK WELD QUALITY AND LOCATION)				
* BACKING TYPE AND FIT (IF APPLICABLE)				
FIT-UP OF CJP GROOVE WELDS OFHSS T-, Y-, AND K-JOINTS WITHOUT BACKING (INCLUDING JOINT GEOMETRY)				
* JOINT PREPARATIONS				
* DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)	●			●
* CLEANLINESS (CONDITION OF STEEL SURFACES)				
* TACKING (TACK WELD QUALITY AND LOCATION)				
CONFIGURATION AND FINISH OF ACCESS HOLES		●		●
FIT-UP OF FILLET WELDS				
* DIMENSIONS (ALIGNMENT, GAPS AT ROOT)		●		●
* CLEANLINESS (CONDITION OF STEEL SURFACES)				
* TACKING (TACK WELD QUALITY AND LOCATION)				
CHECK WELDING EQUIPMENT		●		

[1]THE FABRICATOR OR ERECTOR, AS APPLICABLE, SHALL MAINTAIN A SYSTEM BY WHICH A WELDER WHO HAS WELDED A JOINT OR MEMBER CAN BE IDENTIFIED. STAMPS, IF USED, SHALL BE THE LOW-STRESS TYPE.

INSPECTION TASKS DURING WELDING (TABLE N5.4-2)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC
CONTROL AND HANDLING OF WELDING CONSUMABLES				
* PACKAGING		●		●
* EXPOSURE CONTROL				
NO WELDING OVER CRACKED TACK WELDS		●		●
ENVIRONMENTAL CONDITIONS				
* WIND SPEED WITHIN LIMITS		●		●
* PRECIPITATION AND TEMPERATURE				
WPS FOLLOWED				
* SETTINGS ON WELDING EQUIPMENT				
* TRAVEL SPEED				
* SELECTED WELDING MATERIALS		●		●
* SHIELDING GAS TYPE / FLOW RATE				
* PREHEAT APPLIED				
* INTERPASS TEMPERATURE MAINTAINED (MIN. / MAX)				
* PROPER POSITION (F, V, H, OH)				
WELDING TECHNIQUES				
* INTERPASS AND FINAL CLEANING				
* EACH PASS WITHIN PROFILE LIMITATIONS		●		●
* EACH PASS MEETS QUALITY REQUIREMENTS				
PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	●		●	

INSPECTION TASKS AFTER WELDING (TABLE N5.4-3)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC
WELDS CLEANED		●		●
SIZE, LENGTH AND LOCATION OF WELDS	●		●	
WELDS MEET VISUAL ACCEPTANCE CRITERIA				
* CRACK PROHIBITION				
* WELD / BASE-METAL FUSION				
* CRATER CROSS SECTION		●		●
* WELD PROFILES				
* WELD SIZE				
* UNDERCUT				
* POROSITY				
ARC STRIKES	●		●	
K-AREA[1]	●		●	
WELD ACCESS HOLES IN ROLLED HEAVY SHAPES AND BUILT-UP HEAVY SHAPES[2]	●		●	
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	●		●	
REPAIR ACTIVITIES	●		●	
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	●		●	
NO PROHIBITED WELDS HAVE BEEN ADDED WITHOUT THE APPROVAL OF THE EOR		●		●

[1]WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE K-AREA, VISUALLY INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3 IN. (75mm) OF THE WELD)
[2]AFTER ROLLED HEAVY SHAPES (SEE SECTION A3.1c) AND BUILT-UP HEAVY SHAPES (SEE SECTION A3.1d) ARE WELDED, VISUALLY INSPECT THE WELD ACCESS HOLE FOR CRACKS.

NOTES

1. PERIODIC - OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.
2. CONTINUOUS - PERFORM THESE TASKS FOR EACH WELDED JOINT OR MEMBER.
3. QUALITY CONTROL (QC) SHALL BE PROVIDED BY THE FABRICATOR AND ERECTOR.
4. QUALITY ASSURANCE (QA) SHALL BE PROVIDED BY OTHERS WHEN REQUIRED BY THE AUTHORITY HAVING JURISDICTION (AHJ). APPLICABLE BUILDING CODE (ABC), PURCHASER, OWNER, OR ENGINEER OF RECORD (EOR). NONDESTRUCTIVE TESTING (NDT) SHALL BE PERFORMED BY THE AGENCY OR FIRM RESPONSIBLE FOR QUALITY ASSURANCE, EXCEPT AS PERMITTED IN ACCORDANCE WITH SECTION N6.
5. QC AND QA INSPECTORS SHALL BE QUALIFIED IN ACCORDANCE WITH AISC 360-16 CHAPTER N4.
6. NONDESTRUCTIVE TESTING PERSONNEL SHALL BE QUALIFIED IN ACCORDANCE WITH AISC 360-16 CHAPTER N4.3.
7. NONDESTRUCTIVE TESTING OF WELDED JOINTS SHALL COMPLY WITH AISC 360-16 CHAPTER N5.5a AND b.
8. OBSERVATION OF WELDING OPERATIONS AND VISUAL INSPECTION OF IN-PROCESS AND COMPLETED WELDS SHALL BE THE PRIMARY METHOD TO CONFIRM THAT THE MATERIALS, PROCEDURES AND WORKMANSHIP ARE IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS. FOR STRUCTURAL STEEL, ALL PROVISIONS OF AWS D1.1 / D1.1M STRUCTURAL WELDING CODE - STEEL FOR STATICALLY LOADED STRUCTURES SHALL APPLY.
9. THERMALLY CUT SURFACES OF ACCESS HOLES SHALL BE TESTED BY QA USING MT OR PT, WHEN THE FLANGE THICKNESS EXCEEDS 2 IN. (50mm) FOR ROLLED SHAPES, OR WHEN THE WEB THICKNESS EXCEEDS 2 IN. (50mm) FOR BUILT-UP SHAPES. ANY CRACK SHALL BE DEEMED UNACCEPTABLE REGARDLESS OF SIZE OR LOCATION.
10. WHEN REQUIRED BY APPENDIX 3, TABLE A-3.1, WELDED JOINTS REQUIRING WELD SOUNDNESS TO BE ESTABLISHED BY RADIOGRAPHICS OR ULTRASONIC INSPECTION SHALL BE TESTED BY QA AS PRESCRIBED. REDUCTION IN THE RATE OF UT IS PROHIBITED.
11. REDUCTION OF RATE OF ULTRASONIC TESTING - THE RATE OF UT IS ONLY PERMITTED TO BE REDUCED IF APPROVED BY THE EOR AND THE AHJ PER AISC 360-16 CHAPTER N5.5e.
12. FOR STRUCTURES IN RISK CATEGORY II, WHERE THE INITIAL RATE FOR UT IS 10%, THE NDT RATE FOR AN INDIVIDUAL WELDER OR WELDING OPERATOR SHALL BE INCREASED TO 100% SHOULD THE REJECT RATE, THE NUMBER OF WELDS CONTAINING UNACCEPTABLE DEFECTS DIVIDED BY THE NUMBER OF WELDS COMPLETED, EXCEEDS 5% OF THE WELDS TESTED FOR THE WELDER OR WELDING OPERATOR. A SAMPLING OF AT LEAST 20 COMPLETED WELDS FOR A JOB SHALL BE MADE PRIOR TO IMPLEMENTING SUCH AN INCREASE. WHEN THE REJECT RATE FOR THE WELDER OR WELDING OPERATOR, AFTER A SAMPLING OF AT LEAST 40 COMPLETED WELDS, HAS FALLEN TO 5% OR LESS, THE RATE OF UT SHALL BE RETURNED TO 10%. FOR EVALUATING THE REJECT RATE OF CONTINUOUS WELDS OVER 3 FT (1M) IN LENGTH WHERE THE EFFECTIVE THROAT IS 1 IN. (25mm) OR LESS, EACH 12 IN. (300mm) INCREMENT OR FRACTION THEREOF SHALL BE CONSIDERED AS ONE WELD. FOR EVALUATING THE REJECT RATE ON CONTINUOUS WELDS OVER 3 FT (1M) IN LENGTH WHERE THE EFFECTIVE THROAT IS GREATER THAN 1 IN. (25mm), EACH 6 IN. (150mm) OF LENGTH OR FRACTION THEREOF SHALL BE CONSIDERED ON WELD.
13. ALL NDT PERFORMED SHALL BE DOCUMENTED. FOR SHOP FABRICATION, THE NDT REPORT SHALL IDENTIFY THE TESTED WELD BY PIECE MARK AND LOCATION IN THE PIECE. FOR FIELD WORK, THE NDT REPORT SHALL IDENTIFY THE TESTED WELD BY LOCATION IN THE STRUCTURE, PIECE MARK, AND LOCATION IN THE PIECE. WHEN A WELD IS REJECTED ON THE BASIS OF NDT, THE NDT RECORD SHALL INDICATE THE LOCATION OF THE DEFECT AND THE BASIS OF REJECTION
14. DEMAND CRITICAL WELDS SHALL MEET THE PROVISION FOUND IN AISC 341-16 AND WELDING METHODS, PROCEDURES AND QUALITY CONTROL SHALL COMPLY WITH AWS D1.1 AND THE FOLLOWING:
    a. ARC STRIKES, GOUGES AND OTHER IMPERFECTIONS WITHIN OR ADJACENT TO THE JOINT, SHALL BE REPAIRED OR REMOVED.
    b. PREHEAT AND INTER-PASS REQUIREMENTS AS OUTLINED IN SECTION 3.5.
    c. UNREPAIRED CRACKS, GOUGES, AND NOTCHES WILL NOT BE PERMITTED IN THE JOINT AREA.
    d. USE ELECTRODES WITH CHARPY V-NOTCH ABSORBED ENERGY EQUAL TO OR GREATER THAN 20 FT-LBS AT 20 DEGREES FAHRENHEIT UNDER AWS A5 CLASSIFICATION TEST METHODS, AND 40 FT-LBS AT 70 DEGREES FAHRENHEIT USING TEST PROCEDURES PRESCRIBED IN APPENDIX X OF AISC 358. ACCEPTABLE ELECTRODES INCLUDE E70TG-K2, E71 T-1.

INSPECTION TASKS PRIOR TO BOLTING (TABLE N5.6-1)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS		●	●	
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS		●		●
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)		●		●
PROPER BOLTING PROCEDURES SELECTED FOR JOINT DETAIL		●		●
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS		●		●
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	●			●
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS		●		●

INSPECTION TASKS DURING BOLTING (TABLE N5.6-2)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC
FASTENER ASSEMBLIES, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED		●		●
JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION		●		●
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING		●		●
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES		●		●

INSPECTION TASKS AFTER BOLTING (TABLE N5.6-3)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	●		●	

NOTES

1. PERIODIC - OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.
2. CONTINUOUS - PERFORM THESE TASKS FOR EACH BOLTED CONNECTION.
3. QUALITY CONTROL (QC) SHALL BE PROVIDED BY THE FABRICATOR AND ERECTOR.
4. QUALITY ASSURANCE (QA) SHALL BE PROVIDED BY OTHERS WHEN REQUIRED BY THE AUTHORITY HAVING JURISDICTION (AHJ). APPLICABLE BUILDING CODE (ABC), PURCHASER, OWNER, OR ENGINEER OF RECORD (EOR). NONDESTRUCTIVE TESTING (NDT) SHALL BE PERFORMED BY THE AGENCY OR FIRM RESPONSIBLE FOR QUALITY ASSURANCE, EXCEPT AS PERMITTED IN ACCORDANCE WITH SECTION N7.
5. FOR SNUG-TIGHT JOINTS, PRE-INSTALLATION VERIFICATION TESTING AS SPECIFIED IN TABLE N5.6-1 AND MONITORING OF THE INSTALLATION PROCEDURES AS SPECIFIED IN TABLE N5.6-2 ARE NOT APPLICABLE. THE QCI AND QAI NEED NOT BE PRESENT DURING THE INSTALLATION OF FASTENERS IN SNUG-TIGHT JOINTS.
6. FOR PRETENSIONED JOINTS AND SLIP-CRITICAL JOINTS, WHEN THE INSTALLER IS USING THE TURN-OF-NUT METHOD WITH MATCHMARKING TECHNIQUES, THE DIRECT-TENSION-INDICATOR METHOD, OR THE TWIST-OFF-TYPE TENSION CONTROL BOLT METHOD, MONITORING OF BOLT PRETENSIONING PROCEDURES SHALL BE AS SPECIFIED IN TABLE N5.6-2. THE QCI AND QAI NEED NOT BE PRESENT DURING THE INSTALLATION OF FASTENERS WHEN THESE METHODS ARE USED BY THE INSTALLER.
7. FOR PRETENSIONED JOINTS AND SLIP-CRITICAL JOINTS, WHEN THE INSTALLER IS USING THE CALIBRATED WRENCH METHOD OR THE TURN-OF-NUT METHOD WITHOUT MATCHMARKING, MONITORING OF BOLT PRETENSIONING PROCEDURES SHALL BE AS SPECIFIED IN TABLE N5.6-2. THE QCI AND QAI SHALL BE ENGAGED IN THEIR ASSIGNED INSPECTION DUTIES DURING INSTALLATION OF FASTENERS WHEN THESE METHODS ARE USED BY THE INSTALLER.
8. OBSERVATION OF BOLTING OPERATIONS SHALL BE THE PRIMARY METHOD USED TO CONFIRM THAT THE MATERIALS, PROCEDURES AND WORKMANSHIP INCORPORATED IN CONSTRUCTION ARE IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS AND THE PROVISIONS OF THE RCSC SPECIFICATION.

GENERAL STEEL SPECIAL INSPECTION NOTES :

1. QUALITY ASSURANCE (QA) INSPECTION OF FABRICATED ITEMS SHALL BE MADE AT THE FABRICATOR'S PLANT. THE QUALITY ASSURANCE INSPECTOR (QAI) SHALL SCHEDULE THIS WORK TO MINIMIZE INTERRUPTION TO THE WORK OF THE FABRICATOR.
2. QA INSPECTION OF THE ERECTED STEEL SYSTEM SHALL BE MADE AT THE PROJECT SITE. THE QAI SHALL SCHEDULE THIS WORK TO MINIMIZE INTERRUPTION TO THE WORK OF THE ERECTOR.
3. WHERE A TASK IS NOTED TO BE PERFORMED BY BOTH QC AND QA, IT IS PERMITTED TO COORDINATE THE INSPECTION FUNCTION BETWEEN THE QCI AND QAI SO THAT THE INSPECTION FUNCTIONS ARE PERFORMED BY ONLY ONE PARTY. WHERE QA RELIES UPON INSPECTION FUNCTIONS PERFORMED BY QC, THE APPROVAL OF THE ENGINEER OF RECORD AND THE AUTHORITY HAVING JURISDICTION IS REQUIRED.
4. THE FABRICATOR'S QCI SHALL INSPECT THE FABRICATED STEEL TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE SHOP DRAWINGS, SUCH AS PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION. THE ERECTOR'S QCI SHALL INSPECT THE ERECTED STEEL FRAME TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE ERECTION DRAWINGS, SUCH AS BRACES, STIFFENERS, MEMBER LOCATIONS AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION.
5. THE QAI SHALL BE ON THE PREMISES FOR INSPECTION DURING THE PLACEMENT OF ANCHOR RODS AND OTHER EMBEDMENTS SUPPORTING STRUCTURAL STEEL FOR COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS. AS A MINIMUM, THE DIAMETER, GRADE, TYPE AND LENGTH OF THE ANCHOR ROD OR EMBEDDED ITEM, AND THE EXTENT OR DEPTH OF EMBEDMENT INTO THE CONCRETE, SHALL BE VERIFIED PRIOR TO PLACEMENT OF THE CONCRETE.
6. THE QAI SHALL INSPECT THE FABRICATED STEEL OR ERECTED STEEL FRAME, AS APPROPRIATE, TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE CONSTRUCTION DOCUMENTS, SUCH AS BRACES, STIFFENERS, MEMBER LOCATIONS AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION.
7. QUALITY ASSURANCE (QA) INSPECTIONS, EXCEPT NONDESTRUCTIVE TESTING (NDT), MAY BE WAIVED WHEN THE WORK IS PERFORMED IN A FABRICATING SHOP OR BY AN ERECTOR APPROVED BY THE AUTHORITY HAVING JURISDICTION (AHJ) TO PERFORM THE WORK WITHOUT QA. NDT OF WELDS COMPLETED IN AN APPROVED FABRICATOR'S SHOP MAY BE PERFORMED BY THAT FABRICATOR WHEN APPROVED BY THE AHJ. WHEN THE FABRICATOR PERFORMS THE NDT, THE QA AGENCY SHALL REVIEW THE FABRICATOR'S NDT REPORTS.
8. AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE AHJ STATING THAT THE MATERIALS SUPPLIED AND WORK PERFORMED BY THE FABRICATOR ARE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS. AT COMPLETION OF ERECTION, THE APPROVED ERECTOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE AHJ STATING THAT THE MATERIALS SUPPLIED AND WORK PERFORMED BY THE ERECTOR ARE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.
9. IDENTIFICATION AND REJECTION OF MATERIAL OR WORKMANSHIP THAT IS NOT IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS, SHALL BE PERMITTED AT ANY TIME DURING THE PROGRESS OF THE WORK. HOWEVER, THIS PROVISION SHALL NOT RELIEVE THE OWNER OR THE INSPECTOR OF THE OBLIGATION FOR TIMELY, IN-SEQUENCE INSPECTIONS. NONCONFORMING MATERIAL AND WORKMANSHIP SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE FABRICATOR OR ERECTOR, AS APPLICABLE.
10. NONCONFORMING MATERIAL OR WORKMANSHIP SHALL BE BROUGHT INTO CONFORMANCE, OR MADE SUITABLE FOR ITS INTENDED PURPOSE AS DETERMINED BY THE ENGINEER OF RECORD.
11. CONCURRENT WITH THE SUBMITTAL OF SUCH REPORTS TO THE AHJ, EOR OR OWNER, THE QA AGENCY SHALL SUBMIT TO THE FABRICATOR AND ERECTOR:
    (1) NONCONFORMANCE REPORTS
    (2) REPORTS OF REPAIR, REPLACEMENT OR ACCEPTANCE OF NONCONFORMING ITEMS.

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U OF U BLDG. 303 SEISMIC UPGRADE - PHASE 5
SALT LAKE CITY UTAH
PERMIT SET - 3-5-2024

3/5/24
No. 276196
Robert M. Moyle
PROFESSIONAL STRUCTURAL ENGINEER
STATE OF UTAH

△ DATE REVISION

PROJECT NUMBER 18923

SCHEDULES

SG-003

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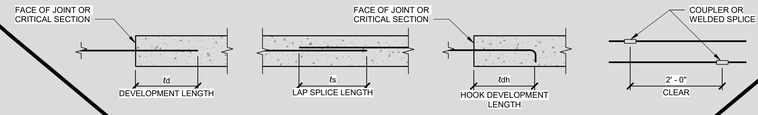
2018 IBC CONC. REBAR LAP SPLICE SCHEDULE

FOR CONCRETE APPLICATIONS (ACI 318 - 14)



CONCRETE REINFORCING & SPLICE LENGTHS (IN)

BAR LOCATION	CONCRETE TYPE	CONCRETE STRENGTH	BAR SIZE #3 td	#3 ts	#3 tdh	#4 td	#4 ts	#4 tdh	#5 td	#5 ts	#5 tdh	#6 td	#6 ts	#6 tdh	#7 td	#7 ts	#7 tdh	#8 td	#8 ts	#8 tdh	#9 td	#9 tdh	#10 td	#10 tdh	#11 td	#11 tdh	COMMENTS
VERT. WALL BARS, FILL ON METAL DECK	NWC	3000 PSI	17	22	8	22	29	8	28	36	10	33	43	12	48	62	13	55	72	15	62	17	69	19	76	30	
HORIZ. WALL BARS, FOOTING TOP BARS	NWC	3000 PSI	17	22	8	22	29	8	28	36	10	33	43	12	48	62	13	55	72	15	62	17	69	19	76	30	
BEAM BOTTOM BARS, COLUMN BARS	NWC	3000 PSI	17	22	8	22	29	11	28	36	14	33	43	16	48	62	19	55	72	22	62	25	69	27	76	30	
FOOTING BOTTOM BARS	NWC	3000 PSI	12	16	8	14	18	8	17	22	10	20	26	12	29	38	13	33	43	15	37	17	42	19	46	30	
BEAM TOP BARS	NWC	3000 PSI	22	29	8	29	38	11	36	47	14	43	56	16	63	82	19	72	94	22	81	25	90	27	98	30	
SLAB ON GRADE	NWC	3000 PSI	12	16	8	14	18	8	17	22	10	20	26	12	32	42	13	42	55	15	53	17	69	19	76	30	

CONCRETE REINFORCING & SPLICE LENGTHS (IN)

BAR LOCATION	CONCRETE TYPE	CONCRETE STRENGTH	BAR SIZE #3 td	#3 ts	#3 tdh	#4 td	#4 ts	#4 tdh	#5 td	#5 ts	#5 tdh	#6 td	#6 ts	#6 tdh	#7 td	#7 ts	#7 tdh	#8 td	#8 ts	#8 tdh	#9 td	#9 tdh	#10 td	#10 tdh	#11 td	#11 tdh	COMMENTS
VERT. WALL BARS, FILL ON METAL DECK	NWC	4500 PSI	14	18	7	18	23	6	23	30	8	27	35	9	30	52	11	45	59	13	51	14	56	16	62	25	
HORIZ. WALL BARS, FOOTING TOP BARS	NWC	4500 PSI	14	18	7	18	23	6	23	30	8	27	35	9	40	52	11	45	59	13	51	14	56	16	62	25	
BEAM BOTTOM BARS, COLUMN BARS	NWC	4500 PSI	14	18	7	18	23	9	23	30	11	27	35	13	40	52	16	45	59	18	51	20	56	22	62	25	
FOOTING BOTTOM BARS	NWC	4500 PSI	12	16	7	12	16	6	14	18	8	17	22	9	24	31	11	27	35	13	31	14	34	16	37	25	
BEAM TOP BARS	NWC	4500 PSI	18	23	7	24	31	9	30	39	11	35	46	13	51	66	16	59	77	18	66	20	73	22	80	25	
SLAB ON GRADE	NWC	4500 PSI	12	16	7	12	16	6	14	18	8	17	22	9	27	35	11	34	44	13	44	14	56	16	62	25	

CONCRETE REINFORCING & SPLICE LENGTHS (IN)

BAR LOCATION	CONCRETE TYPE	CONCRETE STRENGTH	BAR SIZE #3 td	#3 ts	#3 tdh	#4 td	#4 ts	#4 tdh	#5 td	#5 ts	#5 tdh	#6 td	#6 ts	#6 tdh	#7 td	#7 ts	#7 tdh	#8 td	#8 ts	#8 tdh	#9 td	#9 tdh	#10 td	#10 tdh	#11 td	#11 tdh	COMMENTS
VERT. WALL BARS, FILL ON METAL DECK	NWC	6000 PSI	12	16	6	16	21	6	20	26	7	24	31	8	34	44	9	39	51	11	44	12	49	14	54	21	
HORIZ. WALL BARS, FOOTING TOP BARS	NWC	6000 PSI	12	16	6	16	21	6	20	26	7	24	31	8	34	44	9	39	51	11	44	12	49	14	54	21	
BEAM BOTTOM BARS, COLUMN BARS	NWC	6000 PSI	12	16	6	16	21	8	20	26	10	24	31	12	34	44	14	39	51	15	44	17	49	19	54	21	
FOOTING BOTTOM BARS	NWC	6000 PSI	12	16	6	12	16	6	12	16	7	14	18	8	21	27	9	24	31	11	27	12	30	14	32	21	
BEAM TOP BARS	NWC	6000 PSI	16	21	6	21	27	8	26	34	10	31	40	12	45	59	14	51	66	15	57	17	63	19	70	21	
SLAB ON GRADE	NWC	6000 PSI	12	16	6	12	16	6	12	16	7	14	18	8	23	30	9	30	39	11	38	12	49	14	54	21	

NOTES :
1. MECHANICAL COUPLERS MAY BE USED IN LIEU OF LAP SPLICES SHOWN. SEE STRUCTURAL NOTES FOR MINIMUM COUPLER CAPACITY. WHERE MECHANICAL COUPLERS ARE USED, STAGGER ADJACENT SPLICES A MINIMUM OF 24" AS INDICATED ABOVE.
2. DEVELOPMENT LENGTHS SHALL BE INCREASED BY 50% FOR STRAIGHT BAR DEVELOPMENT AND 20% FOR HOOKED BARS WHERE EPOXY COATING IS USED.
3. WHEN SPLICING BARS OF DIFFERENT SIZES, USE LAP SPLICE LENGTH OF LARGER BARS UNO.
4. SPLICE BARS LARGER THAN #8 USING MECHANICAL COUPLERS.

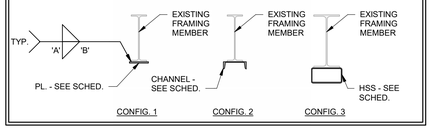
MASONRY WALL SCHEDULE

MARK	THICK.	VERT. REINF. SIZE	VERT. REINF. SPACE	HORIZ. BOND BEAM REINF. NO.	HORIZ. BOND BEAM REINF. SIZE	HORIZ. BOND BEAM REINF. SPACE	@ ROOF	@ FLOOR	COMMENTS
MW-1	8"	#5	24"	(2)	#4	48 o.c.	(2) #4	(2) #4	

NOTES:
1. FOR ANY CMU WALLS NOT SPECIFICALLY CALLED OUT IN PLANS, USE MW1.
2. VERTICAL REINFORCING TO BE @ CENTERLINE OF WALL UNLESS OTHERWISE NOTED.
3. SOLID GROUTING OF WALLS IS UNACCEPTABLE EXCEPT WHERE SPECIFICALLY NOTED.
4. SEE STRUCTURAL NOTES FOR ADDITIONAL INFORMATION.

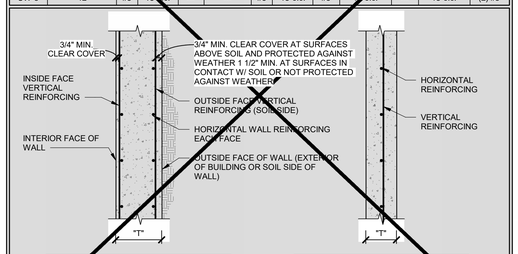
EXISTING MEMBER UPGRADE SCHEDULE

MARK	EXISTING MEMBER	MEMBER UPGRADE	CONFIGURATION	WELD A	WELD B
EMU-1	12B14	PL. 1/4" x 5"	1	3/16"	2"-12"
EMU-2	12B19	PL. 3/8" x 5"	1	1/4"	3"-12"
EMU-3	12B19	C6X13	2	1/4"	4"-12"
EMU-4	14WF30	PL. 5/8" x 8"	1	1/4"	3"-12"
EMU-5	14WF30	HSS8X4X1/2	3	1/2"	4"-12"
EMU-6	18WF50	C12X30	2	5/16"	4"-12"
EMU-7	18WF60	C10X25	2	5/16"	5"-12"
EMU-8	21WF62	C10X15.3	2	5/16"	4"-12"
EMU-9	16WF40	PL. 5/8" x 8"	1	1/4"	3"-12"
EMU-10	12WF27	PL. 1/2" x 8"	1	1/4"	3"-12"
EMU-11	14WF22	PL. 3/8" x 6"	1	?	?
EMU-12	16WF40	HSS8X4X5/16	3	?	?



CONCRETE FOUNDATION WALL SCHEDULE

MARK	THICKNESS "T"	VERTICAL REINFORCING INSIDE FACE SIZE	INSIDE FACE SPACING	CENTER OF WALL SIZE	CENTER OF WALL SPACING	OUTSIDE FACE SIZE	OUTSIDE FACE SPACING	HORIZONTAL REINFORCING EACH FACE SIZE	EACH FACE SPACING	CENTER OF WALL SIZE	CENTER OF WALL SPACING	TOP & BOTTOM BARS
CW-1	8"	---	---	#5	18"o.c.	---	---	---	---	#5	18"o.c.	(2) #5
CW-2	14"	#5	18"o.c.	---	---	#5	18"o.c.	#5	18"o.c.	---	---	(2) #5
CW-3	15"	#5	18"o.c.	---	---	#5	18"o.c.	#5	18"o.c.	---	---	(2) #5
CW-4	28"	#5	16"o.c.	#5	16"o.c.	#5	16"o.c.	#5	16"o.c.	#5	16"o.c.	(3) #5
CW-5	12"	#5	18"o.c.	---	---	#5	18"o.c.	#5	18"o.c.	---	18"o.c.	(2) #5



NOTE:
1. FOR ANY CONCRETE FOUNDATION WALLS NOT SPECIFICALLY CALLED OUT IN PLANS, USE CW-1.
2. VERTICAL REINFORCING TO BE AT CENTERLINE OF WALL UNLESS OTHERWISE NOTED.
3. SEE STRUCTURAL NOTES FOR ADDITIONAL INFORMATION.
4. EXTEND HORIZONTAL REINFORCING AROUND CORNERS OR ADD CORNER BARS AND LAP EACH WAY PER TYPICAL DETAIL.

SPECIAL INSPECTION SCHEDULE [1, 2]

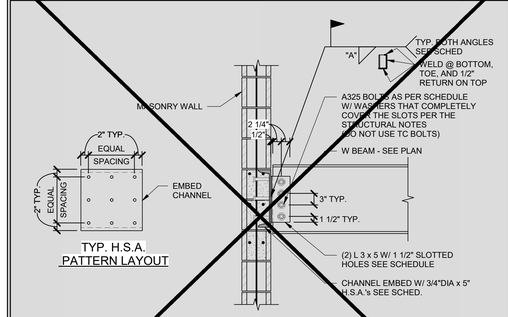
ESTABLISHED PER 2018 IBC SECTION 110 AND CHAPTER 17

ITEM	CONTINUOUS[3]	PERIODIC[3]	REFERENCE	COMMENTS
PRE-FAB CONSTRUCTION (IBC 1704.2)			REFERENCE NOTES P1 & P2	P1. SPECIAL INSPECTION IS NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION, PROVIDED THE FABRICATOR COMPLIES WITH IBC. INSPECTION FOR PREFABRICATED CONSTRUCTION SHALL BE THE SAME AS IF THE MATERIAL USED IN THE CONSTRUCTION TOOK PLACE ON SITE. SPECIAL INSPECTION WILL NOT BE REQUIRED DURING PREFABRICATION IF THE APPROVED AGENCY CERTIFIES THE CONSTRUCTION AND FURNISHES EVIDENCE OF COMPLIANCE. (SEE NOTE 2). P2.
CONCRETE CONSTRUCTION (IBC 1705.3)			SEE IBC TABLE 1705.3 - REF. NOTE C1	C1. SPECIAL INSPECTION IS NOT REQUIRED FOR CONC. ISOLATED SPREAD FOOTINGS, CONTINUOUS FOOTINGS, NON-STRUCTURAL SLABS, FOUNDATION WALLS, PATIOS, DRIVEWAYS, AND SIDEWALKS PROVIDED THE REQUIREMENTS OF IBC 1705.3 ARE MET. C2. PERIODIC SPECIAL INSPECTION IS ALLOWED FOR VERIFICATION OF THE WELDABILITY OF REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, BOUNDARY ELEMENTS OF SPECIAL REINFORCED CONCRETE SHEAR WALLS, AND SHEAR REINFORCEMENT. PERIODIC SPECIAL INSPECTION IS ALLOWED FOR WELDING OF OTHER ASTM A 706 REINFORCING STEEL NOT INCLUDED IN THE CONTINUOUS SPECIAL INSPECTION REQUIREMENTS NOTED ABOVE. C3. PERFORM AIR, SLUMP AND TEMP. TESTS WHEN CONCRETE SAMPLES ARE CAST. C4. PERIODIC SPECIAL INSPECTION IS REQUIRED FOR VERIFICATION OF IN-SITU CONCRETE STRENGTH FOR POST-TENSIONED CONCRETE PRIOR TO TENSIONING TENDONS OR REMOVING SHORING OR FORMS. C5. EPOXY AND EXPANSION ANCHORS INTO MASONRY OR CONCRETE MAY BE USED ONLY WHEN APPROVED BY ARCHITECT. AND/OR ENGINEER USING AN APPROVED PRODUCT WITH CURRENT PUBLISHED ICC RESEARCH REPORT NUMBERS. COORDINATE CONTINUOUS/PERIODIC SPECIAL INSPECTION REQUIREMENTS WITH ICC REPORT.
REINFORCING STEEL PLACEMENT		○		
WELDING OF REINFORCING STEEL	○	○	REFERENCE NOTE C2	
EMBEDDED BOLTS & PLATES	○			
VERIFYING REQUIRED DESIGN MIX		○		
CONCRETE PLACEMENT / SAMPLING	○		REFERENCE NOTE C3	
CURING TEMPERATURE / TECHNIQUES		○		
ERECTION OF PRECAST MEMBERS		○		
VERIFICATION OF IN-SITU STRENGTH		○	REFERENCE NOTE C4	
EPOXY / EXPANSION ANCHOR PLACEMENT		○	REFERENCE NOTE C5	
MASONRY CONSTRUCTION (IBC 1705.4)			SEE TMS 402/ACI 550 TABLE 1.19.2 (NON-ESSENTIAL)	M1. PERIODIC SPECIAL INSPECTION IS ALLOWED FOR VERIFICATION OF THE WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706 IN ACCORDANCE WITH ANSI/AWS D1.4. CONTINUOUS SPECIAL INSPECTION IS REQUIRED FOR REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, BOUNDARY ELEMENTS OF SPECIAL REINFORCED CONCRETE SHEAR WALLS, AND SHEAR REINFORCEMENT. PERIODIC SPECIAL INSPECTION IS ALLOWED FOR WELDING OF OTHER ASTM A 706 REINFORCING STEEL NOT INCLUDED IN THE CONTINUOUS SPECIAL INSPECTION REQUIREMENTS NOTED ABOVE. M2. CONTINUOUS SPECIAL INSPECTION IS REQUIRED FOR ESSENTIAL FACILITIES (TMS 602-16/ACI 530.1 TABLE 3). M3. EPOXY AND EXPANSION ANCHORS INTO MASONRY OR CONCRETE MAY BE USED ONLY WHEN APPROVED BY ARCHITECT AND/OR ENGINEER USING AN APPROVED PRODUCT WITH CURRENT PUBLISHED ICC RESEARCH REPORT NUMBERS. COORDINATE CONTINUOUS/PERIODIC SPECIAL INSPECTION REQUIREMENTS WITH ICC REPORT.
AS MASONRY CONSTRUCTION BEGINS, VERIFY:				
SITE PREPARED MORTAR		○		
MORTAR JOINTS		○		
REINFORCEMENT / CONNECTORS		○		
GRADE & SIZE OF TENDONS & ANCHORAGES		○		
INSPECTION SHALL VERIFY:				
SIZE & LOCATION OF STRUCTURAL ELEMENTS		○		
TYPE, SIZE, & LOCATION OF ANCHORS		○	REFERENCE NOTE M2	
SIZE, GRADE & TYPE OF REINFORCEMENT		○		
WELDING OF REINFORCING BARS	○		REFERENCE NOTE M1	
HOT OR COLD WEATHER PROTECTION		○		
PRIOR TO GROUTING, VERIFY:				
CLEAN GROUT SPACE			REFERENCE NOTE M2	
PLACEMENT OF REINFORCEMENT CONNECTORS, TENDONS AND ANCHORS		○		
PROPORTIONS OF SITE PREPARED GROUT		○		
CONSTRUCTION OF MORTAR JOINTS		○		
GROUT PLACEMENT	○			
PREPARATION OF TEST SPECIMENS / PRISMS	○			
COMPLIANCE W/ CONST. DOCS. / SUBMITTALS		○		
EPOXY / EXPANSION ANCHOR PLACEMENT	○	○	REFERENCE NOTE M3	
VERIFICATION OF f'm AND f'aac		○		
SELF CONSOLIDATING GROUT:				
VERIFY SLUMP FLOW AND VSI	○			
COLD FORMED FRAMING (IBC 1705.11.2 & 1705.12.32)				CF1. SPECIAL INSPECTION IS NOT REQUIRED FOR COLD-FORMED STEEL LIGHT-FRAME SHEAR WALLS, BRACES, DIAPHRAGMS, COLLECTORS (DRAG STRUTS) AND HOLDOWNS WHERE SHEATHING IS WOOD STRUCTURAL PANEL OR STEEL SHEETS ON ONLY ONE SIDE OF THE SHEAR WALL, SHEAR PANEL OR DIAPHRAGM ASSEMBLY AND THE FASTENER SPACING OF THE SHEATHING IS MORE THAN 4"o.c.
LIGHT GAUGE METAL FRAMING WELDING		●		
SHEAR WALL & DIAPHRAGM ATTACHMENTS		●		
DRAG STRUT & BRACE INSTALLATION		●		
HOLDOWN INSTALLATION		●		
SOILS (IBC 1705.6)			REFERENCE NOTE F1	F1. SPECIAL INSPECTION OF SOILS SHALL REFERENCE THE APPROVED SOILS REPORT TO DETERMINE COMPLIANCE. F2. WHERE SOILS REPORT IS NOT PROVIDED SPECIAL INSPECTIONS ARE REQUIRED TO VERIFY THAT THE IN-PLACE DRY DENSITY OF THE COMPACTED FILL IS NOT LESS THAN 90 PERCENT OF THE MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT DETERMINED IN ACCORDANCE WITH ASTM D 1557.
VERIFY ADEQUATE MATERIALS BELOW FOOTINGS		○	REFERENCE NOTE F1	
EXCAVATIONS EXTEND TO PROPER DEPTH AND REACH PROPER MATERIAL		○	REFERENCE NOTE F2	
CLASSIFY & TEST CONTROLLED FILL MATERIALS		○	REFERENCE NOTE F2	
PERFORM MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL	○		REFERENCE NOTE F1	
PROPERLY PREPARED SITE AND SUB-GRADE PRIOR TO FILL		○	REFERENCE NOTE F1	
PILE FOUNDATIONS (IBC 1705.7)			REFERENCE NOTE PF1 AND PF2	PF1. FOR STEEL ELEMENTS, PERFORM ADDITIONAL SPECIAL INSPECTIONS IN ACCORDANCE WITH THE STRUCTURAL STEEL INSPECTION SCHEDULE ALSO INCLUDED IN THESE DRAWINGS. PF2. FOR CONCRETE ELEMENTS AND CONCRETE FILLED ELEMENTS, PERFORM TESTS AND ADDITIONAL SPECIAL INSPECTIONS IN ACCORDANCE WITH SECTION 1705.3.
VERIFY PILE MATERIALS, SIZES, AND LENGTHS	○			
DETERMINE CAPACITIES OF TEST PILES & CONDUCT ADDITIONAL LOAD TESTES, AS REQUIRED	○			
INSPECT DRIVING/DRILLING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT	○			
VERIFY PLACEMENT LOCATIONS, PLUMBNESS, HAMMER DATA, REQUIRED PENETRATIONS, AND RECORD FINAL TIP AND BUTT ELEVATIONS AND DOCUMENT ANY PILE DAMAGE.	○			

GENERAL SPECIAL INSPECTION NOTES :

1. THE ITEMS MARKED WITH A "●" IN THE SPECIAL INSPECTION SCHEDULE SHALL BE INSPECTED IN ACCORDANCE WITH IBC CHAPTER 17 BY A CERTIFIED SPECIAL INSPECTOR FROM AN ESTABLISHED TESTING AGENCY. FOR MATERIAL SAMPLING AND TESTING REQUIREMENTS, REFER TO THE MATERIAL SAMPLING AND TESTING SECTION, THE PROJECT SPECIFICATIONS, AND THE SPECIFIC GENERAL NOTES SECTIONS. THE TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE ARCHITECT, ENGINEER, CONTRACTOR, AND BUILDING OFFICIAL. ANY ITEMS WHICH FAIL TO COMPLY WITH THE APPROVED CONSTRUCTION DOCUMENTS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF DISCREPANCIES ARE NOT CORRECTED, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL, ARCHITECT, AND ENGINEER PRIOR TO COMPLETION OF THAT PHASE OF WORK. SPECIAL INSPECTION TESTING REQUIREMENTS APPLY EQUALLY TO ALL BIDDER DESIGNED COMPONENTS.
2. ANY CONSTRUCTION OR MATERIAL THAT HAS FAILED INSPECTION SHALL BE SUBJECT TO REMOVAL AND REPLACEMENT.
3. CONTINUOUS SPECIAL INSPECTION MEANS THE FULL-TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED. PERIODIC SPECIAL INSPECTION MEANS THE PART-TIME OR INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AND AT THE COMPLETION OF THE WORK.

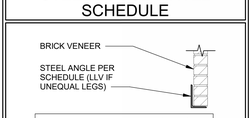
BEAM CONNECTION SCHEDULE @ MASONRY WALL



BEAM SIZE	ANGLE SIZE (EA. SIDE)	WELD 'A'	BOLTS	EMBED CHANNEL	# OF H.S.A.	H.S.A. PATTERN
W10, C10	3 x 5 x 5/16" x 0'-7"	1/4"	(2) 3/4"Ø	C12 x 20.7 x 1'-4"	6	:::
W12, C12	3 x 5 x 5/16" x 0'-9"	1/4"	(3) 3/4"Ø	C12 x 20.7 x 1'-4"	6	:::

1. AT THE CONTRACTORS OPTION, (2) C8 x 13.7 MAY BE SUBSTITUTED FOR THE C15 x 33.9. HSA PATTERN SHALL BE RECONFIGURED & EQUALLY DISTRIBUTED BETWEEN THE TWO CHANNELS. DOUBLE CHANNELS SHALL BE WELDED TOGETHER WITH A 2" STITCH WELD EVERY 4" AT THE FLANGE TOE.

STEEL LOOSE LINTEL SCHEDULE



NOTE: PROVIDE 1" BEARING FOR EACH FOOT OF SPAN @ EACH END. (MIN. OF 6" BEARING @ EACH END)

CLEAR OPENING	SIZE OF ANGLE
UP TO 7'-0"	3-1/2" x 3-1/2" x 1/4"
7'-1" TO 9'-0"	5" x 3-1/2" x 1/4"
9'-1" TO 10'-0"	5" x 3-1/2" x 5/16"
10'-1" TO 11'-0"	5" x 3-1/2" x 3/8"
11'-1" TO 12'-0"	6" x 4" x 3/8"

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U OF U BLDG. 303 SEISMIC UPGRADE - PHASE 5

SALT LAKE CITY UTAH

PERMIT SET - 3-5-2024

3/5/24
No. 276195
Robert M. Moyle
STATE OF UTAH

△	DATE	REVISION
7	5/10/21	ASI #1

PROJECT NUMBER 18923

SCHEDULES

SG-004

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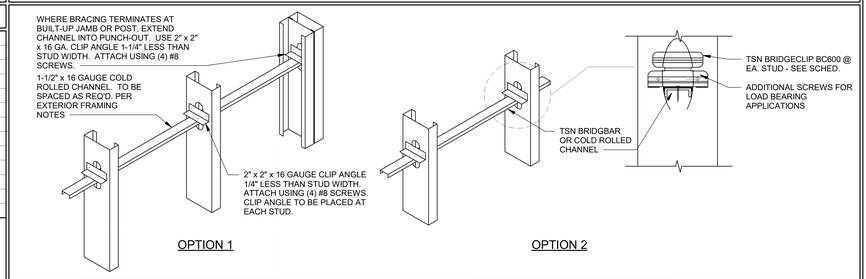
WALL SCHEDULE

MARK	STUD	SPACING	TOP TRACK	BOTTOM TRACK	COMMENTS
SSW-1*	600S162-43	16" o.c.	600T125-43	600T125-43	BRIDGING @ 4'-0"o.c. WHERE SHEATHING OR GYP. IS ONLY ON (1) SIDE
SSW-2	800S162-43	16" o.c.	800T125-43	800T125-43	BRIDGING @ 4'-0"o.c. WHERE SHEATHING OR GYP. IS ONLY ON (1) SIDE

NOTE :
1. ATTACH BOTTOM TRACK TO SLAB PER 5/S-203-4.
2. WHERE NOT SPECIFICALLY INDICATED USE SSW-1.
3. * METAL STUDS FOR BUTTRESS WALLS ON SHEET S-302-4 ARE TO BE Fy = 50 ksi.

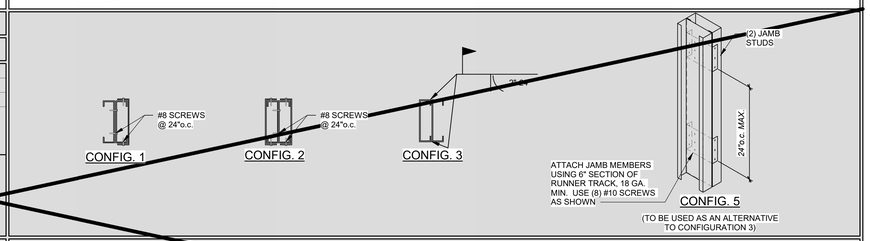
BRIDGING OPTIONS



JAMB STUD SCHEDULE

MARK	MAX. OPENING	STUDS	COMMENTS
SSJ-1	5'-0"	(2) 600S162-43	TYPICAL 6" WALL - SEE DETAIL 4/S-203-4 FOR BOTTOM ATTACHMENT
SSJ-2	8'-0"	(3) 600S162-43	

NOTE : STITCH STUDS W/ 2"WELD @ 24"o.c. AS FOLLOWS :
43 MIL (18 GA.) 1/16" FILLET OR FLARE GROOVE
54 MIL (16 GA.) 1/16" FILLET OR FLARE GROOVE
68 MIL (14 GA.) 1/16" FILLET OR FLARE GROOVE
97 MIL (12 GA.) 3/32" FILLET OR FLARE GROOVE



HEADER SCHEDULE

MARK	MAX. OPENING	VERT. SECTIONS	HORIZ. SECTIONS	CONFIGURATION	HEADER CONNECTION	COMMENTS
SSH-1	5'-0"	(2) 600S162-43	(1) 600T125-43	1	2/S-203-4	USE (1) 600T125-43 FOR SILL WHERE APPLICABLE - SEE DETAIL 7/S-203-4
SSH-2	8'-0"	(2) 600S162-43	(2) 600T125-43	1	2/S-203-4	USE (1) 600T125-43 FOR SILL WHERE APPLICABLE - SEE DETAIL 7/S-203-4

NOTE: SEE NOTE K.4 REGARDING CONTINUITY OF HEADER MEMBERS

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SALT LAKE CITY UTAH

PERMIT SET - 3-5-2024

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No. 276196
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SCHEDULES

SG-005

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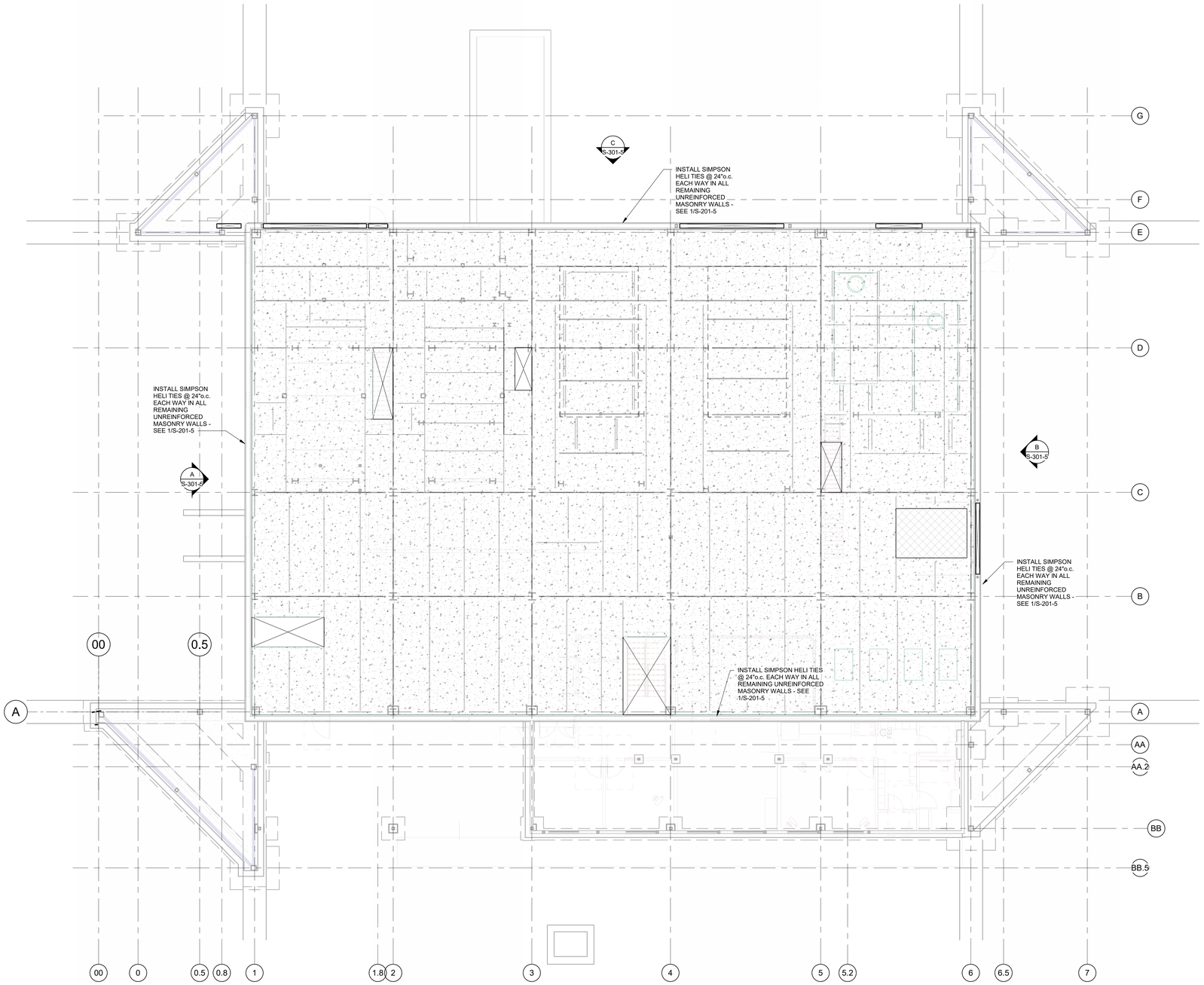
OPERATING FLOOR UPGRADE NOTES:

1. TOP OF EXISTING STEEL IS 4741' - 5 3/4" U.N.O. (FIELD VERIFY) - FINISHED FLOOR ELEVATION IS 4742' - 0" (FIELD VERIFY)
2. BEAM DESIGNATION EXAMPLE: (E) C8X11.5 (+4")
   (E) = EXISTING, (N) = NEW
   C8X11.5 = BEAM SIZE
   (+4") = ELEVATION OF TOP OF BEAM IN RELATION TO TOP OF EXISTING STEEL OF CORRESPONDING FRAMING PLAN LEVEL
3. = EXISTING SUSPENDED CONCRETE SLAB.
4. = EXISTING GRATING
5. FIELD VERIFY ALL DIMENSIONS



OPERATING FLOOR FRAMING PLAN / OFFICE FOUNDATION PLAN
SCALE : 1/8" = 1'-0"

A
S-101-5

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SALT LAKE CITY UTAH

PERMIT SET - 3-5-2024

PROFESSIONAL STRUCTURAL ENGINEER
3/5/24
No. 276196
Robert M. Moyle
STATE OF UTAH

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OPERATING FLOOR PLAN - PHASE 5

S-101-5

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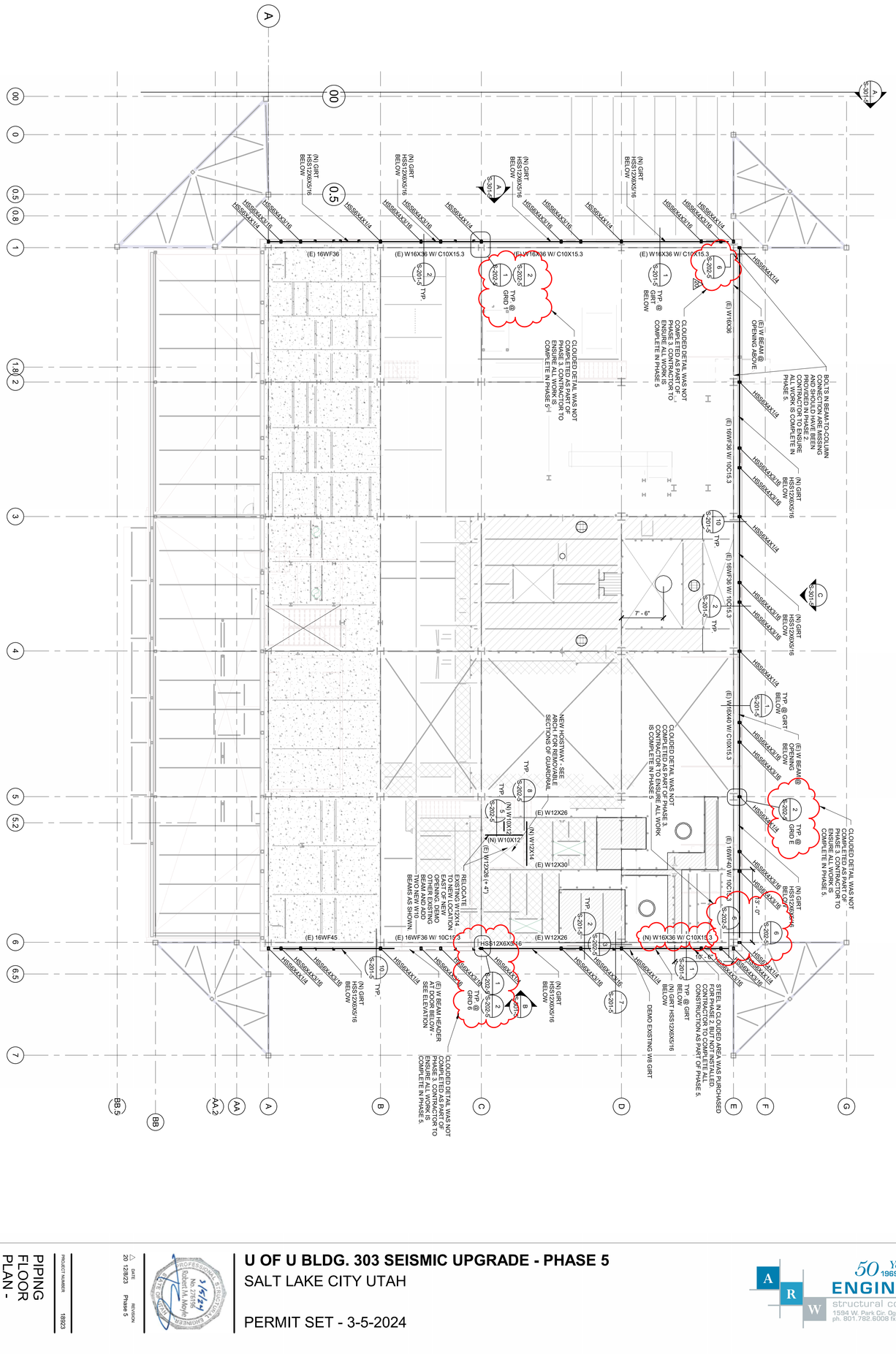
PIPING FLOOR FRAMING PLAN / OFFICE ROOF FRAMING PLAN

SCALE: 1/8" = 1'-0"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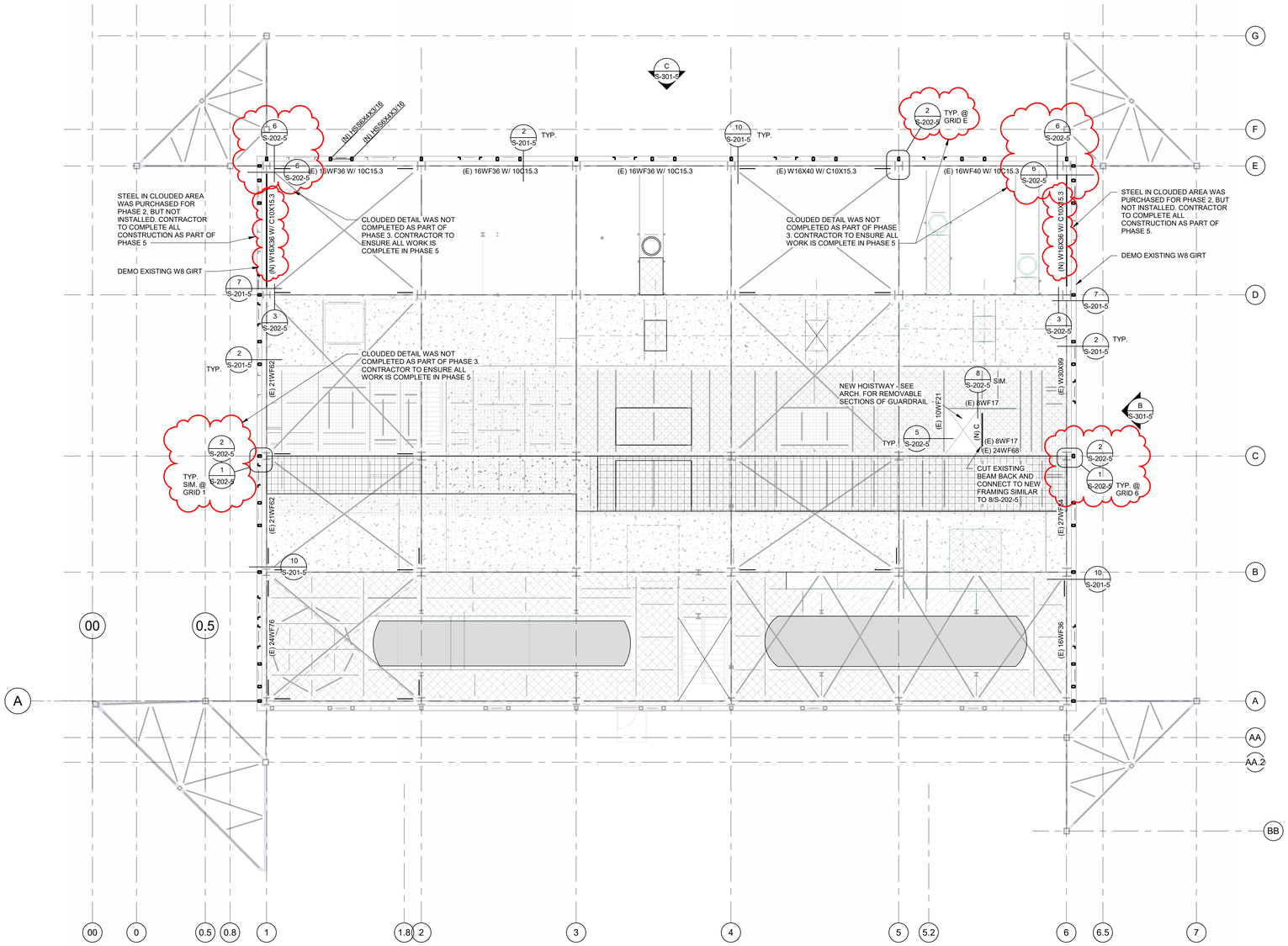
AA
BB.5
BB
A
B
C
D
E
F
G
(E) 16WF36
(E) W16X36 W/ C10X15.3
(E) 16WF45
(E) 16WF36 W/ 10C15.3
(E) W16X40 W/ C10X15.3
(E) 16WF40 W/ 10C15.3
(N) W16X36 W/ C10X15.3
(N) GIRT HSS12X6X5/16 BELOW
HSS8X4X1/4
HSS8X4X5/16
HSS6X4X1/4
HSS6X4X5/16
(E) W12X26
(E) W12X30
(N) W10X12
(N) W12X14
(E) W12X26 (+ 4")
(E) W16X36
(E) W BEAM @ OPENING ABOVE
(E) W BEAM @ OPENING BELOW
HSS12X6X5/16
TYP @ GRID E
TYP @ GRID 6
TYP @ GRID 1
TYP @ GIRT BELOW
TYP @ GIRT
TYP.
7' - 6"
7' - 0"
7' - 10"
CLOUDED DETAIL WAS NOT COMPLETED AS PART OF PHASE 3. CONTRACTOR TO ENSURE ALL WORK IS COMPLETE IN PHASE 5

FAN FLOOR FRAMING UPGRADE NOTES:

1. TOP OF EXISTING STEEL IS 4771' - 10 3/4" U.N.O. (FIELD VERIFY) - FINISHED FLOOR ELEVATION IS 4772' - 0" (FIELD VERIFY)
2. BEAM DESIGNATION EXAMPLE: (E) C8X11.5 (+4")
   (E) = EXISTING, (N) = NEW
   C8X11.5 = BEAM SIZE
   (+4") = ELEVATION OF TOP OF BEAM IN RELATION TO TOP OF EXISTING STEEL OF CORRESPONDING FRAMING PLAN LEVEL
3. = EXISTING GRATING
4. = EXISTING SUSPENDED CONCRETE SLAB
5. SEE S-102-5 FOR ADDITIONAL NOTES.



FAN FLOOR FRAMING PLAN
SCALE : 1/8" = 1'-0"
A
S-103-5

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SALT LAKE CITY UTAH

PERMIT SET - 3-5-2024

3/5/24
No. 276196
Robert M. Moyle
PROFESSIONAL STRUCTURAL ENGINEER
STATE OF UTAH

	DATE	REVISION
20	12/8/23	Phase 5

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FAN FLOOR FRAMING PLAN - PHASE 5

S-103-5

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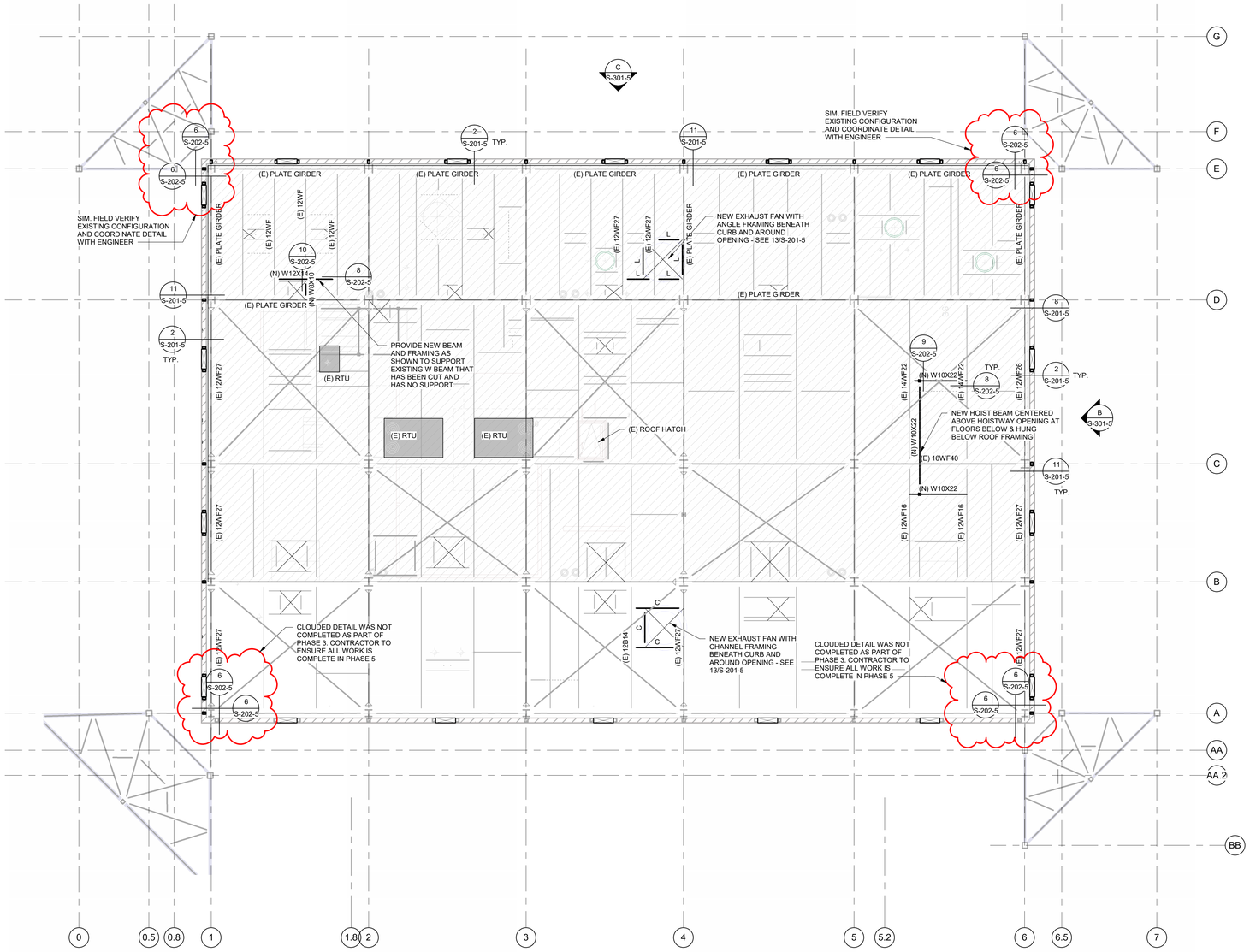
ROOF FRAMING UPGRADE NOTES:

1. TOP OF EXISTING STEEL VARIES - FIELD VERIFY.
2. BEAM DESIGNATION EXAMPLE: (E) C8X11.5 (+4")
   (E) = EXISTING, (N) = NEW
   C8X11.5 = BEAM SIZE
   (+4") = ELEVATION OF TOP OF BEAM IN RELATION TO TOP OF EXISTING STEEL OF CORRESPONDING FRAMING PLAN LEVEL

ROOF FRAMING NOTES:

1. SEE SHEET SG-001 FOR GENERAL STRUCTURAL NOTES.
2. SEE ROOF DECK SCHEDULE FOR REQUIRED DECK AND ATTACHMENTS.
3. CONTRACTOR SHALL ERECT AND MAINTAIN ADEQUATE TEMPORARY BRACING UNTIL ALL ROOF FRAMING AND DECK ATTACHMENTS ARE COMPLETE.
4. SEE TYPICAL BEAM CONNECTION SCHEDULE FOR TYPICAL W BEAM CONNECTIONS THAT ARE NOT SPECIFICALLY DETAILED.



ROOF FRAMING PLAN
SCALE : 1/8" = 1'-0"
A
S-104-5

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SALT LAKE CITY UTAH

PERMIT SET - 3-5-2024

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3/5/24
No. 276196
Robert M. Moyle
STATE OF UTAH

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PROJECT NUMBER 18923

ROOF FRAMING PLAN - PHASE 5

S-104-5

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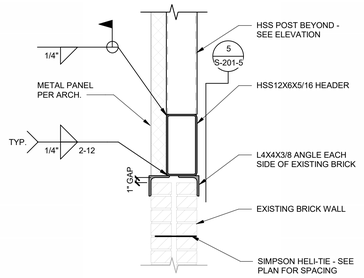
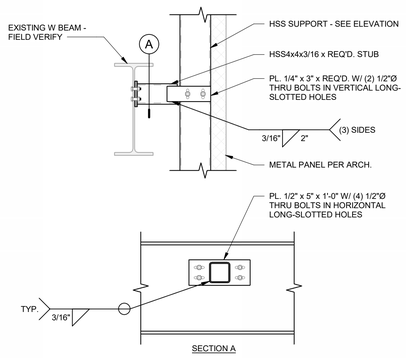
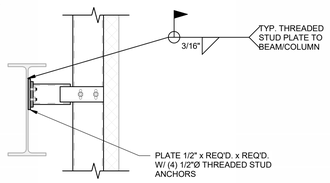
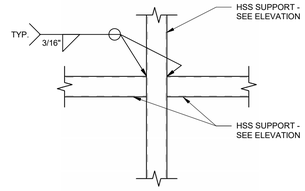


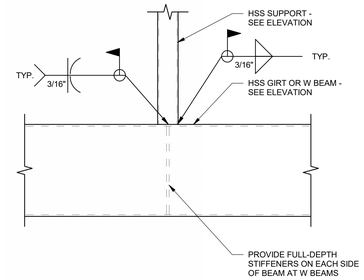


NOTE: WHERE BACKSIDE OF BEAM IS INACCESSABLE DUE TO CONFLICTS OR WHERE EXISTING HOPPER WALLS ARE IN THE WAY (ie., AT THE ROOF ALONG GRID E, AT GRID 1 (D-E), AND AT GRID 6 (D-E)) , SHORTEN HSS STUB AND PROVIDE A WELD PLATE WITH THREADED STUD ANCHORS BETWEEN THE BEAM OR COLUMN INSTEAD OF THRU-BOLTS AS SHOWN BELOW:

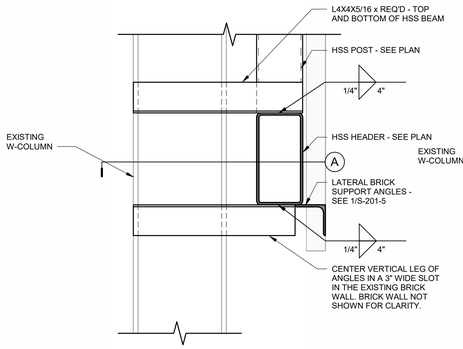


ALTERNATE CONNECTION SEE NOTE

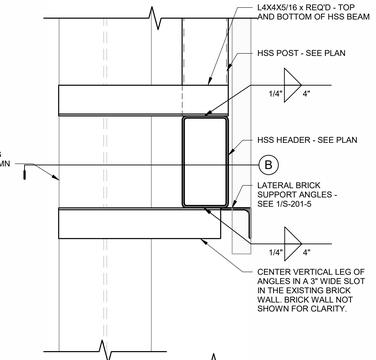


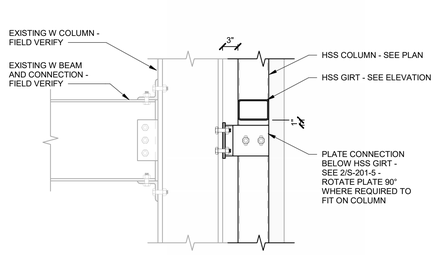


DETAIL 1/S-201-5 L
SCALE : NONE

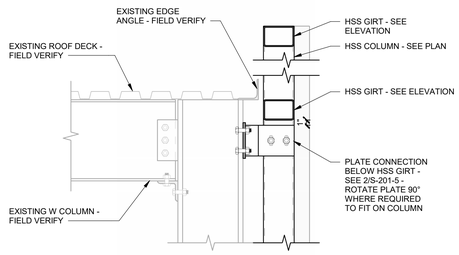


DETAIL 2/S-201-5
SCALE : NONE

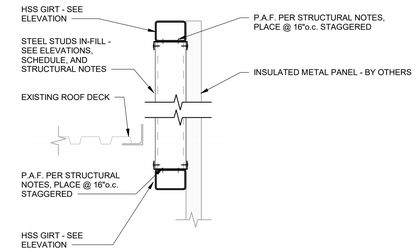


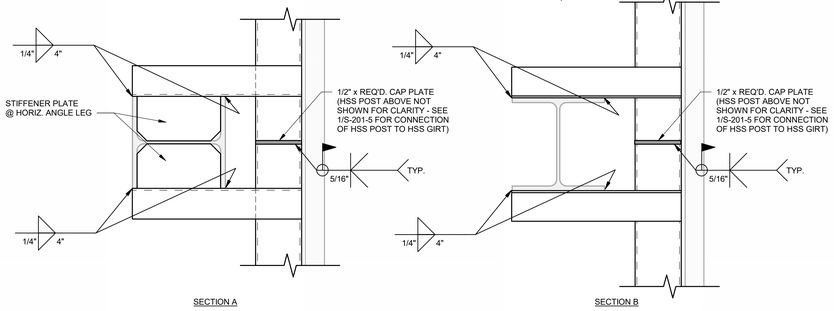


DETAIL 4/S-201-5
SCALE : NONE



DETAIL 5/S-201-5
SCALE : NONE



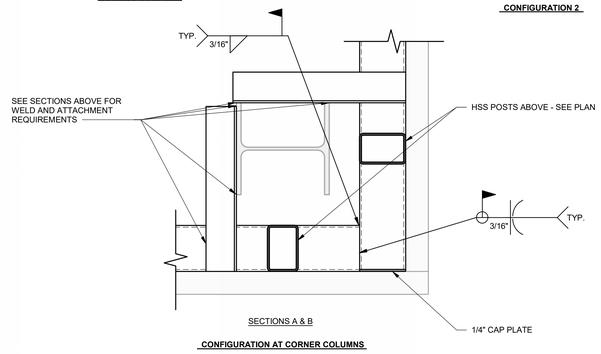


SECTION A

CONFIGURATION 1

SECTION B

CONFIGURATION 2

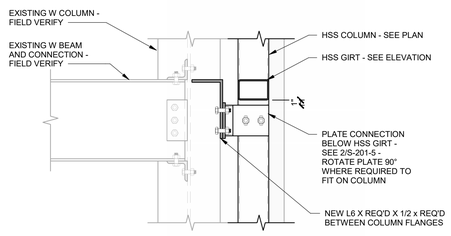


SECTIONS A & B

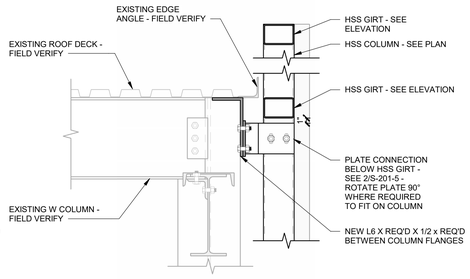
CONFIGURATION AT CORNER COLUMNS

DETAIL 6/S-201-5
SCALE : NONE

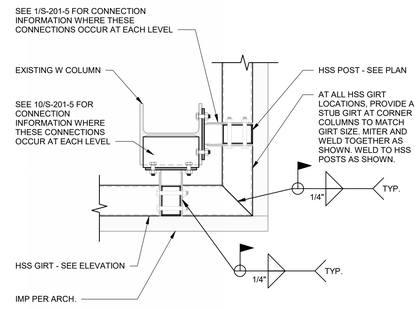
DETAIL 7/S-201-5
SCALE : NONE



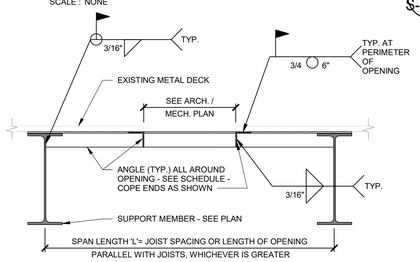
DETAIL 8/S-201-5
SCALE : NONE



DETAIL 9/S-201-5
SCALE : NONE

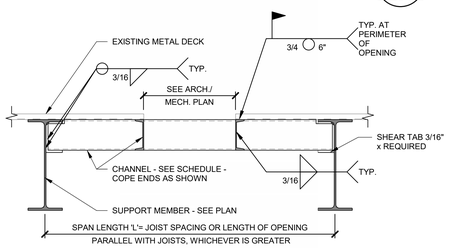


DETAIL 10/S-201-5
SCALE : NONE



SPAN	ANGLE SIZE
L ≤ 6'-0"	L4 x 4 x 1/4
L ≤ 8'-0"	L4 x 4 x 3/8
L ≤ 10'-0"	L5 x 5 x 3/8

DETAIL 11/S-201-5
SCALE : NONE

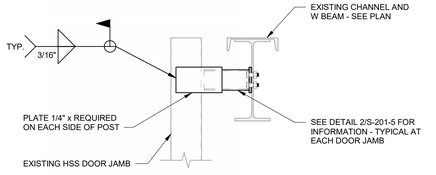


SPAN	CHANNEL
L ≤ 8'-0"	C6 x 8.2
L ≤ 10'-0"	C8 x 11.5

NOTES :
1. THIS DETAIL APPLIES TO ROOF OPENINGS LARGER THAN 18" IN EITHER DIRECTION.
2. MECHANICAL CURB ATTACHMENT TO STRUCTURE IS BY OTHERS.
3. THIS DETAIL OCCURS UNDER THE CURB AND AROUND THE OPENING. WHERE NO OPENING OCCURS, FRAME OCCURS BELOW CURB ONLY.

TYP. FRAMING @ ROOF OPENINGS & ROOFTOP EQUIPMENT DETAIL 13/S-201-5
SCALE : NONE

DETAIL 12/S-201-5
SCALE : NONE



DETAIL 14/S-201-5
SCALE : NONE

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U OF U BLDG. 303 SEISMIC UPGRADE - PHASE 5
SALT LAKE CITY UTAH
PERMIT SET - 3-5-2024

PROFESSIONAL STRUCTURAL ENGINEER 3/5/24 No. 276196 Robert M. Moyle STATE OF UTAH

△ DATE REVISION

PROJECT NUMBER 18923

PHASE 5 DETAILS

S-201-5

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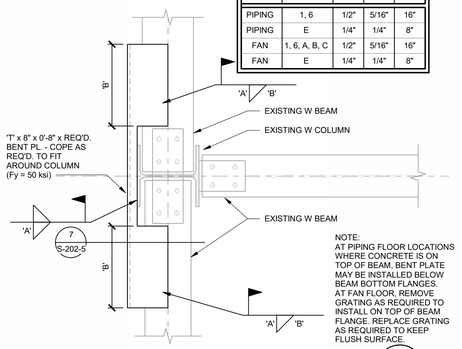
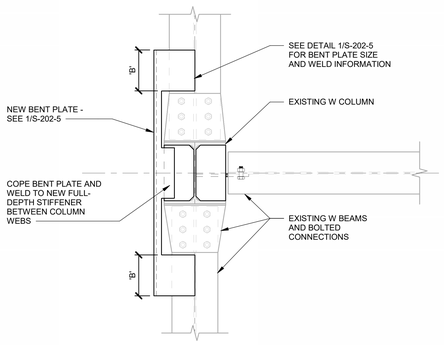
FLOOR	GRID	'T'	WELD	
			'A'	'B'
PIPING	1, 6	1/2"	5/16"	16"
PIPING	E	1/4"	1/4"	8"
FAN	1, 6, A, B, C	1/2"	5/16"	16"
FAN	E	1/4"	1/4"	8"



DRAG CONNECTION DETAIL — 1 / S-202-5
SCALE : NONE



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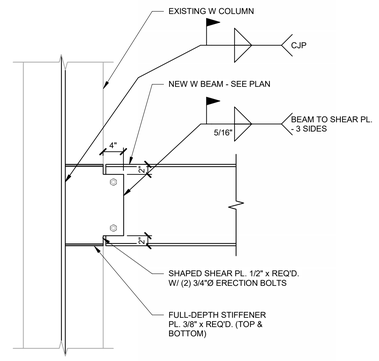
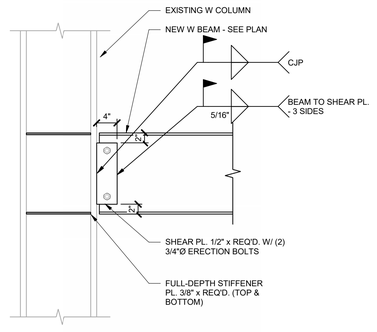
SCALE : NONE



DETAIL — 3 / S-202-5
SCALE : NONE



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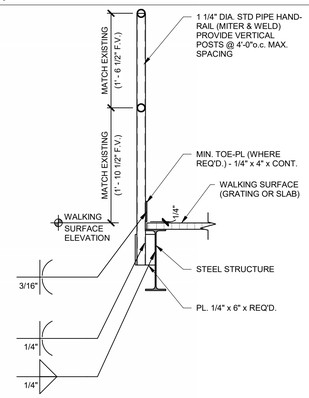
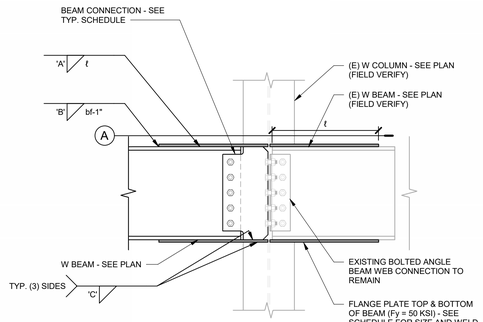
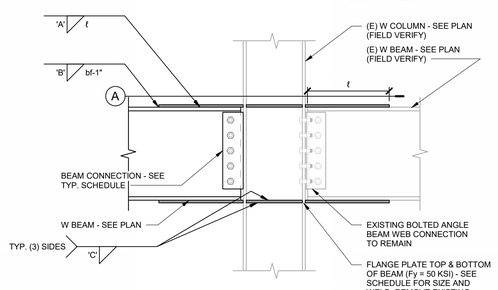
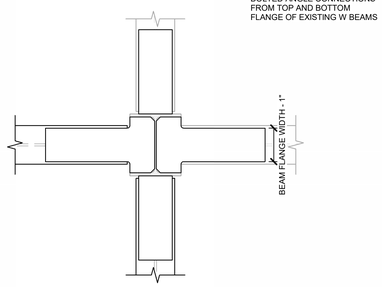
SCALE : NONE



TYPICAL HANDRAIL CONFIGURATION — 5 / S-202-5
SCALE : NONE





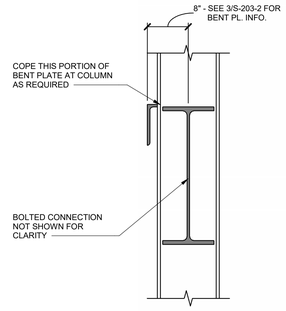


SECTION A

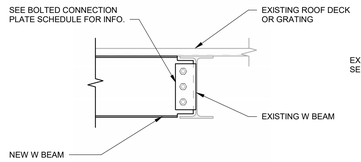
DETAIL — 6 / S-202-5
SCALE : NONE

FLANGE PLATE SCHEDULE						
LEVEL	GRID	THICKNESS 'T'	PLATE LENGTH t	WELD		
				'A'	'B'	'C'
PIPING	A	1"	16"	5/16"	5/16"	3/8"
FAN	A	1"	18"	5/16"	5/16"	3/8"
ROOF	A	5/16"	4"	1/4"	1/4"	1/4"
PIPING	E	3/8"	6"	1/4"	1/4"	1/4"
FAN	E	5/16"	6"	1/4"	1/4"	1/4"
ROOF	E	5/16"	4"	1/4"	1/4"	1/4"
PIPING	1	5/8"	13"	5/16"	5/16"	5/16"
FAN	1	3/4"	13"	5/16"	5/16"	5/16"
ROOF	1	5/16"	4"	1/4"	1/4"	1/4"
PIPING	6	5/8"	13"	5/16"	5/16"	5/16"
FAN	6	3/4"	13"	5/16"	5/16"	5/16"
ROOF	6	5/16"	4"	1/4"	1/4"	1/4"

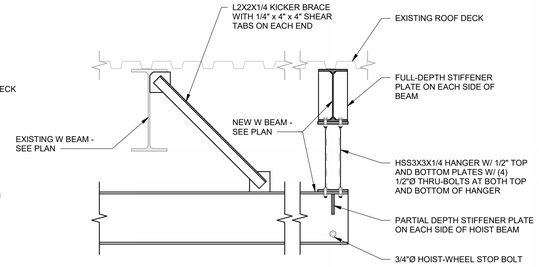
NOTES:
1. THE WIDTH OF THE FLANGE PLATES IS TO BE THE WIDTH OF THE BEAM FLANGE MINUS 1".
2. ALL FLANGE PLATES AND STIFFENERS TO BE A572 Fy = 50 KSI STEEL.
3. AT LOCATIONS WHERE BEAMS ON EACH SIDE OF THE COLUMN ARE A DIFFERENT DEPTH, COLUMN STIFFENERS ARE TO BE ADDED ADJACENT TO BEAM FLANGE PLATES.
4. WHERE CONCRETE IS PRESENT ON TOP OF BEAM, CAREFULLY CHIP OUT CONCRETE TO AVOID DAMAGING THE REINFORCEMENT. REPLACE CONCRETE WITH 4500 PSI CONCRETE PER STRUCTURAL NOTES AFTER INSTALLING FLANGE PLATE.



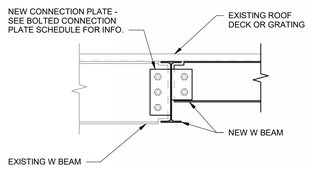
DETAIL — 7 / S-202-5
SCALE : NONE



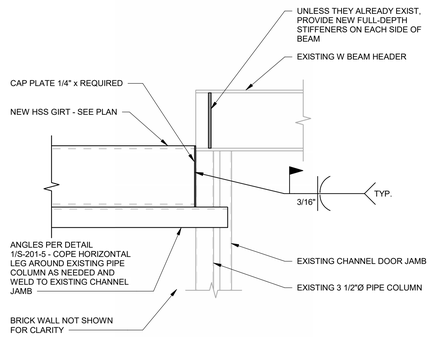
DETAIL — 8 / S-202-5
SCALE : NONE



DETAIL — 9 / S-202-5
SCALE : NONE



DETAIL — 10 / S-202-5
SCALE : NONE



DETAIL — 11 / S-202-5
SCALE : NONE

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ph: 801.782.6008 fx: 801.782.4656

U OF U BLDG. 303 SEISMIC UPGRADE - PHASE 5
SALT LAKE CITY UTAH
PERMIT SET - 3-5-2024

PROFESSIONAL STRUCTURAL ENGINEER
3/5/24
No. 276196
Robert M. Moyle
STATE OF UTAH

△	DATE	REVISION
1	5/18/20	REVIEW COMMENTS #1
2	1/5/21	ADDENDUM 3

PROJECT NUMBER 18923

PHASE 5 DETAILS

S-202-5

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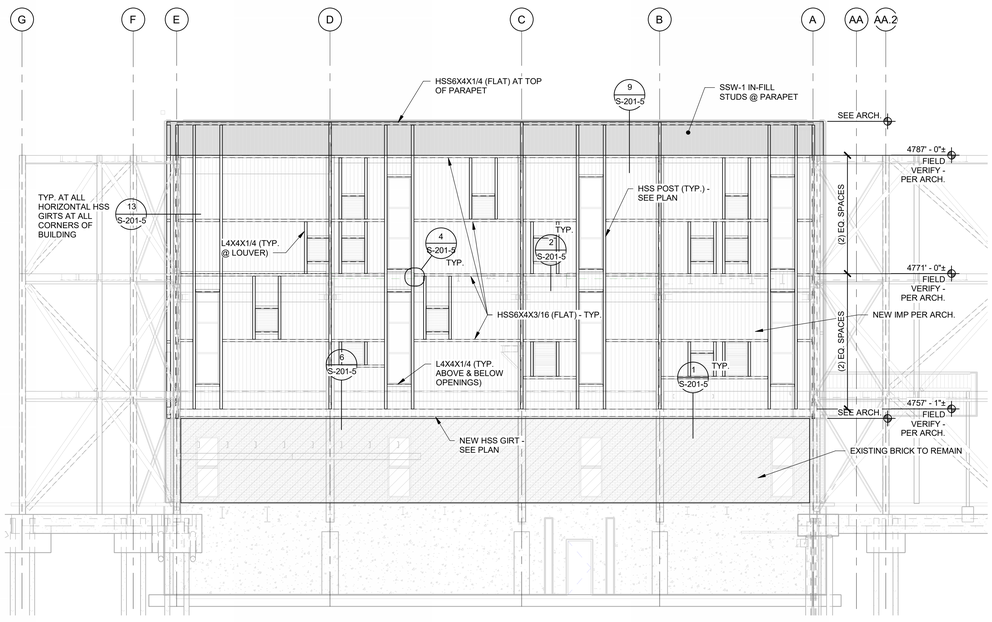
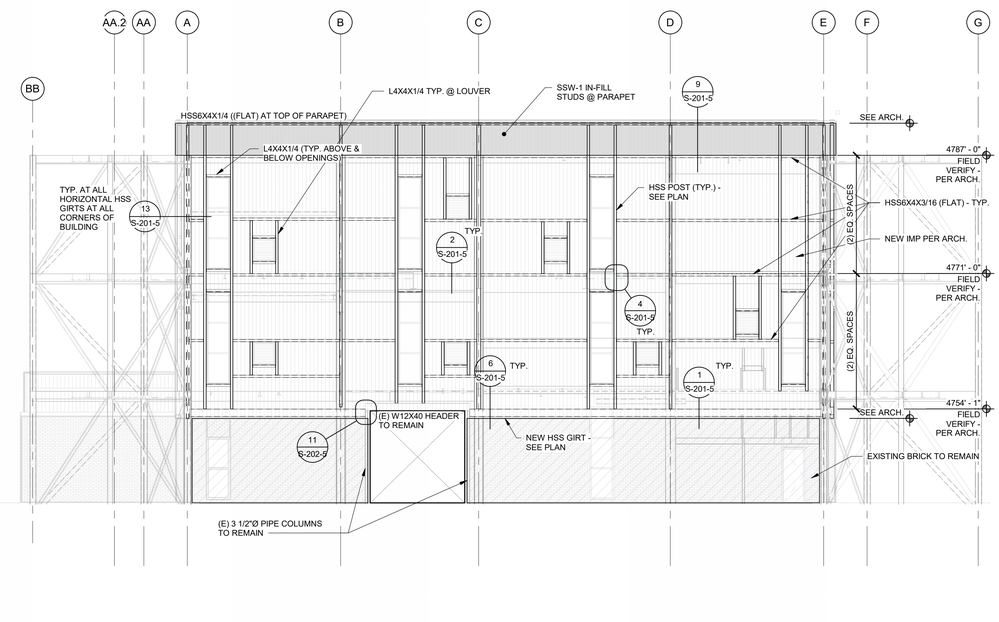
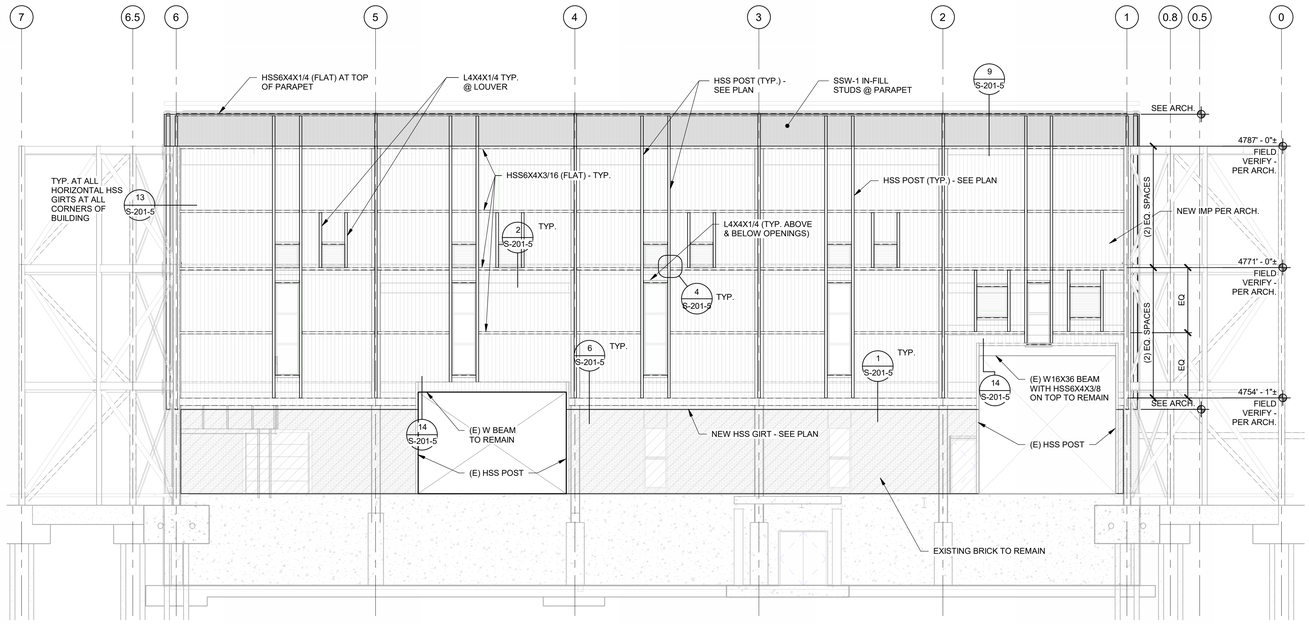
3/4/2024 1:19:39 PM



NORTH WALL ELEVATION
SCALE : 1/8" = 1'-0"
A S-301-5



SOUTH WALL ELEVATION
SCALE : 1/8" = 1'-0"
B S-301-5



EAST WALL ELEVATION
SCALE : 1/8" = 1'-0"
C S-301-5

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U OF U BLDG. 303 SEISMIC UPGRADE - PHASE 5
SALT LAKE CITY UTAH

PERMIT SET - 3-5-2024

PROFESSIONAL STRUCTURAL ENGINEER
3/5/24
No. 276196
Robert M. Moyle
STATE OF UTAH

△ DATE REVISION

PROJECT NUMBER 18923

WALL ELEVATIONS

S-301-5

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3/5/2024 9:26:55 AM

MECHANICAL LEGEND (NOTE: NOT ALL SYMBOLS SHOWN ARE USED ON THESE DRAWINGS)

ABBR.	SYMBOL	DESCRIPTION
SA		POSITIVE PRESSURE DUCT UP
SA		POSITIVE PRESSURE DUCT DOWN
EA/RA		NEGATIVE PRESSURE DUCT UP
EA/RA		NEGATIVE PRESSURE DUCT DOWN
OA		OUTSIDE AIR INTAKE DUCT UP
OA		OUTSIDE AIR INTAKE DUCT DOWN
		ROUND DUCT UP
		ROUND DUCT DOWN
		CONICAL FITTING WITH DAMPER
		ECCENTRIC FITTING WITH DAMPER
		CONICAL FITTING WITHOUT DAMPER
		ECCENTRIC FITTING WITHOUT DAMPER
		ELBOW WITH TURNING VANES
		ELBOW WITHOUT TURNING VANES
		LONG RADIUS ELBOW
		SHORT RADIUS ELBOW
		DUCTWORK
MVD		MANUAL VOLUME DAMPER
		ACCESS PANEL (SIZE)
		PUMP
		DUCT BREAK

ABBR.	SYMBOL	DESCRIPTION
		- PIPING -
	M	METER
	M	2-WAY MOTOR CONTROL VALVE
	M	3-WAY MOTOR CONTROL VALVE
		BALANCE VALVE
		FLOW MEASURING STATION
		BALL VALVE
		BUTTERFLY VALVE
		CHECK VALVE
		GATE VALVE
		GLOBE VALVE
		PRESSURE REDUCING VALVE
		PRESSURE RELIEF VALVE
		HOSE END DRAIN VALVE
		STRAINER
		STRAINER WITH BLOW OFF VALVE
		PLUG VALVE
		GAS COCK
	S	SOLENOID VALVE
PRV		PRESSURE REGULATING VALVE
		THERMOWELL
		THERMOMETER WITH THERMOWELL
		UNION
	DE	DIELECTRIC COUPLING
		ORIFICE PLATE
		VENTURI
		AUTOMATIC AIR VENT
		MANUAL AIR VENT
		VACUUM BREAKER
		THERMOMETER
		GAUGE
		GAUGE WITH BALL VALVE
		DIFFERENTIAL PRESSURE GAUGE
		PRESSURE TEMPERATURE/TEST POINT

ABBR.	SYMBOL	DESCRIPTION
HTHWS	HTHWS	HIGH TEMP. HOT WATER SUPPLY
HTHWR	HTHWR	HIGH TEMP. HOT WATER RETURN
CWS	CWS	COOLING WATER SUPPLY
CWR	CWR	COOLING WATER RETURN
CHWS	CHWS	CHILLED WATER SUPPLY
CHWR	CHWR	CHILLED WATER RETURN
CDS	CDS	CONDENSER WATER SUPPLY (TOWER)
CDR	CDR	CONDENSER WATER RETURN (TOWER)
CDS	CDS	CONDENSER WATER SUPPLY
CDR	CDR	CONDENSER WATER RETURN
CA	CA	COMPRESSED AIR
IA	IA	INSTRUMENT AIR
PC	PC	PUMPED CONDENSATE
D	D	CONDENSATE OR EQUIPMENT DRAIN
BD	BD	BLOW-DOWN DRAIN
OF	OF	OVERFLOW DRAIN
DCW		DOMESTIC COLD WATER
SW		SOFTENED WATER
NPW		NON-POTABLE WATER
DHW		DOMESTIC HOT WATER
DHWC		DOMESTIC HOT WATER CIRCULATING
DWT	T	DOMESTIC TEMPERED WATER
V	V	DOMESTIC VENT PIPING
W	W	SANITARY WASTE (ABOVE FLOOR)
W	W	SANITARY WASTE (BELOW FLOOR)
OST	OST	STORM OVERFLOW DRAIN
ST	ST	STORM DRAIN (ABOVE FLOOR)
ST	ST	STORM DRAIN (BELOW FLOOR)
SS	SS	SANITARY SEWER (BELOW FLOOR)
G	G	NATURAL GAS
LO	LO	LUBE OIL
		ORIFICE PLATE
		PIPE ANCHOR
		PIPE GUIDE
		FLEX CONNECTION
		PIPE CAP
		PIPE BREAK
		FLOW ARROW
		PIPE DOWN
		PIPE UP
		TEE OUTLET UP
		TEE OUTLET DOWN

ABBR.	SYMBOL	DESCRIPTION
	ZONE # T	THERMOSTAT W/ZONE CALLOUT
	ZONE # HS	HUMIDITY SENSOR W/ZONE CALLOUT
	ZONE # TS	TEMP SENSOR W/ZONE CALLOUT
	CO	CARBON MONOXIDE DETECTOR
	CO_2	CARBON DIOXIDE SENSOR
		DIGITAL INPUT
		ANALOG INPUT
		DIGITAL OUTPUT
		ANALOG OUTPUT
		BI-DIRECTIONAL NETWORK CONNECTION
		FLOW ARROW
	FS	FLOW SWITCH
	TS	DUCT MOUNTED TEMPERATURE SENSOR
	TS	DUCT AVERAGING TEMPERATURE SENSOR
	TS	WELL MOUNTED TEMPERATURE SENSOR
	MD	MOTORIZED DAMPER ACTUATOR
	M	MOTORIZED DAMPER ACTUATOR
	TL	TEMPERATURE LOW LIMIT THERMOSTAT
	SD	DUCT SMOKE DETECTOR
	ES	DAMPER/VALVE END SWITCH
	DPS	DIFFERENTIAL PRESSURE SWITCH
	HPS	HIGH PRESSURE SWITCH
	PS	PRESSURE SWITCH MANUAL RESET
		AQUASTAT
	PE	PRESSURE ELECTRIC SWITCH
	MS	MOTOR STARTER
	CR	CONTROL RELAY
	VFD	VARIABLE FREQUENCY DRIVE
	VFD BP	VARIABLE FREQUENCY DRIVE WITH BY-PASS
	M	ELECTRIC MOTOR
	TC	TEMPERATURE CONTROLLER
	TT	TEMPERATURE TRANSMITTER
	LT	LEVEL TRANSMITTER
	PT	PRESSURE TRANSMITTER
	DPT	DIFFERENTIAL PRESSURE TRANSMITTER
	FT	FLOW TRANSMITTER
	EPT	ELECTRIC/PNEUMATIC TRANSDUCER
	P/I	ELECTRIC/PNEUMATIC TRANSDUCER
		CURRENT SWITCH/TRANSMITTER
	ANN	ANNUNCIATOR
	FACP	FIRE ALARM CONTROL PANEL
	CAM	CONTROL ADDRESSABLE MODULE
	MAM	MONITOR ADDRESSABLE MODULE
	ESR	EMERGENCY STOP RELAY
	LC	LEVEL CONTROLLER
	EPO	EMERGENCY POWER SHUTOFF
	AFS	AIR FLOW SWITCH

ABBR.	SYMBOL	DESCRIPTION
RD		ROOF DRAIN
OD		OVERFLOW DRAIN
FS		FLOOR SINK
FD		FLOOR DRAIN
FCO		FLOOR CLEANOUT
GCO		GRADE CLEANOUT
WCO		WALL CLEANOUT
HB		HOSE BIBB
SA		SHOCK ABSORBERS

- GRAPHIC SYMBOLS -

1	KEY NOTE
A	REVISION NUMBER
TAG	MECHANICAL EQUIPMENT TAG
	SHADING INDICATES MECHANICAL EQUIPMENT
	HATCHING OR HEAVY SHORT DASH INDICATE ITEMS TO BE REMOVED
	NORTH ARROW
	CONNECT TO EXISTING
EXIST NEW	CONNECT TO EXISTING PIPE
	SPOT ELEVATION

DETAIL BUBBLE
1 / M2.1 — DETAIL NUMBER; SHEET NUMBER - WHERE DETAIL IS SHOWN

SECTION CUT
1 / XXX — SECTION LETTER; SHEET NUMBER

- ABBREVIATIONS -

AFF	ABOVE FINISHED FLOOR	IE	INVERT ELEVATION
BDD	BACK DRAFT DAMPER	LAT	LEAVING AIR TEMPERATURE
BFF	BELOW FINISHED FLOOR	LWT	LEAVING WATER TEMPERATURE
CL	CENTERLINE	MA	MIXED AIR
CO	CLEANOUT	(N)	NEW
(E)	EXISTING	NC	NORMALLY CLOSED
EA	EXHAUST AIR	NO	NORMALLY OPEN
EAT	ENTERING AIR TEMPERATURE	OA	OUTSIDE AIR
ELEV	ELEVATION	OTCS	OPEN TO CEILING SPACE
ESP	EXTERNAL STATIC PRESSURE	RA	RETURN AIR
EWT	ENTERING WATER TEMPERATURE	SA	SUPPLY AIR
FFE	FINISHED FLOOR ELEVATION	TSP	TOTAL STATIC PRESSURE
FGR	FLUE GAS RECIRCULATION	VTR	VENT THROUGH ROOF

GENERAL NOTES:

CONTRACTOR SHALL REFERENCE SPECIFICATIONS FOR CONSTRUCTION MATERIALS AND INSTALLATION PROCEDURES. SPECIFICATIONS ARE A PART OF THE CONSTRUCTION DOCUMENTS. SHOULD ANY CONFLICT ARISE BETWEEN THE DRAWINGS AND SPECIFICATIONS, SUCH CONFLICT SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR RESOLUTION.

ALL PENETRATIONS THROUGH FIRE-RATED WALLS OR FLOORS ARE TO BE SEALED TO MAINTAIN SEPARATION RATING.

THESE DRAWINGS ARE DIAGRAMMATIC IN CHARACTER AND DO NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC.

ALL DUCTWORK DIMENSIONS SHOWN ARE INTERIOR CLEAR DIMENSIONS. ALLOWANCES FOR DUCT LINER OR INSULATION ARE NOT INCLUDED

EXISTING CONDITIONS ARE TAKEN FROM EXISTING DRAWINGS AND FIELD OBSERVATION. ACTUAL CONDITIONS MAY VARY FROM WHAT IS SHOWN. FIELD VERIFY ALL CONDITIONS PRIOR TO COMMENCING WORK.

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Fax 303.239.0918
www.rmhgroup.com
RMH Group Project Number

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U OF U BLDG. 303 SEISMIC UPGRADE - PHASE 5
SALT LAKE CITY UTAH
PERMIT SET - 3-5-2024

STATE OF UTAH · JEFFREY W. ELSNER · 3/5/24 · 9196296-2202 · PROFESSIONAL ENGINEER

DATE	REVISION

PROJECT NUMBER 18136

MECHANICAL LEGEND

M-000-5

3/5/2024 8:10:22 AM

FAN SCHEDULE

TAG	SERVICE	TYPE	CFM	ESP	BHP	FAN RPM	DRIVE	MOTOR CONTROLLER	DAMPER TYPE	DAMPER APD	ELECTRICAL HP	ELECTRICAL V/PH	WEIGHT LBS	MANUFACTURER & MODEL	NOTES
EF-1	CIRCULATION	DOWNBLAST ROOF VENTILATOR	38000	0.25	9.9	453	BELT	STARTER/CONTACTOR			10	460/3	555	GREENHECK GB-540	1, 2, 3, 7
EF-2	CIRCULATION	DOWNBLAST ROOF VENTILATOR	38000	0.25	9.9	453	BELT	STARTER/CONTACTOR			10	460/3	555	GREENHECK GB-540	1, 2, 3, 7

GENERAL NOTES:

A. PERFORMANCE IS AT SITE CONDITIONS
B. DAMPER APD IS MAX ALLOWED AND IS INCLUDED WITH ESP
C. EQUIPMENT WITH 208V NAMEPLATES SHALL HAVE MOTORS SUITABLE FOR
D. OPERATION AT 180 VOLTS OR PROVIDED WITH 200V TO 208V TRANSFORMERS
FANS OTHER THAN ROOF VENTILATORS OVER 5 HP SHALL HAVE A FEG RATING OF 67 AND BE SELECTED WITHIN 15% OF PEAK EFFICIENCY

NOTES:

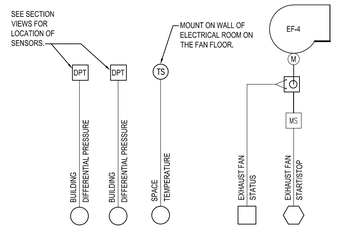
1. ROOF CURB
2. INTEGRAL DISCONNECT
3. GRAVITY BACKDRAFT DAMPER
4. HINGED CURB BASE
5. SCROLL DRAIN
6. SCROLL CLEANOUT
7. AMCA SPARK A / B / C

GRILLE/REGISTER/DIFFUSER SCHEDULE

TAG	PURPOSE	TYPE	MOUNTING	SIZE	NC MAX	ACCESSORIES	MANUFACTURER & MODEL	NOTES
D	SUPPLY DIFFUSER	DUCT	WALL	8 X 8	40	OBD	PRICE 510	

GENERAL NOTES:

A. ASSUMES 10dB ROOM ABSORPTION



1 M-002-5 EXHAUST FAN EF-1, EF-2
SCALE: NONE

EXHAUST FAN CONTROL SEQUENCE OF OPERATION:

DESIGN INTENT: THE INTENT OF THESE FANS IS TO CONTROL TEMPERATURE BY EXHAUSTING HOT AIR FROM THE PLANT WITHOUT INTERFERING WITH COMBUSTION AIR FLOW TO THE BOILERS.

EXHAUST FAN CONTROL

1. EXHAUST FANS SHALL BE DE-ENERGIZED WHENEVER THE DIFFERENTIAL PRESSURE EXCEEDS (IS MORE NEGATIVE THAN) -0.2 INCHES OF WATER COLUMN AT EITHER OF THE TWO BUILDING DIFFERENTIAL PRESSURE SENSORS. THE MEASUREMENT SHALL BE MADE WITH AN AVERAGING ALGORITHM TO REDUCE THE IMPACTS OF WIND GUSTS ON THE READINGS.

2. ANY TIME NEGATIVE BUILDING PRESSURE EXCEEDING -02 INCHES OF WATER COLUMN FOR MORE THAN 10 MINUTES INITIATE AN ALARM.

3. WHEN NOT PROHIBITED BY DIFFERENTIAL PRESSURE THE FIRST EXHAUST FAN (EF-2) SHALL BE ENERGIZED AT 90F ON THE UPPER FLOOR AND THE SECOND EXHAUST SHALL BE ENERGIZED AT 95F.

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Rich Group project number

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U OF U BLDG. 303 SEISMIC UPGRADE - PHASE 5
SALT LAKE CITY UTAH

PERMIT SET - 3-5-2024

STATE OF UTAH
JEFFREY W ELSNER
3/5/24
PROFESSIONAL ENGINEER

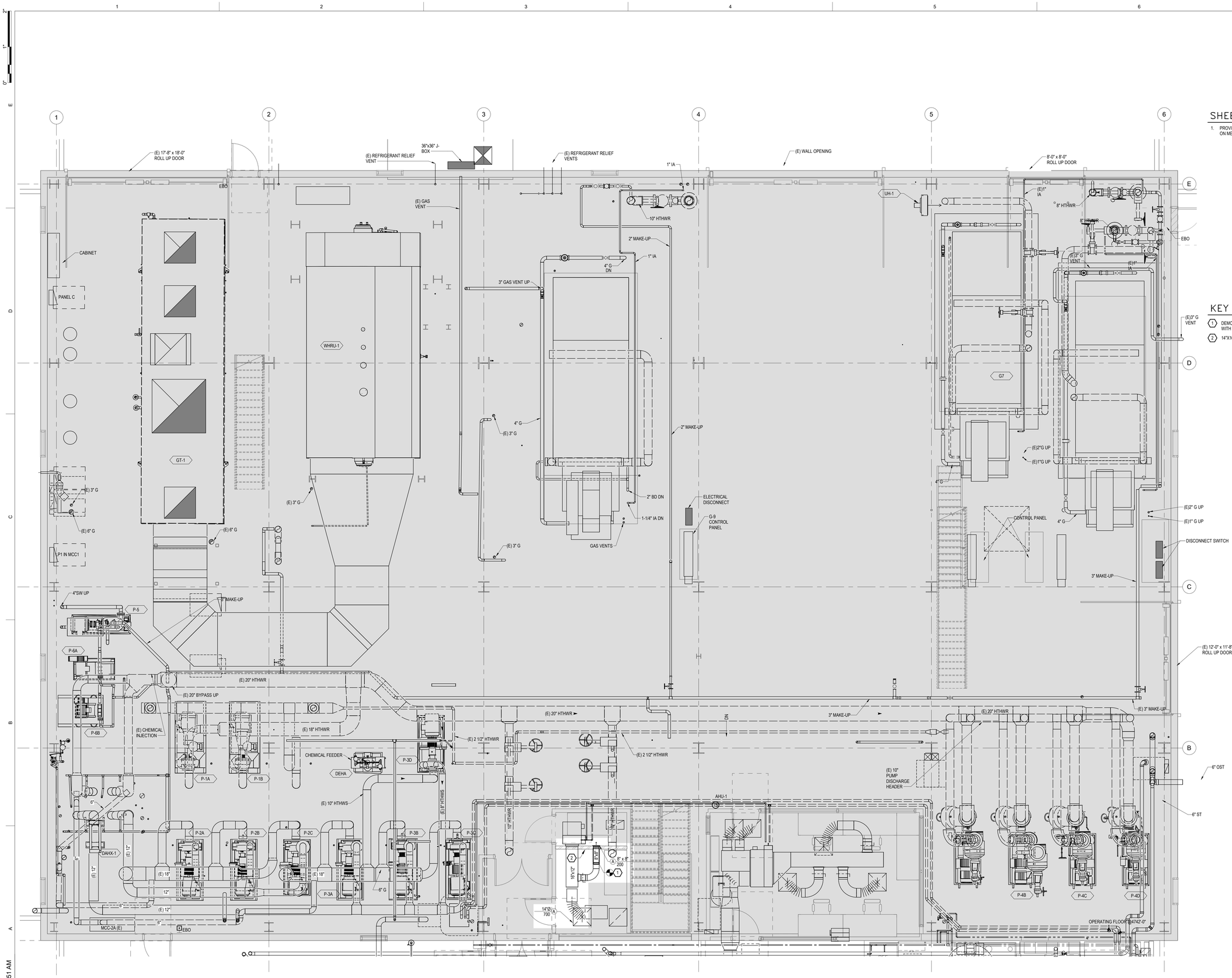
DATE	REVISION

PROJECT NUMBER 21486 / 21632

EQUIPMENT SCHEDULES

M-001-5

5/7/2019 11:13:15 AM



SHEET NOTES

1. PROVIDE SEISMIC BRACING FOR ALL PIPING AND EQUIPMENT INDICATED ON MECHANICAL SCHEDULES SHEETS M-001-6, M-002-6, M-003-6, M-004-4.

KEY NOTES

1. DEMOLISH EXISTING 8" FLEX DUCT AND CEILING DIFFUSER, REPLACE WITH NEW DUCT AND SIDEWALL GRILLE AS SHOWN.
2. 14"X16" OPENING IN WALL ABOVE CEILING FOR RETURN TRANSFER AIR.

1 OPERATING FLOOR - MECHANICAL PLAN
SCALE: 1/4" = 1'-0"

PLAN NORTH TRUE NORTH

3/5/2024 8:10:51 AM

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U OF U BLDG. 303 SEISMIC UPGRADE - PHASE 5
SALT LAKE CITY UTAH

PERMIT SET - 3-5-2024

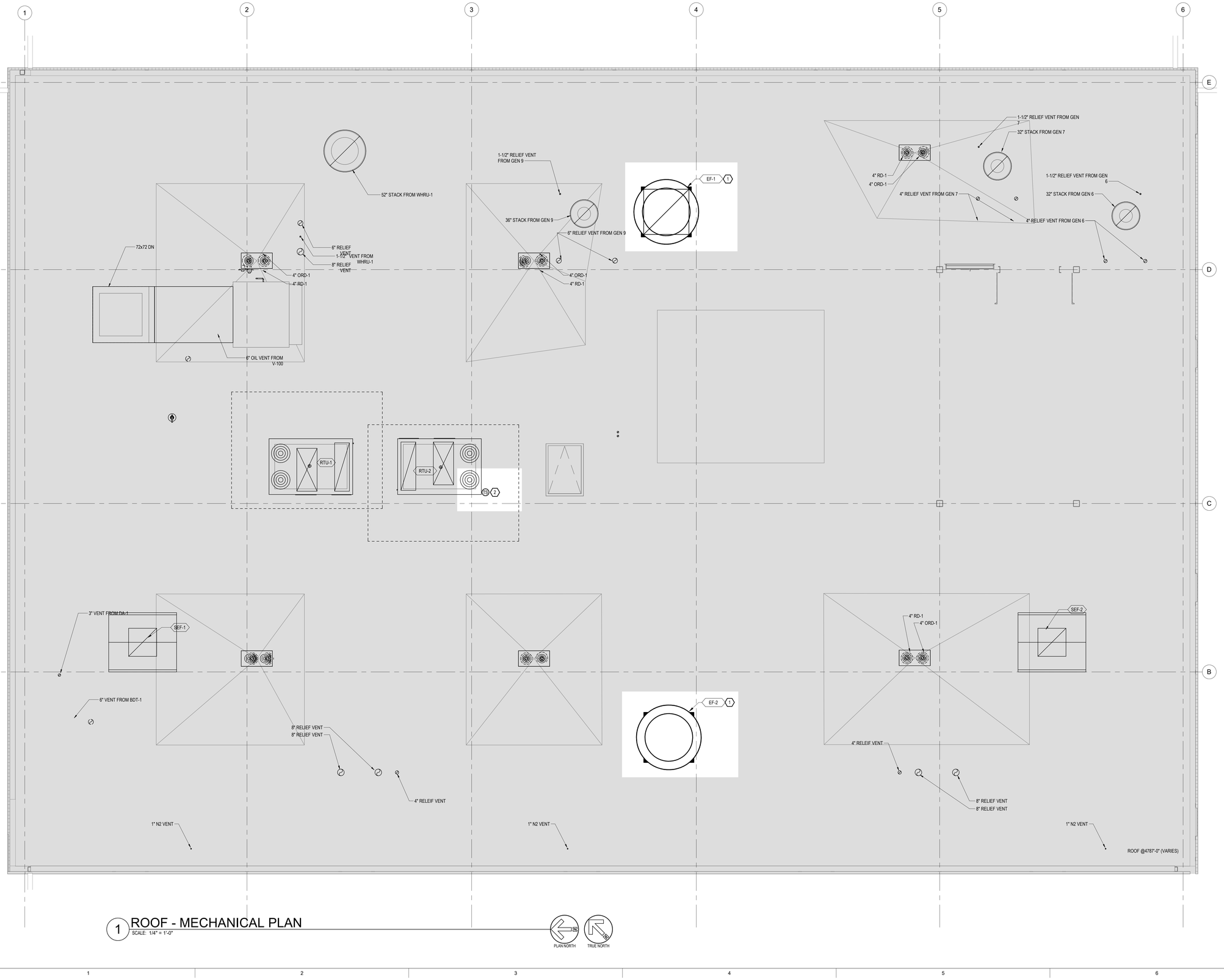
STATE OF UTAH
JEFFREY W ELSNER
3/5/24
NO. 9196596-2202
PROFESSIONAL ENGINEER

DATE	REVISION

PROJECT NUMBER 18136

OPERATING FLOOR - MECHANICAL PLAN

M-101-5



SHEET NOTES

1. REFER TO GENERAL NOTES ON COVER SHEET.
2. SEE ELECTRICAL, STRUCTURAL AND ARCHITECTURAL DRAWINGS FOR COORDINATION.

KEY NOTES

1. EXHAUST FAN INTAKE OPEN TO FLOOR BELOW.
2. PROVIDE NEW FAN FLOOR TEMPERATURE SENSOR ON THE OUTER WALL OF THE ELECTRICAL ROOM ON THE FLOOR BELOW.

1 ROOF - MECHANICAL PLAN
SCALE: 1/4" = 1'-0"

PLAN NORTH

TRUE NORTH

FFKR ARCHITECTS
730 Pacific Avenue · Salt Lake City, Utah 84104
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MECHANICAL · ELECTRICAL
INDUSTRIAL · SUSTAINABLE DESIGN
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SALT LAKE CITY UTAH
PERMIT SET - 3-5-2024

STATE OF UTAH
JEFFREY W. ELSNER
3/5/24
PROFESSIONAL ENGINEER

DATE	REVISION

PROJECT NUMBER 18136

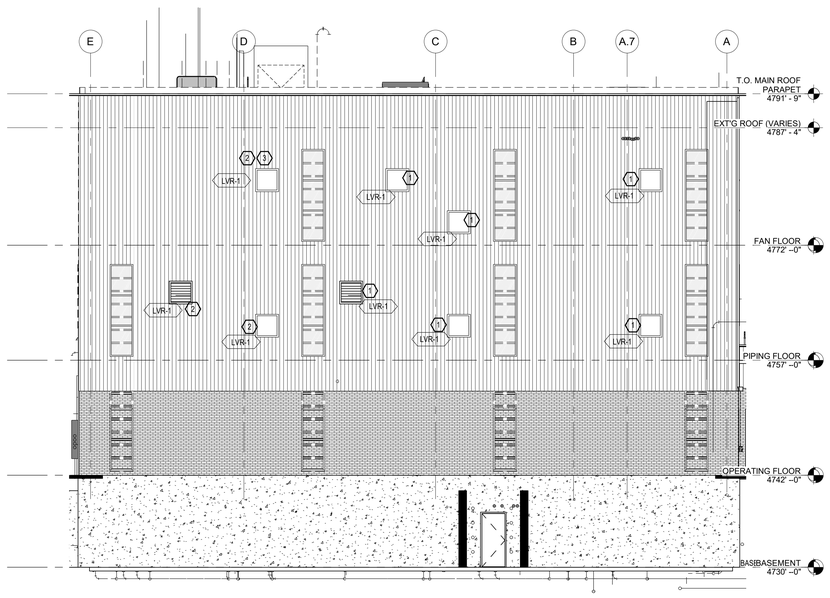
ROOF - MECHANICAL PLAN

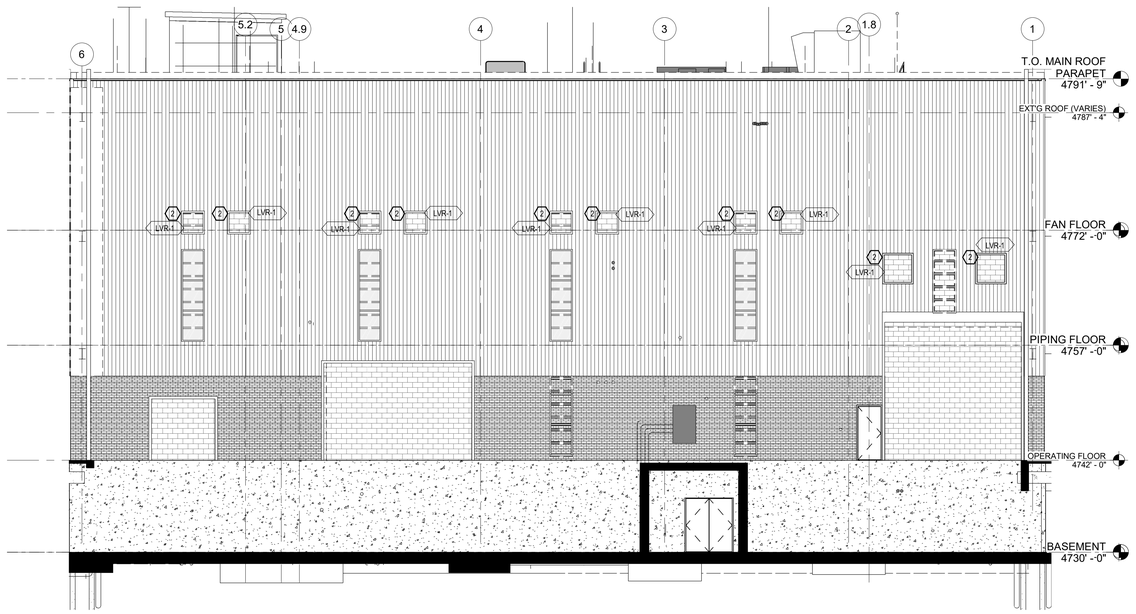
M-104-5

3/5/2024 8:10:53 AM

KEY NOTES

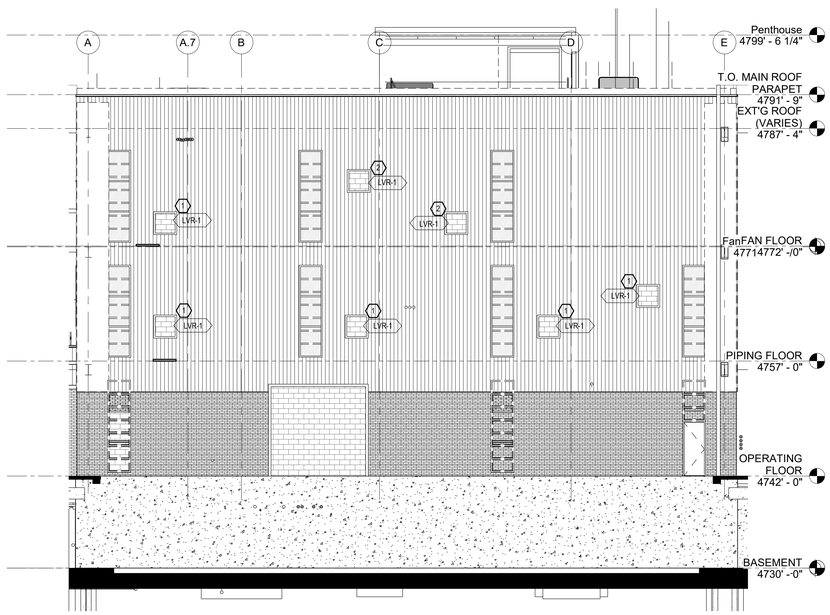
1. PROVIDE MANUAL DAMPER WITH OPERATOR ACCESSIBLE INSIDE THE BUILDING.
2. LOUVER SHALL BE OPEN AT ALL TIMES, DO NOT PROVIDE A DAMPER.
3. LOCATE BUILDING DIFFERENTIAL PRESSURE SENSOR ACROSS THIS LOUVER (TWO SENSORS TOTAL).





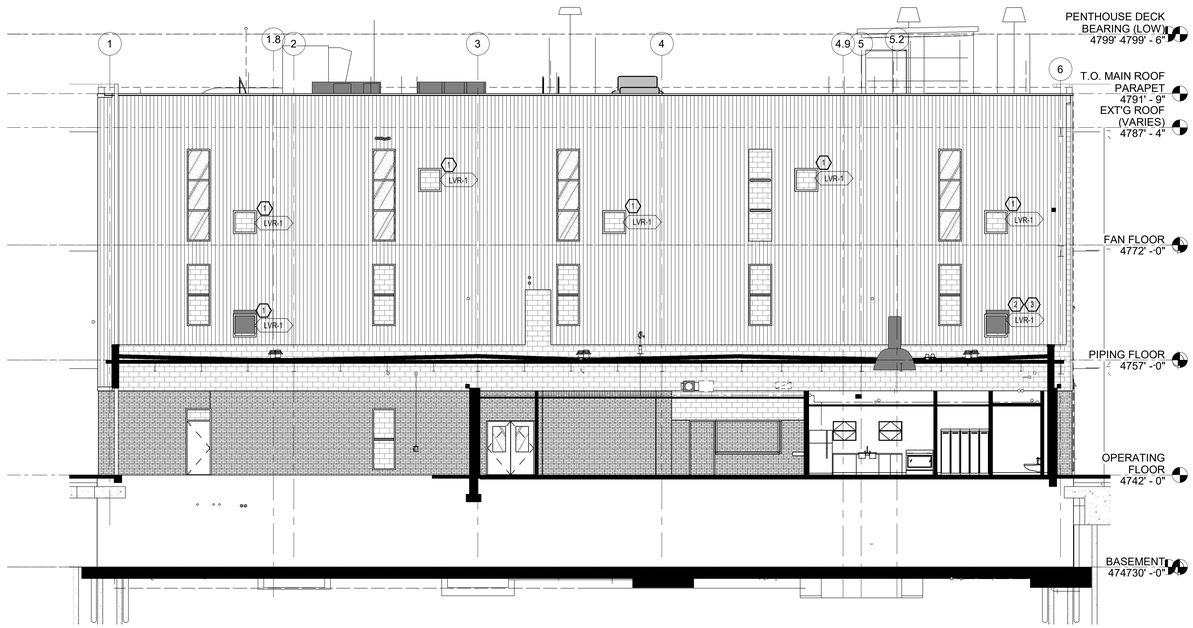
3 NORTH ELEVATION
SCALE: 1/8" = 1'-0"

PLAN NORTH TRUE NORTH



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

PLAN NORTH TRUE NORTH



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

PLAN NORTH TRUE NORTH

2 WEST ELEVATION
SCALE: 1/8" = 1'-0"

PLAN NORTH TRUE NORTH

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U OF U BLDG. 303 SEISMIC UPGRADE, PROJ. #22436 - PHASE 5

SALT LAKE CITY UTAH

PERMIT SET - 3-5-2024

STATE OF UTAH · JEFFREY W. ELSNER · 3/5/24 · 9769596-2202 · PROFESSIONAL ENGINEER

DATE	REVISION

PROJECT NUMBER 18136

Elevations

M-301-5

3/5/2024 8:12:25 AM

THESE DRAWINGS ARE A PROGRESS SET AND ARE, BY THEIR NATURE, INCOMPLETE. THEY ARE NOT SUITABLE FOR BIDDING OR CONSTRUCTION. ANY ATTEMPT TO ESTABLISH CONSTRUCTION COSTS FROM THESE DOCUMENTS MUST BE DONE WITH EXTREME CAUTION. COST ALLOWANCES MUST BE PROVIDED FOR DESIGN ELEMENTS AND MATERIALS NOT YET INDICATED ON THESE DOCUMENTS. THE RMH GROUP HAS NO RESPONSIBILITY OR LIABILITY FOR COSTS OF CONSTRUCTION ASSOCIATED WITH DESIGN ELEMENTS AND MATERIALS NOT YET SHOWN ON THESE DOCUMENTS.

ELECTRICAL LEGEND (NOTE: NOT ALL SYMBOLS SHOWN ARE USED ON THESE DRAWINGS)

-ONE LINE SYMBOLS-

SYMBOL	DESCRIPTION
	CIRCUIT BREAKER
	DRAW-OUT CIRCUIT BREAKER (MOLDED INSULATED CASE)
52	DRAW-OUT POWER CIRCUIT BREAKER
	CONTROL FUSE
	FUSE WITH SWITCH
	SWITCH
PANEL XXX	PANELBOARD
TVSS	TVSS OR MISC EQUIPMENT
ATS XXX	AUTOMATIC TRANSFER SWITCH
100A4G	FEEDER DESIGNATION, SEE FEEDER SCHEDULE
	AUTOMATIC TRANSFER SWITCH WITH BY-PASS
E	ENGINE GENERATOR
TX-XXXX	TRANSFORMER
	ENCLOSED BUSWAY
	GROUND BUS
	WEATHERHEAD
M	MOTOR
	DELTA CONNECTION
	WYE CONNECTION
	GROUNDED WYE CONNECTION
	GROUNDED WYE CONNECTION W/RESISTOR GROUND
	GROUNDED WYE CONNECTION W/REACTOR GROUND
M	METERING DEVICE
	CURRENT TRANSFORMER
	POTENTIAL TRANSFORMER
	LOAD-BREAK CONNECTOR
##	PROTECTIVE RELAY DEVICE
K	KEY INTERLOCK
2400V,100A 10SEC. RESISTOR	RESISTOR
	CONTACT NORMALLY OPEN - TYPE a
	CONTACT NORMALLY CLOSED - TYPE b
	CAPACITOR
+ -	SINGLE BATTERY
+ -	MULTIPLE BATTERIES
	LIGHTNING ARRESTOR
	THERMAL ELEMENT, OVERLOAD RELAY

-GENERAL-

SYMBOL	DESCRIPTION
	BRANCH CIRCUIT HOME RUN TO PANELBOARD, DESIGNATION INDICATES PANEL AND CIRCUIT NUMBERS.
	CONTROL WIRING
	CIRCUIT LINE TERMINATOR
	LIGHTING, ONE-LINE, AND POWER CIRCUITING
	LIGHTING, ONE-LINE, AND POWER CIRCUITING (UNDERGROUND)
FO	LIGHTING, ONE-LINE, AND POWER CIRCUITING
	FLEXIBLE CONDUIT
	CONDUIT BREAK SYMBOL
	CONDUIT CAP
	CONDUIT CHANGE IN ELEVATION
	CONDUIT STUB DOWN (OUT OF DRAWING LIMITS)
	CONDUIT STUB UP (OUT OF DRAWING LIMITS)
J	JUNCTION BOX
J	WALL MOUNTED JUNCTION BOX
J	FLOOR MOUNTED JUNCTION BOX
	PUSH BUTTON A = ABORT DA = DURESS ALARM EPO = EMERGENCY POWER OFF IC = INTERCOM ST = SHUNT TRIP GFI = REMOTE GFI RESET
S X #	SWITCH CONTROL SINGLE POLE (IF BLANK) 2 = DOUBLE POLE 3 = THREE-WAY 4 = FOUR-WAY D = DIMMER K = KEY OPERATED LV = LOW VOLTAGE P = WITH PILOT LIGHT TO = THERMAL OVERLOAD VS = VARIABLE SPEED WP = WEATHERPROOF x = SMALL LETTER INDICATED LUMINAIRES CONTROLLED XP = EXPLOSION PROOF
S S	DUAL SWITCH
$	INTERCOM SWITCH
XX	SPECIALTY SWITCH SYMBOLS: B = BUZZER CH = CHIME CK = CARD READER/KEYPAD CR = CARD READER CA = DURESS ALARM PUSH-BUTTON DC = DOOR CONTACT D = DOOR OPERATOR DS = DOOR STRIKE EL = ELECTRIC LOCK ES = ELECTRIC STRIKE F = MANUAL PULL STATION FS = FLOW SWITCH GB = GLASSBREAK DETECTION HC = HANDICAP PUSH-BUTTON IC = INTERCOM CALL STATION KP = KEYPAD MH = MANHOLD MD = MOTION DETECTOR ML = MAGNETIC LOCK OS = OCCUPANCY SENSOR PB = PULLBOX PM = POWER QUALITY METER PS = PRESSURE SWITCH R = REMOTE INDICATING LIGHT RT = REMOTE TEST STATION RX = REQUEST TO EXIT PUSH-BUTTON S = WALL MOUNTED SPEAKER TC = TIME CLOCK TS = TAMPER SWITCH TV = TELEVISION OUTLET VM = VIDEO MONITOR
XXX	MISC. SYSTEM COMPONENT AMP = AMPLIFIER RNN = ANNUNCIATOR ASD = ADJUSTABLE SPEED DRIVE ATS = AUTOMATIC TRANSFER SWITCH BMS = BALANCED MAGNETIC STRIP CAM = CONTROL ADDRESSABLE MODULE DE = DELAYED EGRESS DMA = DOOR MANAGEMENT ALARM DTC = DATA TERMINAL CABINET DVR = DIGITAL VIDEO RECORDER EC = ELECTRICAL CONTACTOR FAA = FIRE ALARM ANNUNCIATOR FACP = FIRE ALARM CONTROL PANEL FSCP = FSD = FIRE SMOKE DAMPER MAM = MONITOR ADDRESSABLE MODULE PIR = PASSIVE INFARED DETECTOR SAP = SECURITY ALARM PANEL TMSS = TRANSIENT VOLTAGE SURGE SUPPRESSOR VFD = VARIABLE FREQUENCY DRIVE

-POWER-

SYMBOL	DESCRIPTION
	DUPLEX RECEPTACLE D = DEDICATED DUPLEX GROUNDED RECEPTACLE IG = ISOLATED GROUND E = EMERGENCY POWER
GFI	GFI = GROUND FAULT CIRCUIT INTERRUPTER
	FLOOR MOUNTED DUPLEX RECEPTACLE
	FLOOR MOUNTED FOURPLEX RECEPTACLE
	FLOOR POKE-THOUGH FOURPLEX RECEPTACLE AND DATA OUTLETS
	FLOOR MOUNTED SPECIAL PURPOSE RECEPTACLE
	CEILING MOUNTED DUPLEX RECEPTACLE
	CEILING MOUNTED FOURPLEX RECEPTACLE
	CEILING MOUNTED SPECIAL PURPOSE RECEPTACLE
	FOURPLEX RECEPTACLE
	RANGE RECEPTACLE
	SINGLE RECEPTACLE
	SPECIAL PURPOSE RECEPTACLE
	SWITCHED RECEPTACLE
	EMERGENCY RECEPTACLE
	DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
	MOTOR STARTER
	COMBINATION MOTOR STARTER
	DISTRIBUTION PANEL
	EXISTING DISTRIBUTION PANEL
	NEW PANEL, FLUSH MOUNTED
	EXISTING PANEL, FLUSH MOUNTED
	NEW PANEL, SURFACE MOUNTED
	EXISTING PANEL, SURFACE MOUNTED
U	ULTRASONIC SENSOR
S	COMBINATION SWITCH AND RECEPTACLE
S	DIMMER SWITCH
	CONDUIT SEAL OFF
	FIRE RATED POKE-THRU
	PARTITION CIRCUIT SPLIT
	POWER POLE
W	SURFACE RACEWAY
CR	CONTROL RELAY
M	METER
T	TRANSFORMER

-LIGHTING (REFER TO LUMINAIRE SCHEDULE)-

SYMBOL	DESCRIPTION
#X	LUMINAIRES # = BRANCH CIRCUIT NUMBER x = SWITCH LEG IDENTIFIER
	SHADING INDICATES LUMINAIRE ON LIFE SAFETY
	SHADING INDICATES PORTION OF LUMINAIRE ON LIFE SAFETY
	WALL MOUNTED LUMINAIRE
	BARE-LAMP STRIP LIGHT
	STRIP LIGHT w/JUNCTION BOX
# #	POLE MOUNTED LUMINAIRE
	LUMINAIRE
	WALL WASHER LUMINAIRE
	ADJUSTABLE LUMINAIRE
	PENDANT LUMINAIRE
	TRACK LIGHTING
P	PHOTOCELL
	EXIT LIGHT (WITH FACES & DIRECTION ARROWS INDICATED)
	WALL MOUNTED EXIT LIGHT (WITH FACES & DIRECTION ARROWS INDICATED)
	WALL MOUNTED BATTERY PACK EMERGENCY LIGHT

-FIRE ALARM DEVICES-

SYMBOL	DESCRIPTION
A	ABORT BUTTON
B	BELL
D D	DUCT SMOKE DETECTOR
	FIRE FIGHTERS TELEPHONE JACK
H	COMBINATION FIRE HORN/STROBE LIGHT
S	COMBINATION FIRE SPEAKER/STROBE LIGHT
	FIRE ALARM STROBE LIGHT
	FIRE ALARM STROBE, CEILING MOUNT
H	FIRE HORN
H	DUAL PROJECTION FIRE HORN DUAL PROJECTION FIRE HORN
X	DETECTOR UNDER FLOOR F = FLAME I = IONIZATION TYPE P = PHOTOELECTRIC TYPE T = THERMAL TYPE
	MAGNETIC DOOR HOLD OPEN
D X	DETECTOR F = FLAME I = IONIZATION TYPE P = PHOTOELECTRIC TYPE T = THERMAL TYPE
B	BEAM DETECTOR
	PULL STATION/TELEPHONE JACK
S	DELUGE VALVE

-GROUNDING SYMBOLS-

SYMBOL	DESCRIPTION
	GROUND TEST WELL
	GROUNDING CONDUCTOR
	LIGHTNING PROTECTION AIR TERMINAL
	BONDING POINT
G	GROUND BAR
	ELECTRICAL GROUND
	GROUND ROD WITH INSPECTION TEST WELL
	PIGTAIL
	LIGHTNING ARRESTOR
	GROUNDING ROD
A	AERIAL ROD

-SPECIAL SYSTEMS DEVICES-

SYMBOL	DESCRIPTION
	DATA OUTLET BACKBOX
	CEILING MOUNTED DATA OUTLET BACKBOX
W	TELEPHONE OUTLET BACKBOX W = WALL PHONE 48" AFF
	TELEVISION JACK BACKBOX
	FLOOR MOUNTED DATA OUTLET BACKBOX
WP	WIRELESS ACCESS POINT (CEILING)
TTB	TELEPHONE TERMINAL BOARD
DTB	DATA TERMINAL BOARD
M	MICROPHONE OUTLET
S X	SPEAKER V = WITH INTEGRAL VOLUME CONTROL
S H	WALL MOUNTED SPEAKER
V H	WALL MOUNTED VOLUME CONTROL
C H	CLOCK RECEPTACLE OUTLET
	SECURITY CAMERA
T	THERMOSTAT

- GRAPHIC SYMBOLS -

SYMBOL	DESCRIPTION
1	KEY NOTE
#	REVISION NUMBER
1	DETAIL NOTE
X	X = DENOTES ALL LUMINAIRES IN THE RESPECTIVE AREA ARE THE TYPE INDICATED UNLESS NOTED OTHERWISE, REFER TO LUMINAIRE SCHEDULE
TAG	MECHANICAL EQUIPMENT TAG
	SHADING INDICATES EQUIPMENT
	HATCHING INDICATES EQUIPMENT
	HATCHING OR HEAVY SHORT DASH INDICATE TO BE REMOVED
A100	ROOM NUMBER
N	NORTH ARROW
1 / E2.1	DETAIL BUBBLE DETAIL NUMBER SHEET NUMBER - WHERE DETAIL IS SHOWN
1 / E2.1	SECTION CUT SECTION NUMBER/LETTER SHEET NUMBER - WHERE DETAIL IS SHOWN

- ABBREVIATIONS -

(E)	EXISTING
(N)	NEW
(PART)	PARTIAL CIRCUIT
+XX	MOUNTING HEIGHT IN INCHES, AFF UNO
A	AMP
AB	AMPS BRACING
AC	ABOVE COUNTER TOP
AF	AMP FRAME
AFC	ABOVE FINISHED COUNTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMPS INTERRUPTING CAPACITY
AS	AMPS SENSOR
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
BFC	BELOW FINISHED CEILING
C	CONDUIT
CAM	CONTROL ADDRESSABLE MODULE
CB	MOLDED CASE CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT T.V.
CKT	CIRCUIT
CLG	CEILING
CO	CONDUIT ONLY
CUH	CABINET UNIT HEATER
DMC	DUAL MODE CONTROLLER
DTB	DATA TERMINAL BOARD
DTC	DATA TERMINAL CABINET
E/G	ENGINE/GENERATOR
EC	EMPTY CONDUIT
EF	EXHAUST FAN
ELEC	ELECTRIC
ELEV	ELEVATION
EM	EM EMERGENCY
EMERG	EMERGENCY
EMS	ENERGY MANAGEMENT SYSTEM
EP	EXPLOSION PROOF
EWC	ELECTRIC WATER COOLER
EX	EXISTING
F	FUSE
FA	FIRE ALARM
FAA	FIRE ALARM ANNUNCIATOR
FACP	FIRE ALARM CONTROL PANEL
FAP	FIRE ALARM PANEL
FCU	FAN COIL UNIT
FIXT	FIXTURE
FLR	FLOOR
FLUOR	FLUORESCENT
FTU	FAN TERMINAL UNIT
G	GROUND (EQUIPMENT)
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GAF	GROUND FAULT INTERRUPTER
GND	GROUND (EQUIPMENT)
HC	HANDICAPED
HG	HOSPITAL GRADE
HP	HORSEPOWER
HT	HEAT TRACE
HV	HIGH VOLTAGE
IC	INTERRUPTING CAPACITY
ICAND	INCANDESCENT
IDF	INTERMEDIATE DISTRIBUTION FRAME

- ABBREVIATIONS -

IG	ISOLATED GROUND
JB	JUNCTION BOX
K	THOUSAND
LTG	LIGHTING
LTS	LIGHTS
LV	LOW VOLTAGE
MAM	MONITOR ADDRESSABLE MODULE
MATV	MASTER ANTENNA TV
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCSW	MOLDED CASE SWITCH
MDF	MAIN DISTRIBUTION FRAME
MDP	MAIN DISTRIBUTION PANEL
MH	MANHOLE
MLO	MAIN LUGS ONLY
MTD	MOUNTED
MTG	MOUNTING HEIGHT
N	NEUTRAL
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NF	NON FUSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
P	POLE
PA	PUBLIC ADDRESS
PB	PULL BOX
PIV	POST INDICATOR VALVE
PNL	PANEL
PWR	POWER
RCPT(S)	RECEPTACLE(S)
RF	RETURN AIR FAN
SBC	STRANDED BARE COPPER
SA	SUPPLY AIR FAN
SO	SPACE ONLY
SP	SPARE
SPD	SURGE PROTECTIVE DEVICE
ST	SHUNT TRIP
SW	SWITCH
T	TRANSFORMER
TEL	TELEPHONE
TF	TRANSFER FAN
TTB	TELEPHONE TERMINAL BOARD
TV	TELEVISION
UF	UNDERFLOOR
UG	UNDERGROUND
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTAGE
VFD	VARIABLE FREQUENCY DRIVE
VP	VAPOR PROOF
VV	VARIABLE VOLUME UNIT
W	WIRE
WG	WIRE GUARD
WP	WIRE PROOF
WT	WATERTIGHT
XFMR	TRANSFORMER
XP	EXPLOSION PROOF

GENERAL NOTES

ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH LOCAL BUILDING CODES AND THE NATIONAL ELECTRICAL CODE (NEC).

CONTRACTOR SHALL REFERENCE SPECIFICATIONS FOR CONSTRUCTION MATERIALS AND INSTALLATION PROCEDURES. SPECIFICATIONS ARE A PART OF THE CONSTRUCTION DOCUMENTS. SHOULD ANY CONFLICT ARISE BETWEEN THE DRAWINGS AND SPECIFICATIONS, SUCH CONLICT SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR RESOLUTION.

FIRE-SEAL ALL PENETRATIONS THROUGH RATED WALLS AND FLOORS WITH MATERIALS CAPABLE OF PREVENTING THE PASSAGE OF FLAMES AND HOT GASES WHEN SUBJECTED TO THE REQUIREMENTS OF THE TEST STANDARD SPECIFIC FOR FIRE STOPS ASTM E814.

DATA ON THE DRAWINGS IS AS EXACT AS COULD BE REASONABLY SECURED. ABSOLUTE ACCURACY IS NOT GUARANTEED. VERIFY EXACT LOCATIONS, MEASUREMENTS, LEVELS, SPACE REQUIREMENTS, POTENTIAL CONFLICTS WITH OTHER TRADES. ADAPT WORK TO ACTUAL CONDITIONS AT THE SITE. BEFORE SUBMITTING COSTS VISIT THE SITE TO BECOME THOROUGHLY FAMILIAR WITH THE ACTUAL CONDITIONS OF THIS PROJECT. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE; DO NOT SCALE. THESE DRAWINGS DO NOT SHOW MATERIALS FOR A COMPLETE INSTALLATION; PLAN THE INSTALLATION AND LAYOUT OF THE WORK AS DIAGRAMMED IN THESE DOCUMENTS. REFER TO FLOOR PLANS, SCHEMATICS AND DIAGRAMS OF OTHER TRADES FOR ELECTRICAL REQUIREMENTS, BRANCH CIRCUITS AND OTHER ELECTRICAL CONNECTIONS NOT INDICATED ON THESE DOCUMENTS.

JUNCTION BOXES FOR LUMINAIRES AND OUTLETS ARE NOT INDICATED. PROVIDE THE PROPER NUMBER OF JUNCTION BOXES TO MEET LOCAL CODE AND NATIONAL ELECTRICAL CODE.

EXECUTE THE WORK IN ACCORDANCE WITH SUPPORTING OBJECTS FOR SEISMIC ZONE REQUIRED BY STATE AND LOCAL CODES ALL CEILING ATTACHED OBJECTS AND FLOOR ATTACHED EQUIPMENT INCLUDING, BUT NOT LIMITED TO: PENDANT LIGHTING FIXTURES, GENERAL LIGHTING, MULTIPLE RACEWAYS, GENERATOR, TRANSFORMER, ELECTRICAL SWITCHGEAR, SWITCHBOARDS AND OTHER ELECTRICAL EQUIPMENT.

UP-TO-DATE ELECTRICAL RECORD DRAWINGS ARE NOT AVAILABLE FOR THIS PROJECT. INFORMATION FOR EXISTING CIRCUITRY IS BASED ON EXISTING PANEL DIRECTORIES, AVAILABLE DRAWINGS, AND ASSUMPTIONS. LOCATIONS AND INFORMATION FOR EXISTING ELECTRICAL DEVICES AND EQUIPMENT SHOWN ON THESE DOCUMENTS ARE APPROXIMATE AND WERE DERIVED FROM FIELD OBSERVATION AND AVAILABLE RECORD DRAWINGS. VERIFY ACTUAL FIELD CONDITIONS PRIOR TO STARTING WORK

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SALT LAKE CITY UTAH
PERMIT SET - 3-5-2024

LICENSED PROFESSIONAL ENGINEER
No. 9798512-2202
DANIEL V SANDBLOM
03/05/2024
STATE OF UTAH

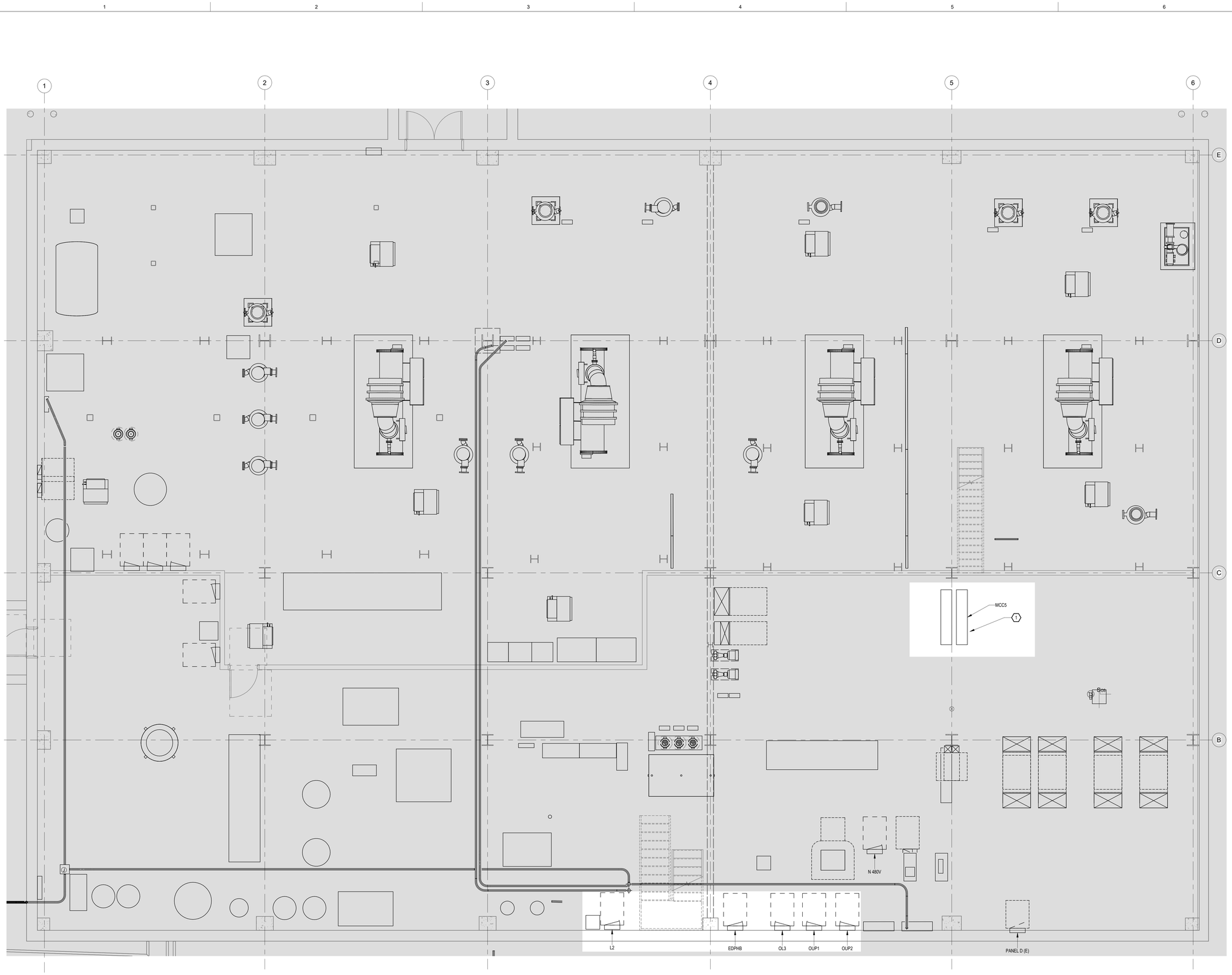
DATE REVISION

PROJECT NUMBER 18136

ELECTRICAL LEGEND

E-000-5

3/5/2024 8:10:02 AM



1 BASEMENT FLOOR - POWER PLAN

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

PLAN NORTH

TRUE NORTH

SHEET NOTES

1. REFER TO GENERAL NOTES ON ELECTRICAL LEGEND SHEET.
2. REFER TO SHEET E-110-5 FOR ONE-LINE.
3. REFER TO SHEET E-200-5 EQUIPMENT SCHEDULE FOR FEEDER AND CONDUIT SIZES AND MOTOR CONTROL CENTER SCHEDULE.
4. REFER TO SHEET E-104-5 FOR ROOF-MOUNTED EXHAUST FAN LOCATIONS.
5. COORDINATE FAN CONTROLS WITH DIVISION 23 CONTROLS CONTRACTOR.

KEY NOTES

1. PROVIDE 480V MOTOR CIRCUITS FROM EXISTING MCC-5. ROUTE FEEDERS IN CONDUIT FROM MCC TO NEW ROOF TOP EXHAUST FAN UNITS EF-1 AND EF-2 DISCONNECTS. REFER TO ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.

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U OF U BLDG. 303 SEISMIC UPGRADE - PHASE 5

SALT LAKE CITY UTAH

PERMIT SET - 3-5-2024

LICENSED PROFESSIONAL ENGINEER
No. 9788512-2202
DANIEL V SANDLOM
03/05/2024
STATE OF UTAH

DATE	REVISION

PROJECT NUMBER 18136

BASEMENT FLOOR - POWER PLAN

E-100-5

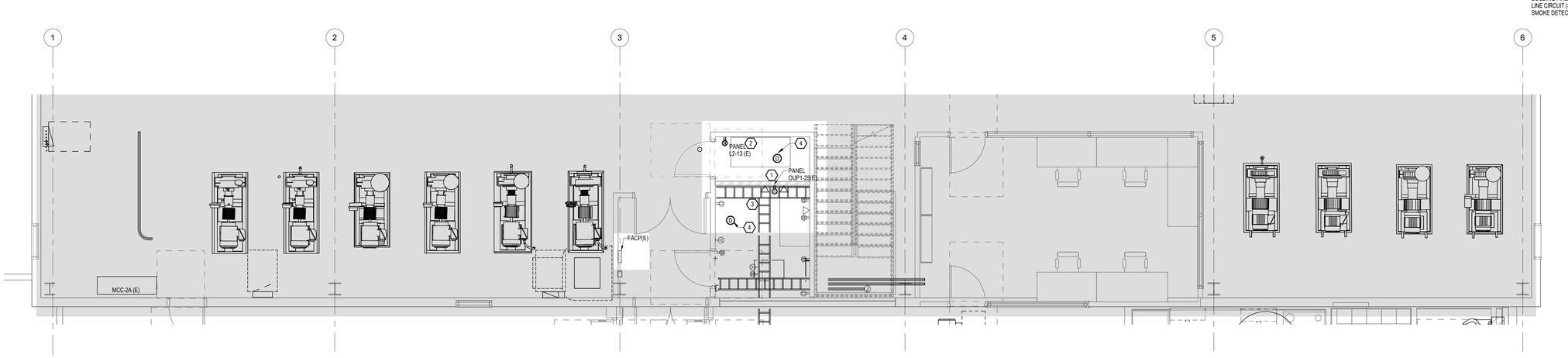
3/5/2024 8:10:13 AM

SHEET NOTES

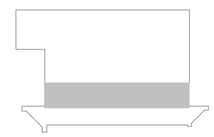
1. REFER TO GENERAL NOTES ON COVER SHEET.
2. LIGHT LINE WEIGHT INDICATES EXISTING (E). HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION (N).
3. PLANT SHALL REMAIN OPERATIONAL THROUGHOUT CONSTRUCTION TO SUPPLY HIGH-TEMPERATURE WATER AND CHILLED WATER TO THE CAMPUS. SEEK PERMISSION FROM PLANT PERSONNEL PRIOR TO SHUT-OFF OR TURN-ON ELECTRICAL POWER TO PLANT EQUIPMENT.
4. PROVIDE TEMPORARY POWER FOR SMALL TOOLS AND TASK LIGHTING.
5. PATCH AND PAINT ANY SURFACES DAMAGED DUE TO DEMOLITION AND CONSTRUCTION TO MATCH EXISTING CONDITIONS. SEAL ALL PENETRATIONS THROUGH RATED FLOORS AND WALLS WITH UL LISTED SEALANTS AND FIRESTOPPING MATERIALS.
6. THESE DRAWINGS HAVE BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS. DATA PRESENTED ON THIS DRAWING IS AS ACCURATE AS CAN BE DETERMINED, BUT ACCURACY IS NOT GUARANTEED. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NEITHER RESPONSIBLE FOR ITS ACCURACY, NOR ERRORS NOR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THESE DOCUMENTS. FIELD VERIFICATION OF ALL AFFECTED COMPONENTS IS REQUIRED. MAINTAIN FIRE ALARM SYSTEM OPERATION IN ALL AREAS OUTSIDE OF THE AREA OF WORK DURING CONSTRUCTION.
7. SPLICING WIRES TO NEW OR EXISTING FIRE ALARM DEVICES IS NOT ACCEPTABLE WITHOUT WRITTEN PERMISSION FROM OWNER.
8. THIS DRAWING DEPICTS ANTICIPATED QUANTITIES AND LOCATIONS OF FIRE ALARM SYSTEM DEVICES AND IS NOT INTENDED TO ILLUSTRATE A COMPLETE, DESIGNED SYSTEM. FIRE ALARM SYSTEM CONTRACTOR SHALL FIELD INVESTIGATE, DESIGN, COORDINATE, INSTALL, PROGRAM, TEST, AND COMMISSION THE NEW FIRE ALARM SYSTEM AS DEFINED IN THE SPECIFICATIONS AND IN ACCORDANCE WITH ALL APPLICABLE CODES AND OWNER STANDARDS. PROVIDE ALL FIRE ALARM SYSTEM COMPONENTS FOR A COMPLETE SYSTEM.
9. ALL NEW FIRE ALARM DEVICES SHALL BE COMPATIBLE WITH THE EXISTING FIRE ALARM SYSTEM.
10. THE LOCATIONS OF SMOKE DETECTORS ARE SHOWN DIAGRAMMATICALLY; FINAL LOCATIONS TO CONFORM WITH NFPA 72 AND MANUFACTURER'S REQUIREMENTS. IN FINISHED SPACES COORDINATE LOCATION OF FIRE ALARM SYSTEM COMPONENTS WITH ARCHITECT AND OWNER.
11. REFER TO SHEET E-100-5 FOR PANEL LOCATIONS.

KEY NOTES

1. RELOCATE EXISTING RECEPTACLE AND DATA PORTS TO NEW PROGRAMMERS ROOM WALL. MAINTAIN BRANCH CIRCUIT FROM SAME PANEL.
2. RELOCATE EXISTING RECEPTACLE TO NEW LOCATION BY STORAGE ROOM ENTRY WAY. MAINTAIN BRANCH CIRCUIT FROM SAME PANEL.
3. EXTEND EXISTING CABLE TRAY TO NEW PROGRAMMERS ROOM WALL. INSTALL NEW CABLE TRAY AS INDICATED.
4. PROVIDE SMOKE DETECTORS COMPATIBLE WITH THE INSTALLED BUILDING FIRE ALARM SYSTEM AND CONNECT TO THE LOCAL SIGNALING LINE CIRCUIT (SLC). PROVIDE PROGRAMMING INTO SYSTEM OF THE NEW SMOKE DETECTORS BY THE FIRE ALARM SERVICE COMPANY.



KEY PLAN



1 OPERATING FLOOR - POWER PLAN
SCALE: 1/4" = 1'-0"

PLAN NORTH TRUE NORTH

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SALT LAKE CITY UTAH
PERMIT SET - 3-5-2024



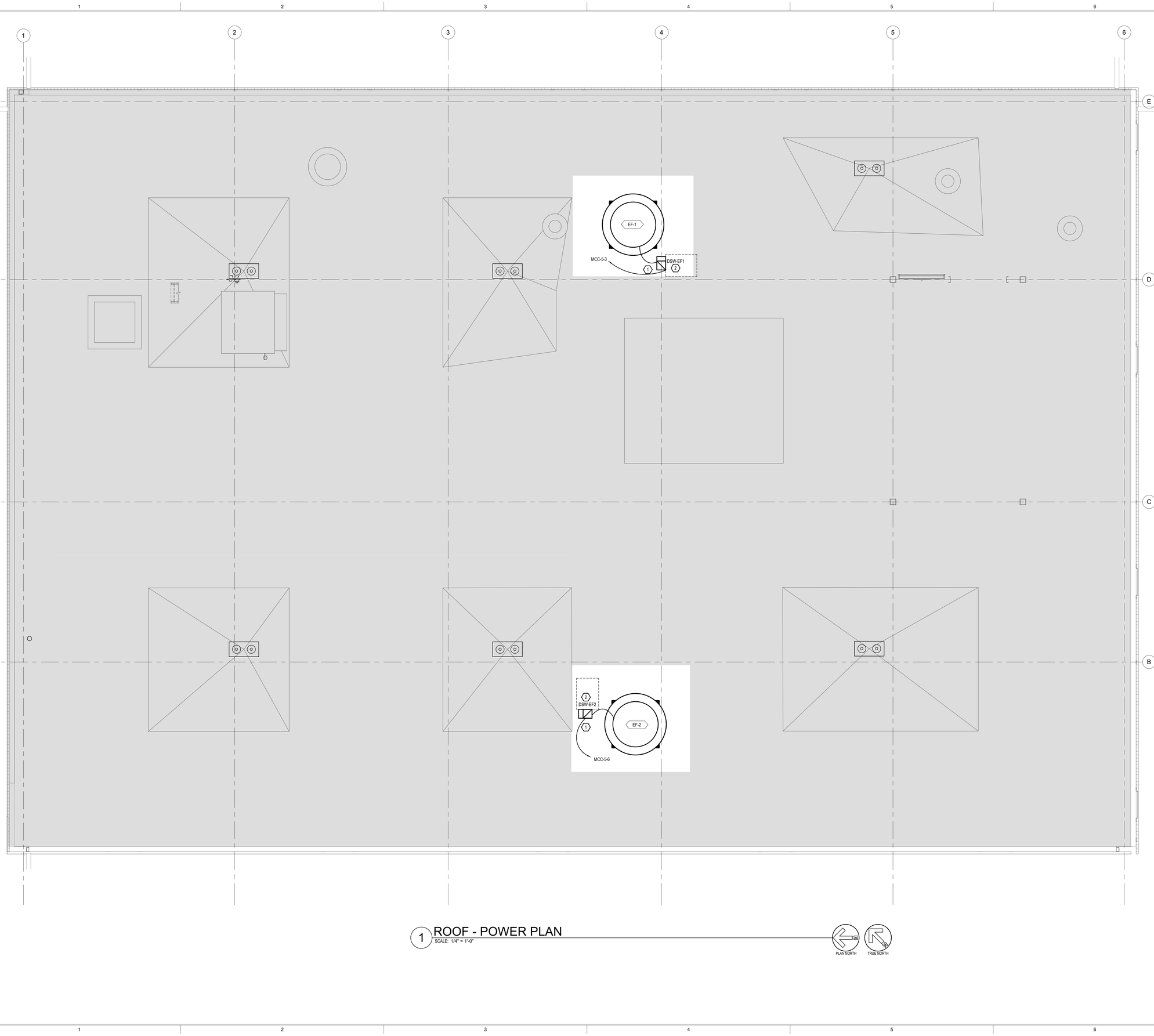
DATE	REVISION

PROJECT NUMBER 18136

OPERATING FLOOR - POWER PLAN

E-101-5

3/5/2024 8:10:17 AM



SHEET NOTES

1. REFER TO GENERAL NOTES ON COVER SHEET.
2. COORDINATE ALL ROOF PENETRATIONS WITH OWNER TO VERIFY SEAL AND ROOF WARRANTY COMPLIANCE.
3. REFER TO SHEET E-110-5 FOR ONE-LINE.
4. REFER TO SHEET E-200 -5 EQUIPMENT SCHEDULE FOR FEEDER SIZES.
5. REFER TO SHEET E-100-5 FOR MCC-5 LOCATION.
6. COORDINATE FAN CONTROLS WITH DIVISION 23 CONTROLS CONTRACTOR.

KEY NOTES

1. PROVIDE WEATHER PROTECTED ROOF PENETRATION FOR 460V FEEDER IN CONDUIT FROM EXISTING MCC-5. ROUTE FEEDER TO NEW EXHAUST FAN UNIT DISCONNECT SWITCH AND CONTINUE TO FAN UNIT. SEAL ALL PENETRATIONS WEATHERTIGHT.
2. COORDINATE WITH MECHANICAL EQUIPMENT INSTALLER TO PROVIDE FAN UNIT DISCONNECT SWITCH.

1 ROOF - POWER PLAN
SCALE: 1/4" = 1'-0"

PLAN NORTH TRUE NORTH

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SALT LAKE CITY UTAH

PERMIT SET - 3-5-2024

LICENSED PROFESSIONAL ENGINEER
No. 9788512-2202
DANIEL V. SANDBLOM
03/05/2024
STATE OF UTAH

DATE	REVISION

PROJECT NUMBER 18136

ROOF - POWER PLAN

E-104-5

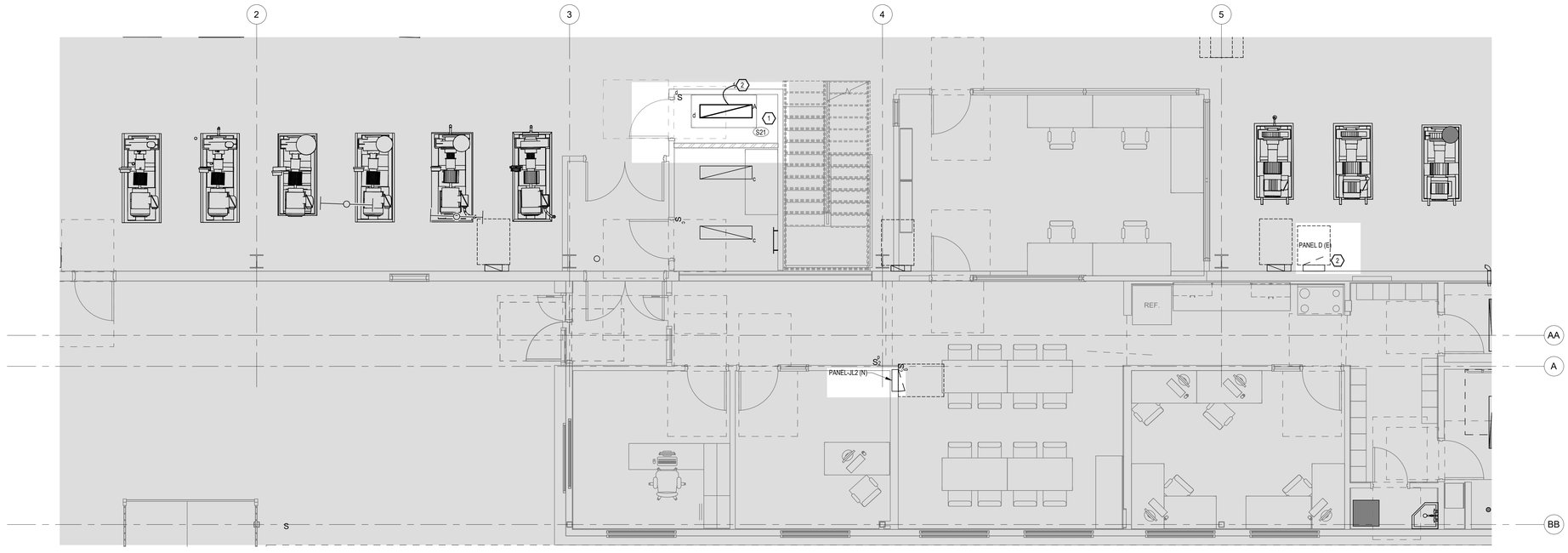
3/5/2024 8:10:18 AM

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING (E). HEAVY LINE WEIGHT INDICATES NEW CONSTRUCTION (N).
2. PLANT SHALL REMAIN OPERATIONAL THROUGHOUT CONSTRUCTION TO SUPPLY HIGH-TEMPERATURE WATER AND CHILLED WATER TO THE CAMPUS. SEEK PERMISSION FROM PLANT PERSONNEL PRIOR TO SHUT-OFF OR TURN-ON ELECTRICAL POWER TO PLANT EQUIPMENT.
3. PROVIDE TEMPORARY POWER FOR SMALL TOOLS AND TASK LIGHTING.
4. PATCH AND PAINT ANY SURFACES DAMAGED DUE TO DEMOLITION AND CONSTRUCTION TO MATCH EXISTING CONDITIONS. SEAL ALL PENETRATIONS THROUGH RATED FLOORS AND WALLS WITH UL LISTED SEALANTS AND FIRESTOPPING MATERIALS.
5. THESE DRAWINGS HAVE BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS. DATA PRESENTED ON THIS DRAWING IS AS ACCURATE AS CAN BE DETERMINED, BUT ACCURACY IS NOT GUARANTEED. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NEITHER RESPONSIBLE FOR ITS ACCURACY, NOR ERRORS NOR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THESE DOCUMENTS. FIELD VERIFICATION OF ALL AFFECTED COMPONENTS IS REQUIRED.
6. REFER TO SHEET E-110-5 FOR ONE-LINE.
7. REFER TO SHEET E-200-5 FOR PANEL SCHEDULES AND LIGHTING FIXTURE SCHEDULE. .

KEY NOTES

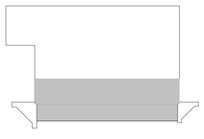
1. PROVIDE NEW LIGHTING FIXTURE AND SWITCH IN STORAGE ROOM. PROVIDE LIGHTING CONTROLS COMPATIBLE WITH THE COOPER WAVELINX CONTROL SYSTEM CURRENTLY INSTALLED.
2. EXTEND EXISTING BRANCH CIRCUIT FOR CONTROL ROOM LIGHTING.



1 OPERATING FLOOR - ELECTRICAL LIGHTING PLAN
SCALE: 1/4" = 1'-0"

PLAN NORTH TRUE NORTH

KEY PLAN



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SALT LAKE CITY UTAH
PERMIT SET - 3-5-2024

LICENSED PROFESSIONAL ENGINEER
No. 9788122-2202
DANIEL V. SANDBLOM
03/05/2024
STATE OF UTAH

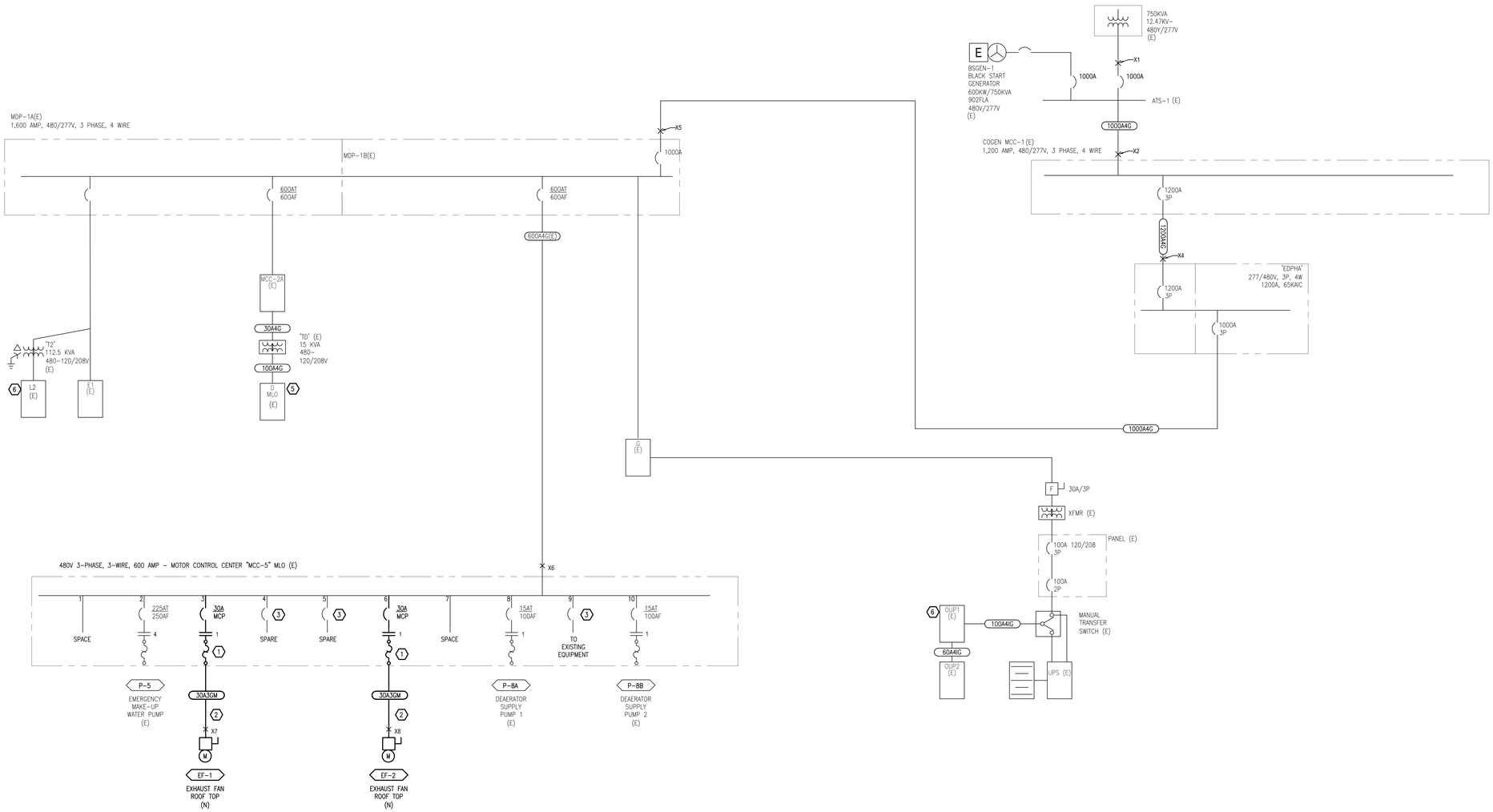
	DATE	REVISION

PROJECT NUMBER 18136

OPERATING FLOOR - ELECTRICAL LIGHTING PLAN

EL-201-5

3/5/2024 8:10:21 AM



1 MOTOR CONTROL CENTER "MCC-5" ONE-LINE DIAGRAM
E110 SCALE: NONE

FEEDER SCHEDULE

KEY	CONDUIT & CONDUCTORS [SEE NOTE 1]	REMARKS
30A3GM	3/4 C - 3#10, 1#10G	NOTE 6
600A4G	2 [3" C - 4#350, 1#1G]	
1200A4G	4 [3" C - 4#350, 1#3/0G]	
60A3GM	1" C - 3#4, 1#10G	

FEEDER SCHEDULE NOTES:

1. THE NOMINAL CONDUCTOR AMPACITIES AND CONDUIT SIZES IN THIS FEEDER SCHEDULE ARE BASED ON COPPER CONDUCTORS, 60 DEGREE CENTIGRADE TERMINATIONS AND TYPE TW CONDUCTORS FOR SIZES #14 TO #1, AND 75 DEGREE CENTIGRADE TERMINATIONS AND TYPE THW CONDUCTORS FOR SIZES #1/0 AND LARGER. UNLESS NOTED OTHERWISE, CONDUIT IS SIZED BASED ON TYPE EMT CONDUIT. CONDUCTOR AMPACITIES ARE BASED ON 30 DEG C (86 DEG F) AMBIENT TEMPERATURE. USE OF OTHER CONDUIT, CONDUCTOR TYPES, AND AMBIENT TEMPERATURE CONDITIONS REQUIRES CONTRACTOR TO RE-EVALUATE CONDUCTOR AMPACITY AND CONDUIT SIZE. MODIFICATIONS MUST BE SUBMITTED FOR ENGINEER'S REVIEW AND CONFIRMATION.

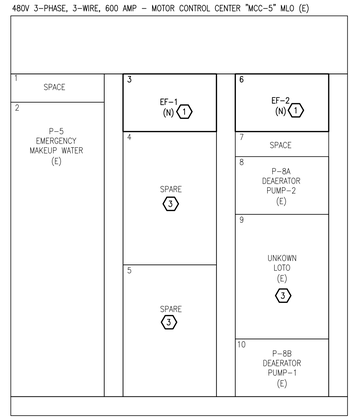
SHORT CIRCUIT SCHEDULE

Fault Contributions

Utility contribution: 750 kVA, 480 V, 3 PH, 5.32% Z	16,957 A
Total system motor contribution: 600 FLA	3,600 A
Total fault current from all sources	20,557 A

Point Fault Calculations

POINT	DESCRIPTION	Required Short Circuit Bracing	Short Circuit Isc SYM RMS	Line-Line Voltage V	Length of Run (Note 1)
X1	Service Transformer to ATS	25,000	20,350	480	10
X2	ATS TO MCC-1	20,000	18,152	480	150
X3	MCC-1 TO TF FFP1A TF	14,000	9,779	480	50
X4	MCC-1 to SWBD EDPHA	20,000	16,489	480	140
X5	SWBD EDPHA to SWBD MDP	18,000	16,159	480	25
X6	SWBD MDP to MCC-5	18,000	15,186	480	50
X7	MCC-5 to EF-1	10,000	1,619	480	150
X8	MCC-5 to EF-2	10,000	1,619	480	150



2 MOTOR CONTROL CENTER "MCC-5" ELEVATION DIAGRAM
E110 SCALE: NONE

SHEET NOTES

1. LIGHT LINE WEIGHT INDICATES EXISTING (E) . HEAVY LINE WEIGHT INDICATES NEW (N) CONSTRUCTION.
2. POWER DISTRIBUTION LUG SIZES ARE NOT INDICATED ON THIS DRAWING. ENSURE THAT ALL LUGS ARE SIZED TO ACCOMMODATE THE FEEDERS LISTED IN THE FEEDER SCHEDULE BELOW.
3. PATCH AND PAINT ANY SURFACES DAMAGED DUE TO DEMOLITION AND CONSTRUCTION TO MATCH EXISTING CONDITIONS. SEAL ALL PENETRATIONS THROUGH RATED FLOORS AND WALLS WITH UL LISTED SEALANTS AND FIRESTOPPING MATERIALS.
4. THESE DRAWINGS HAVE BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS. DATA PRESENTED ON THIS DRAWING IS AS ACCURATE AS CAN BE DETERMINED, BUT ACCURACY IS NOT GUARANTEED. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NEITHER RESPONSIBLE FOR ITS ACCURACY, NOR ERRORS NOR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THESE DOCUMENTS. FIELD VERIFICATION OF ALL AFFECTED COMPONENTS IS REQUIRED.
5. REFER TO SHEET E-200-5 FOR ELECTRICAL SCHEDULES AND EQUIPMENT SCHEDULE.
6. REFER TO SHEETS E-100-5, AND E-104-5 FOR EQUIPMENT LOCATIONS.
7. COORDINATE FAN CONTROLS WITH DIVISION 23 CONTROLS CONTRACTOR.

KEY NOTES

1. PROVIDE NEW MCP STARTER FOR NEW EXHAUST FAN IN EXISTING SPARE BUCKET. SIZE EQUIPMENT TO AIC RATING 18,000 AMPS.
2. PROVIDE NEW BRANCH CIRCUIT IN CONDUIT FROM MCC-5 FOR NEW 460V EXHAUST FAN. PROVIDE ROOF PENETRATION FOR CONDUIT AND ROUTE BRANCH CIRCUIT IN CONDUIT TO FAN UNIT THROUGH DISCONNECT SWITCH.
3. EXISTING BREAKER OR STARTER SIZE IN MCC NOT KNOWN. DETERMINE BREAKER AND STARTER SIZE DURING OUTAGE AND UPDATE DRAWINGS.
5. BRANCH CIRCUIT EXTENDED TO NEW LIGHT FIXTURE. REFER TO SHEET EL201-5 FOR DETAILS.
6. RECEPTACLE STORAGE ROOM RELOCATIONS TO MAINTAIN EXISTING BRANCH CIRCUIT, REFER TO SHEET E101-5 FOR DETAILS.

OUTAGE NOTES

1. COORDINATE AND SCHEDULE ALL ELECTRICAL OUTAGES AND OUTAGE TIME FRAMES WITH OWNER'S REPRESENTATIVE AT LEAST TWO WEEKS PRIOR TO OUTAGE.
2. SUBMIT A DETAILED METHOD OF PROCEDURE (MOP) FOR OUTAGES FOUR WEEKS PRIOR TO OUTAGE.
3. PERFORM OUTAGES DURING OFF HOURS AT A TIME ACCEPTABLE BY THE OWNER.
4. ACCOMPLISH ALL PREP WORK PRIOR TO OUTAGE TO MINIMIZE THE OUTAGE TIME FRAME.
5. PROVIDE TEMPORARY POWER FOR ALL CONSTRUCTION NEEDS.

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U OF U BLDG. 303 SEISMIC UPGRADE - PHASE 5
SALT LAKE CITY UTAH
PERMIT SET - 3-5-2024

LICENSED PROFESSIONAL ENGINEER
No. 9788512-2202
DANIEL V SANDBLOM
03/05/2024
STATE OF UTAH

Δ	DATE	REVISION

PROJECT NUMBER 21486/21632

ELECTRICAL ONE-LINE

E-110-5

5/7/2019 11:13:15 AM

Motor Control Center Schedule

Version_0519

NAME: **MCC-5 (E)**

N/A MCB
80% RATED
MLO MAIN LUGS
600 AMP BUSING
COPPER BUSING
10000 SYM RMS AMPS PANEL SHORT CIRCUIT RATING
144 Amps MINIMUM AMPACITY

TYPE: INDOOR
DEPTH: 20 INCHES
FED FROM MDP-1B
VOLTAGE 277/480 V.
WIDTH: 20 INCHES PER SECTION
PHASE 3 PH
NEUTRAL BUS: YES
WIRE 4 W
GROUND BUS: YES
HZ 60
GENERAL NOTES 1. EXISTING MCC
2. NEW CIRCUIT BREAKER/MOTOR STARTER
3. ADJUST OVERLOADS BASED ON NAMEPLATE CURRENT
4. SEE E-110-5 FOR REQUIRED STARTER AIC RATING

Circuit #	Equipment Identification (See Note 1)	Motor Data HP	Phase	Terminal Voltage	FLA	Circuit Total kVA	Function Code(s)	NEMA Size STARTER	Breaker/Fuse Size Type	OCP Size	Remarks
1	SPACE	- -	--	--	--	- -	--	--	- -	-- / --	
2	P-5 EMERGENCY MAKE-UP	75	3	460	98.0	78.48	FVNR	4	MCP	225 / 3	
3	EF-1 (N)	10	3	460	14.0	11.15	FVNR	1	MCP	30 / 3	NOTE 2, 3
4	SPARE (UNKNOWN SIZE)										
5	SPARE (UNKNOWN SIZE)										
6	EF-2 (N)	10	3	460	14.0	11.15	FVNR	1	MCP	30 / 3	NOTE 2, 3
7	SPARE										
8	P-8A DEAERATOR PUMP (E)	3/4	3	460	1.6	1.27	FVNR	1	MCP	15 / 3	
9	UNKNOWN	- -	--	--	--	- -	--	--	- -	-- / --	
10	P-8B DEAERATOR PUMP (E)	3/4	3	460	1.6	1.27	FVNR	1	MCP	15 / 3	

Function Code(s):
FVNR = Full Voltage Non-Reversing
FVR = Full Voltage Reversing
2S1W = Two Speed, One Winding
2S2W = Two Speed, Two Winding
VSD = Variable Speed Drive
SSRVS = Solid State Reduced Voltage

Power Factor:	80%
Minimum MCC Ampacity:	144 Amps

LOAD TYPE	CONNECTED LOAD		POWER FACTOR	kVA	DEMAND FACTOR	NEC Calculated LOAD
INCANDESCENT	0.0	kW @	100%	0.0	125%	0.0 kVA
INDUCTIVE	0.0	kW @	95%	0.0	125%	0.0 kVA
RECEPTACLES						
FIRST 10 kVA	0.0	kW @	95%	0.0	100%	0.0 kVA
REMAINDER	0.0	kW @	95%	0.0	50%	0.0 kVA
MOTORS						
LARGEST	61.2	kW @	80%	76.5	125%	95.6 kVA
REMAINDER	19.8	kW @	80%	24.8	100%	24.8 kVA
APPLIANCES	0.0	kW @	80%	0.0	100%	0.0 kVA
HEAT	0.0	kW @	100%	0.0	100%	0.0 kVA
COMPUTER	0.0	kW @	95%	0.0	100%	0.0 kVA
OTHER	0.0	kW @	85%	0.0	100%	0.0 kVA
NONCOINCIDENT	0.0	kW @	85%	0.0	0%	0.0 kVA
PEAK LOAD	0.0	kW @	95%	0.0	125%	0.0 kVA
0% SPARE	0.0	kW @	95%	0.0	100%	0.0 kVA
TOTAL	81.0	kW		101	kVA	120 kVA

PANEL: D (E)

VOLTAGE: 120/240 V.
1 PH 3 W. 60 HZ
TYPE: LIGHTING & APPLIANCE
MOUNTING: SURFACE
PANEL COVER: SURFACE
NEUTRAL BUS: YES
GROUND BUS: YES ISOLATED GND: NO
NOTE: 1. EXISTING PANEL
2. ADD FIXTURE TO CIRCUIT
3. [ ]
4. [ ]

FED FROM: MCC-2A
N/A AMP MAIN RATED AT 80%
MLO AMP MAIN LUGS
100 AMP BUS
COPPER BUSING
10000 SYMMETRICAL RMS AMPS
PANEL SHORT CIRCUIT RATING

NOTE	DESCRIPTION	CCT VA	BREAKER AMP / P	CCT PH	CCT	BREAKER AMP / P	CCT VA	DESCRIPTION	NOTE
	JCBO L.R. PANEL BASEMENT	200	20 / 1		1 A 2	20 / 1	460	LTG. PIPING FL. HIGH BAG	
	JCBO CONSOLE CONTROL ROOM	800	20 / 1		3 B 4	20 / 1	460	LTG. PIPING FL. GEN #3&4	
	LTG. PIPING FL. HIGH BAG	200	20 / 1		5 A 6	20 / 1	460	LTG. PIPING FL. GEN. #4	
	LTG. OPERATING FL., GEN. #4	460	20 / 1		7 B 8	20 / 1	460	LTG. BASEMENT WEST HALF	
	LTG. STAIRWAY	460	20 / 1		9 A 10	20 / 1	460	LTG. BASEMENT WEST HALF	
	LTG. BASEMENT GEN. #5	460	20 / 1		11 B 12	20 / 1	460	LTG. BASEMENT GEN. #3	
	LTG. BASEMENT GEN. #4 & 5	460	20 / 1	13	13 A 14	20 / 1	642	LTG. CONTROL RM SERVER RM	2
	LTG. OPERATING FL. SO. WEST	460	20 / 1		15 B 16	20 / 1	460	LTG. CONTROL ROOM	
	LTG. OPERATING FL. SO. WEST	460	20 / 1		17 A 18	20 / 1	460	LTG. OPERATING FL. SO. EAST	
	LTG. PIPING FL. SO WEST	460	20 / 1		19 B 20	20 / 1	360	PIPING FL. RELAY RACKS	
	LTG. FAN FL. SO. WEST	460	20 / 1		21 A 22	20 / 1	360	PLUGS BASEMENT WEST WALL &	
	LTG. FAN FL. GEN. #4	460	20 / 1		23 B 24	20 / 1	360	PLUGS B CEMENT EAST WALL	
	LTG. FAN FL. GEN #3	460	20 / 1		25 A 26	20 / 1	300	O2 ANALYZER GEN #5	
	O2 ANALYZER GEN #3	300	20 / 1		27 B 28	20 / 1	200	CONTROL CIRC. EXPANSION DRU	
	O2 ANALYZER GEN #4	300	20 / 1		29 A 30	20 / 1	200	ANNUN. & CHART DR GEN #1	
	PLUGS FAN FL.	360	20 / 1		31 B 32	20 / 1	360	BTU METERS GEN #3,4,5	
	PLUGS PIPING FL.	360	20 / 1		33 A 34	20 / 1	360	PLUGS OPERATINTG FL. SO. WES	
	OUTSIDE BLDG. LTG.	800	20 / 1		35 B 36	20 / 1	360	PLUGS SHOP CORRIDOR/CTRL R	
	PLUG BY ROLL UP DOOR	180	20 / 1		37 A 38	20 / 1	460	LTG. AND PLUGS ROOF	
	PLUGS, OPERATING FL. SO EAST	360	20 / 1		39 B 40	20 / 1	460	LTG. CONTROL ROOM	
	EXHAUST FAN CONTROL ROOM	360	20 / 1		41 A 42	20 / 1	180	CHART DR. GEN #3,4,5	

PANEL LOADING SUMMARY

LOAD TYPE	PH A	PH B	TOTAL
INCANDESCENT	0.0	0.0	0.0 kVA
INDUCTIVE LTG	5.8	5.8	11.6 kVA
RECEPTACLES	1.3	2.6	3.9 kVA
MOTORS	0.0	0.0	0.0 kVA
APPLIANCES	1.2	0.5	1.7 kVA
HEAT	0.0	0.0	0.0 kVA
COMPUTER	0.0	0.0	0.0 kVA
OTHER	0.0	0.0	0.0 kVA
NONCOINCIDENT	0.0	0.0	0.0 kVA
PEAK LOAD	0.0	0.0	0.0 kVA
TOTAL	8.2	8.9	17.1 kVA

NEC DEMAND LOAD SUMMARY

LOAD TYPE	kW		FACT	kVA	POWER FACTOR	DEMAND LOAD	CALCULATED
INCANDESCENT	0.0	@	100%	= 0.0	@ 125%	= 0.0	kVA
INDUCTIVE LTG	11.0	@	95%	= 11.6	@ 125%	= 14.5	kVA
RECEPTACLES							
FIRST 10 kVA	3.7	@	95%	= 3.9	@ 100%	= 3.9	kVA
REMAINDER	0.0	@	95%	= 0.0	@ 50%	= -	kVA
MOTORS							
LARGEST	0.0	@	80%	= 0.0	@ 125%	= 0.0	kVA
REMAINDER	0.0	@	80%	= 0.0	100%	= 0.0	kVA
APPLIANCES	1.3	@	80%	= 1.7	@ 100%	= 1.7	kVA
HEAT	0.0	@	100%	= 0.0	@ 125%	= 0.0	kVA
COMPUTER	0.0	@	95%	= 0.0	@ 100%	= 0.0	kVA
OTHER	0.0	@	85%	= 0.0	@ 100%	= 0.0	kVA
NONCOINCIDENT	0.0	@	95%	= 0.0	@ 0%	= -	kVA
PEAK LOAD	0.0	@	90%	= 0.0	@ 125%	= 0.0	kVA
0 % SPARE	0.0	@	90%	= 0.0	@ 100%	= 0.0	kVA
TOTAL	16.0	kW		17.1	kVA	20.1	kVA

Version 1217

PHASE BALANCE (%)	A-B	PF
	92	94

MIN PANEL AMPACITY	84	AMPERES

PANEL: PANEL L2(E)

VOLTAGE: 120/208 V.
3 PH 4 W. 60 HZ
TYPE: PANELBOARD
MOUNTING: SEE PLAN
PANEL COVER: (SEE SPECIFICATIONS)
NEUTRAL BUS: YES
GROUND BUS: YES ISOLATED GND: NO
NOTE: 1. EXISTING PANEL BASEMENT FLOOR
2. SERVED BY MDP-1A
3. [ ]
4. [ ]

FED FROM: T-T2
N/A AMP MAIN RATED AT 80%
MLO AMP MAIN LUGS
400 AMP BUS
(SEE SPECIFICATIONS) BUSING
(SEE FAULT SCHEDULE) SYMMETRICAL RMS AMPS
PANEL SHORT CIRCUIT RATING

NOTE	DESCRIPTION	CCT VA	BREAKER AMP / P	CCT PH	CCT	BREAKER AMP / P	CCT VA	DESCRIPTION	NOTE
	PANEL OL3	9000	100 / --		1 A 2	100 / --	0	SPARE	
	* *	9000	-- / --		3 B 4	-- / 2	0	*	
	* *	9000	-- / 3		5 C 6	100 / --	12000	PANEL B	
	UNKNOWN	0	20 / --		7 A 8	/ 2	12000		
	* *	0	-- / 2		9 B 10	100 / --	12000	PANEL C	
	SPACE	0	20 / 1		11 C 12	/ 2	12000		
	RECEPTACLES SERVER RM	540	20 / 1		13 A 14	20 / 1	900	UNKNOWN	
	RECEPTACLES CTRL RM	900	20 / 1		15 B 16	30 / --	3000	WELDING PLUG	
	QUAD RECEPTACLE CTRL RM	360	20 / 1		17 C 18	-- / 2	3000	* *	
	FAN COIL - TELECOM RM	667	15 / 1		19 A 20	100 / --	0	SPARE	
	SPACE	0	- / --		21 B 22	-- / 2	0	SPACE	
	SPACE	0	- / --		23 C 24	-- / --	0	SPACE	
	SPACE	0	- / --		25 A 26	-- / --	0	SPACE	
	SPACE	0	- / --		27 B 28	-- / --	0	SPACE	
	SPACE	0	- / --		29 C 30	-- / --	0	SPACE	

PANEL LOADING SUMMARY

LOAD TYPE	PH A	PH B	PH C	TOTAL
INCANDESCENT	0.0	0.0	0.0	0.0 kVA
INDUCTIVE LTG	0.0	0.0	0.0	0.0 kVA
RECEPTACLES	0.5	3.9	3.4	7.8 kVA
MOTORS	0.7	0.0	0.0	0.7 kVA
APPLIANCES	0.0	0.0	0.0	0.0 kVA
HEAT	0.0	0.0	0.0	0.0 kVA
COMPUTER	0.0	0.0	0.0	0.0 kVA
OTHER	21.9	21.0	33.0	75.9 kVA
NONCOINCIDEN	0.0	0.0	0.0	0.0 kVA
PEAK LOAD	0.0	0.0	0.0	0.0 kVA
TOTAL	23.1	24.9	36.4	84.0 kVA

PHASE BALANCE	A-B	B-C	C-A	PF
(%)	94	59	53	86

MIN PANEL AMPACITY	235	AMPERES

NEC DEMAND LOAD SUMMARY

LOAD TYPE	kW		FACT	kVA	POWER FACTOR	DEMAND LOAD	CALCULATED
INCANDESCENT	0.0	@	100%	= 0.0	@ 125%	= 0.0	kVA
INDUCTIVE LTG	0.0	@	95%	= 0.0	@ 125%	= 0.0	kVA
RECEPTACLES							
FIRST 10 kVA	7.4	@	95%	= 7.8	@ 100%	= 7.8	kVA
REMAINDER	0.0	@	95%	= 0.0	@ 50%	= -	kVA
MOTORS							
LARGEST	0.5	@	80%	= 0.7	@ 125%	= 0.8	kVA
REMAINDER	0.0	@	80%	= 0.0	@ 100%	= 0.0	kVA
APPLIANCES	0.0	@	80%	= 0.0	@ 100%	= 0.0	kVA
HEAT	0.0	@	100%	= 0.0	@ 125%	= 0.0	kVA
COMPUTER	0.0	@	95%	= 0.0	@ 100%	= 0.0	kVA
OTHER	64.5	@	85%	= 75.9	@ 100%	= 75.9	kVA
NONCOINCIDEN	0.0	@	95%	= 0.0	@ 0%	= -	kVA
PEAK LOAD	0.0	@	90%	= 0.0	@ 125%	= 0.0	kVA
0 % SPARE	0.0	@	90%	= 0.0	@ 100%	= 0.0	kVA
TOTAL	72.0	kW		84.0	kVA	94.5	kVA

Version 0816a

PANEL: OUP1 (E)

VOLTAGE: 120/240 V.
1 PH 3 W. 60 HZ
TYPE: LIGHTING & APPLIANCE
MOUNTING: SEE PLAN
PANEL COVER: (SEE SPECIFICATIONS)
NEUTRAL BUS: YES
GROUND BUS: YES ISOLATED GND: NO
NOTE: 1. EXISTING PANELBOARD
2. SERVED BY EXISTING MTS
3. 0
4. [ ]

FED FROM: MTS (E)
100 AMP MAIN RATED AT 80%
N/A AMP MAIN LUGS
100 AMP BUS
COPPER BUSING
10000 SYMMETRICAL RMS AMPS
PANEL SHORT CIRCUIT RATING

NOTE	DESCRIPTION	CCT VA	BREAKER AMP / P	CCT PH	CCT	BREAKER AMP / P	CCT VA	DESCRIPTION	NOTE
	PC & HMI REC	200	20 / 1		1 A 2	20 / --	200	PANEL OUP2	
	GEN 6 CONTROL	200	20 / 1		3 B 4	-- / 2	200	* *	
	FLOW METER	200	20 / 1		5 A 6	30 / --	3600	RECEPTACLE CTRL RM	
	FLOW METER	200	20 / 1		7 B 8	-- / 2	3600	* *	
	GEN 7 CONTROL	200	20 / 1		9 A 10	20 / 1	720	RECEPTACLES CTRL RM	
	CTRL & VALVE POWER	200	20 / 1		11 B 12	20 / 1	0	SPARE	
	CTRL & VALVE POWER	200	20 / 1		13 A 14	20 / 1	0	SPARE	
	RECEPTACLES SERVER RM	1080	20 / 1		15 B 16	20 / 1	0	SPARE	
	RECEPTACLE SERVER RM	3600	30 / --		17 A 18	20 / 1	0	SPARE	
	* *	3600	-- / 2		19 B 20	20 / 1	0	SPARE	
	RECEPTACLE SERVER RM	3600	30 / --		21 A 22	20 / 1	0	SPARE	
	* *	3600	-- / 2		23 B 24	20 / 1	0	SPARE	
	RECEPTACLES SERVER RM	360	20 / 1		25 A 26	20 / 1	0	SPARE	
	SPARE	0	20 / 1		27 B 28	20 / 1	0	SPARE	
	SPARE	0	20 / 1		29 A 30	20 / 1	0	SPARE	

PANEL LOADING SUMMARY

LOAD TYPE	PH A	PH B	TOTAL
INCANDESCENT	0.0	0.0	0.0 kVA
INDUCTIVE LTG	0.0	0.0	0.0 kVA
RECEPTACLES	12.1	11.9	24.0 kVA
MOTORS	0.0	0.0	0.0 kVA
APPLIANCES	0.0	0.0	0.0 kVA
HEAT	0.0	0.0	0.0 kVA
COMPUTER	0.0	0.0	0.0 kVA
OTHER	0.8	0.8	1.6 kVA
NONCOINCIDENT	0.0	0.0	0.0 kVA
PEAK LOAD	0.0	0.0	0.0 kVA
TOTAL	12.9	12.7	25.6 kVA

PHASE BALANCE (%)	A-B	PF
	98	95

MIN PANEL AMPACITY	78	AMPERES

NEC DEMAND LOAD SUMMARY

LOAD TYPE	kW		FACT	kVA	POWER FACTOR	DEMAND LOAD	CALCULATED
INCANDESCENT	0.0	@	100%	= 0.0	@ 125%	= 0.0	kVA
INDUCTIVE LTG	0.0	@	95%	= 0.0	@ 125%	= 0.0	kVA
RECEPTACLES							
FIRST 10 kVA	9.5	@	95%	= 10.0	@ 100%	= 10.0	kVA
REMAINDER	13.3	@	95%	= 14.0	@ 50%	= 7.0	kVA
MOTORS							
LARGEST	0.0	@	80%	= 0.0	@ 125%	= 0.0	kVA
REMAINDER	0.0	@	80%	= 0.0	100%	= 0.0	kVA
APPLIANCES	0.0	@	80%	= 0.0	@ 100%	= 0.0	kVA
HEAT	0.0	@	100%	= 0.0	@ 125%	= 0.0	kVA
COMPUTER	0.0	@	95%	= 0.0	@ 100%	= 0.0	kVA
OTHER	1.4	@	85%	= 1.6	@ 100%	= 1.6	kVA
NONCOINCIDEN	0.0	@	95%	= 0.0	@ 0%	= -	kVA
PEAK LOAD	0.0	@	90%	= 0.0	@ 125%	= 0.0	kVA
0 % SPARE	0.0	@	90%	= 0.0	@ 100%	= 0.0	kVA
TOTAL	24.2	kW		25.6	kVA	18.8	kVA

Version 1217

EQUIPMENT SCHEDULE

KEY	ITEM DESCRIPTION (SEE NOTE 1)	VOLTS	PH	MOTOR HP	UNIT FLA	UNIT KVA	UNIT KW	PANEL (SEE NOTE 2)	BREAKER SIZE	MOTOR CIRCUIT KEY	MOTOR CIRCUIT	MINIMUM SCCR (kA) (SEE NOTE 1)	STARTER / CONTROLLER TYPE	STARTER / CONTROLLER SIZE	STARTER / CONTROLLER LOCATION	LOCAL DISC. SW. (SEE NOTE 3)	DISC. LOCATION (SEE NOTE 4)	REMARKS
EF-1	ROOF-MOUNTED EXHAUST FAN 1	460	3	10	14.0	11.2	9.0	MCC-5	30.0	30A3GM	3/4" C - 3#10, 1#10G	1	FVNR	1	MCC	20A, 3P	AT UNIT	- -
EF-2	ROOF-MOUNTED EXHAUST FAN 2	460	3	10	14.0	11.2	9.0	MCC-5	30.0	30A3GM	3/4" C - 3#10, 1#10G	1	FVNR	1	MCC	20A, 3P	AT UNIT	- -

NOTES:
1. COORDINATE ELECTRICAL EQUIPMENT REQUIREMENTS WITH THE ACTUAL MECHANICAL EQUIPMENT SUPPLIED. VERIFY THE COMPONENT OR EQUIPMENT MARKED NAMEPLATE SCCR IS EQUAL TO OR GREATER THAN THE AVAILABLE FAULT CURRENT INDICATED. IF THE NAMEPLATE SCCR IS LESS THAN THE AVAILABLE FAULT CURRENT, PROTECT COMPONENT OR EQUIPMENT TO AVAILABLE SHORT-CIRCUIT CURRENT INDICATED ACCORDING TO ANSI/UL 508A, SUPPLEMENT SB, USING NRTL LISTED COMPONENTS. SUBMIT FOR REVIEW COMPONENTS DATA AND TIME-CURRENT CURVES SUBSTANTIATING COMPLIANCE.
2. REFER TO PANEL SCHEDULES FOR EXACT CIRCUIT NUMBER.

LUMINAIRE SCHEDULE

Version 1107

KEY	LAMP(S) QTY	LAMP(S) TYPE	DESCRIPTION	FINISH	MOUNTING	SPECIFICATION (NOTE 1) MANUFACTURER	CATALOG NUMBER	VOLTS	WATTS	NOTES
A	NA	LED	SURFACE MOUNT LINEAR LED	WHITE	SURFACE	ALS	IL4A-SWSC-WH-UD	100-277	44	SELECTABLE 44W AND 4000K CCT

LIGHTING CONTROL SEQUENCE OF OPERATION SCHEDULE

KEY	DESCRIPTION	CONTROL SYSTEM TYPE	VACANCY (MANUAL ON, AUTO OFF)	OCCUPANCY (AUTO ON, AUTO OFF)	TIMECLOCK	LOCAL MANUAL SWITCHING	LOCAL MANUAL DIMMING	SENSOR TIME DELAY	PHOTOSENSOR DIMMING	PHOTOSENSOR ON/OFF	NOTES
S21	OCCUPANCY SENSING	NETWORK	X			X		20 MINUTE			LIGHTS SHALL BE MANUAL ON TO 100% AND AUTOMATIC OFF WHEN THE SPACE IS VACANT.

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Δ	DATE	REVISION

PROJECT NUMBER 21486/21632

ELECTRICAL SCHEDULES

E-200-5

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