THE VILLAGE AT DISCOVERY - LOT 1 LEE'S SUMMIT, MO

PRINTS ISSUED 11/20/24 - CITY SUBMITTAL

REVISIONS:

PROJECT TEAM

COLUMBIA, MO 65201

1526 Grand Boulevard

Kansas City, MO 64108

ajdolph@rosemann.com

COLUMBIA, MO 65201

3622 ENDEAVOR AVE., STE. 101

1901 PENNSYLVANIA DRIVE

cspickert@mcclurevision.com

2400 BLUFF CREEK DRIVE, SUITE 101

COLUMBIA, MO 65202 CELESTE SPICKERT

COLUMBIA, MO 65201

andrew@j-squaredeng.com

1000 W NIFONF BLVD., BLDG 1

tim@crockettengineering.com

1000 W NIFONF BLVD., BLDG 1

tim@crockettengineering.com

COLUMBIA, MO 65203

TIM CROCKETT

573.447.0292

COLUMBIA, MO 65203

TIM CROCKETT

573.447.0292

ANDREW WHITE

573.234.4492

CROCKETT ENGINEERING CONSULTANTS

CROCKETT ENGINEERING CONSULTANTS

LANDSCAPE ARCHITECT

573.234.2609

MECHANICAL, ELECTRICAL, PLUMBING

bpmaenner@intrinsicdevelopment.com

BRIAN MAENNER

573.881.0280

AJ DOLPH

816.472.1448

573.881.0280

3622 ENDEAVOR AVE., STE. 101

bpmaenner@intrinsicdevelopment.com

OWNER

CONTACT:

ARCHITECT

CONTRACTOR

INTRINSIC DEVELOPMENT

STRUCTURAL ENGINEER

CONTACT

PHONE:

EMAIL:

PHONE:

MCCLURE

ADDRESS:

EMAIL:

PHONE:

ENGINEER

ADDRESS:

CONTACT:

CONTACT:

CONTACT:

EMAIL:

PHONE:

SIGNATURE BLOCK

EMAIL:

PHONE:

EMAIL:

PHONE:

J-SQUARED ENGINEERING

CIVIL ENGINEER

EMAIL:

PHONE:

INTRINSIC DEVELOPMENT

ROSEMANN & ASSOCIATES, P.C.

PROJECT DATA

B, BUSINESS

14,014 S.F.

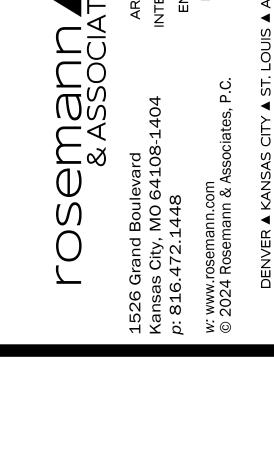
14,014 S.F. 28,028 S.F.

2-STORY FIRST FLOOR

A-2, UNCONCENTRATED

1 12/12/24 City Comment Response

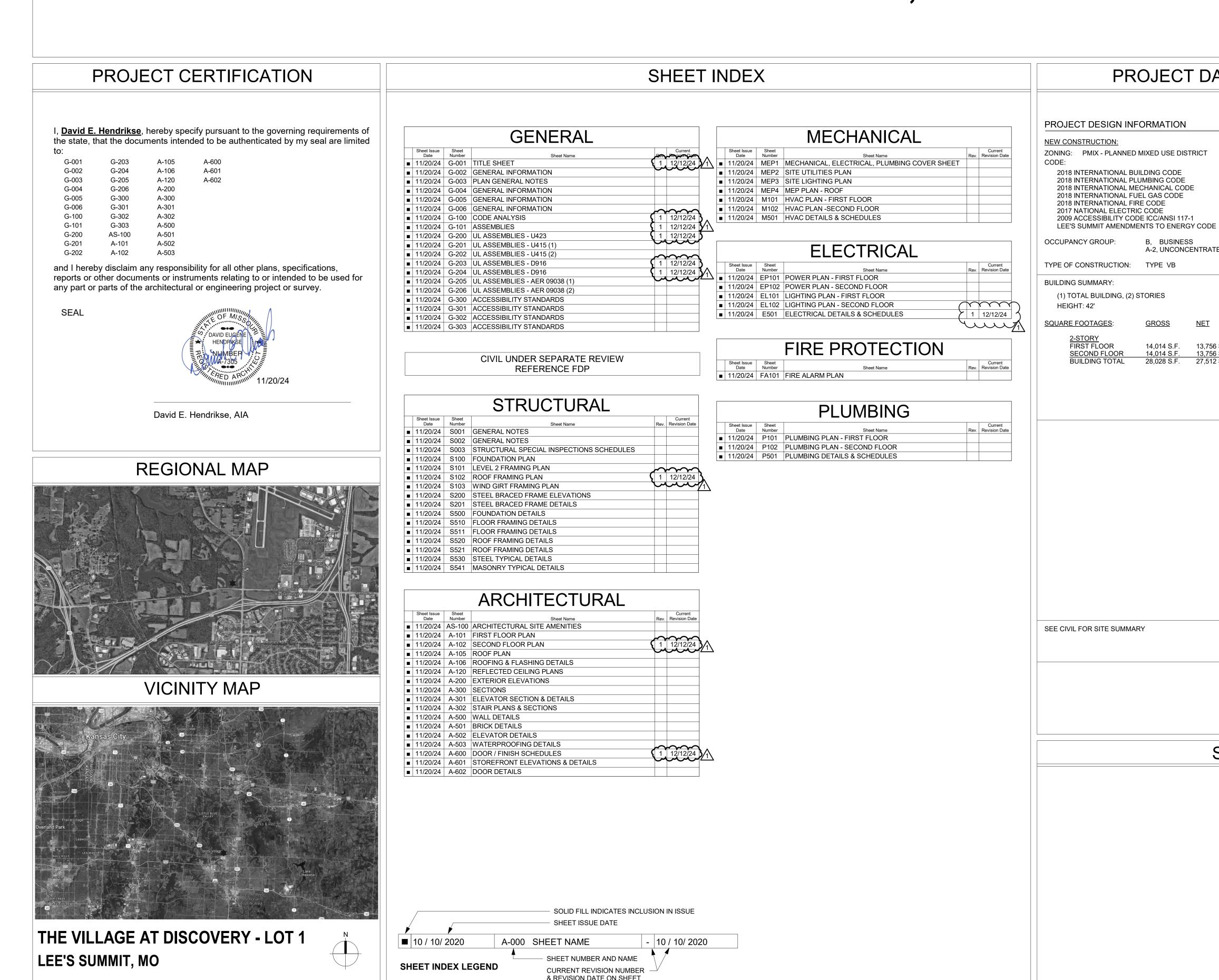




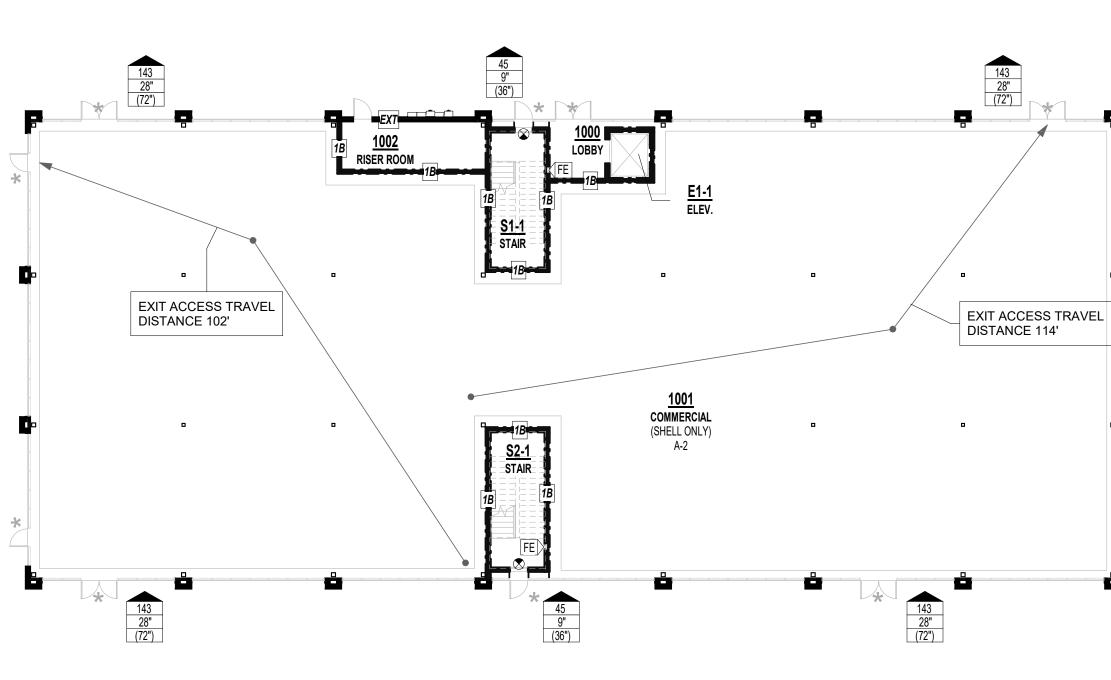


SHEET TITLE TITLE SHEET

PROJECT NUMBER: 23096







1ST FLOOR CODE PLAN

		RE	FERENCE G-003 FOR GENERAL NOTES	
CODE	REVIEW	CHAPTER SEVEN		
	IE VILLAGE AT DISCOVERY - LOT 1 E SUMMIT, MO	704 FIRE-RESISTANCE RATING OF STRUCTURAL MEMBERS:	0 HOUR RATED	
	18 IBC	705.5 EXTERIOR WALLS FIRE-RESISTANCE RATING:	FIRE SEPARATION DISTANCE > 10'-0" RATED EXPOSURE FROM INSIDE ONLY	
CHAPT	ER THREE	TABLE 705.8 MAX AREA OF EXTERIOR WALL OPENINGS:	FIRE SEPARATION DISTANCE > 25'-0" UNPROTECTED, NO LIMIT	
SECTION 302 CLASSIFICATION: B,	BUISNESS	SECTION 707 FIRE BARRIERS:	1 HOUR RATED	
A-2, UNCONCENTRATED		SECTION 708 FIRE PARTITIONS:	1 HOUR RATED	
OLIA DTED EQUID		SECTION 711 HORIZONTAL ASSEMBI	LIES: 1 HOUR RATED	
CHAPTER FOUR		SECTION 713 SHAFT ENCLOSURES:	1 HOUR RATED	
SECTIONS 402 - 428: N/A		SECTION 714 PENETRATIONS:	MATCH ASSEMBLY RATING	
		SECTION 715 FIRE-RESISTANT JOINT SYSTEMS: MATCH ASSEMBLY RATING		
CHAP	TER FIVE	TABLE 716.1(2) OPENING FIRE PROTECTION & RATING:	1 HOUR FIRE BARRIER:60 MINUTE DOOR 1 HOUR PARTITION: 45 MINUTE DOOR	
TABLE 504.3 ALLOWABLE HEIGHT IN FEET ABOVE GRADE PLANE:	CONSTRUCTION TYPE VB B: ACTUAL: 42' ALLOWABLE: 60'-0"	717 DUCTS AND AIR TRANSFER OPENINGS:	REQUIRED AT RATED PENETRATIONS, 1.5 HOUR DAMPER RATING	
	A: ACTUAL: 42' ALLOWABLE: 60'-0"	SECTION 718 CONCEALED SPACES:	FIREBLOCK	
TABLE 504.4 ALLOWABLE NUMBER OF STORIES ABOVE GRADE PLANE:	CONSTRUCTION TYPE VA B: ACTUAL: 2 ALLOWABLE: 3 STORIES A-2: ACTUAL: 1 ALLOWABLE: 2 STORIES	CHAF	PTER NINE	
506.2 ALLOWABLE	CONSTRUCTION TYPE VB	903 AUTOMATIC SPRINKLER SYSTEM	/I: A-2, B, REQUIRED: NFPA 13	
AREA FACTOR:	B: ACTUAL: 14,014SF ALLOWABLE: 27,000SF A-2:ACTUAL: 14,014SF ALLOWABLE: 18,000SF	905 STANDPIPE SYSTEM:	CLASS I REQUIRED	
TABLE 508.4 REQUIRED	B - B: 0 HOUR	906 PORTABLE FIRE EXTINGUISHER:	S: REQUIRED PER NFPA 10, 75'-0" MAX TRAVEL	
SEPARATION OF OCCUPANCIES:	A - B: 1 HOUR A - A: 0 HOUR	907 FIRE ALARM & DETECTION SYSTEM:	REQUIRED PER NFPA 72	
TABLE 509 INCIDENTAL USES: STORA	GE > 100 SF, 1HR	909 SMOKE CONTROL SYSTEM:	COMPLY WITH IMC	
CHAF	PTER SIX	CHAF	PTER TEN	

TABLE 601 FIRE RESISTANCE REQS.

FOR BUILDING ELEMENTS (HOURS): CONSTRUCTION TYPE VB PRIMARY STRUCTURAL FRAME: 0 HOUR INTERIOR BEARING WALL: 0 HOUR EXTERIOR BEARING WALL: 0 HOUR 0 HOUR NON-BEARING WALL: FLOOR CONSTRUCTION: 0 HOUR ROOF CONSTRUCTION: 0 HOUR

TABLE 602 FIRE RESISTANCE RATING

JURISDICTION PRIOR TO INSTALL.

REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE: 0 HOUR <30 FEET, 0 >30 FEET

CODE PLAN GENERAL NOTES:

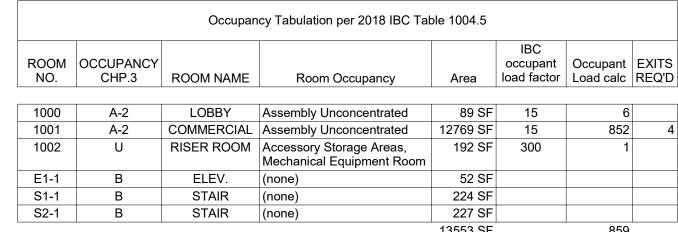
- 1. FIRE EXTINGUISHERS SHALL BE LOCATED SO THAT THE MAXIMUM TRAVEL DISTANCE SHALL NOT EXCEED 75 FEET. GENERAL CONTRACTOR TO PROVIDE SEMI-RECESSED FIRE EXTINGUISHER CABINETS WITH FIRE EXTINGUISHERS THROUGHOUT AT ACCESSIBLE HEIGHT.
- 2. SIGNS IDENTIFYING FIRE PROTECTION EQUIPMENT, CONTROLS FOR AIR CONDITIONING SYSTEMS, SPRINKLER RISERS AND VALVES, OR OTHER FIRE DETECTION, SUPPRESSION OR CONTROL ELEMENTS SHALL BE IDENTIFIED FOR THE USE OF THE FIRE DEPARTMENT PER 2018 IBC. SIGNAGE SHALL ALSO MEET 2018 IFC REQUIREMENTS FOR HEIGHT AND LETTERING. GC TO COORDINATE WITH AUTHORITY HAVING JURISDICTION ON ALL SIGNAGE.
- 3. KNOX BOX QUANTITY AND LOCATION TO BE COORDINATED BY THE GENERAL CONTRACTOR WITH AUTHORITY HAVING JURISDICTION.
- 4. ANNUNCIATOR PANEL AND FACP QUANTITY AND LOCATION TO BE COORDINATED BY THE GENERAL CONTRACTOR WITH AUTHORITY HAVING
- 5. ALL DIMENSIONS ARE APPROXIMATE ON CODE PLAN. ACTUAL ARCHITECTURAL DIMENSIONS PER ARCHITECTURAL AND STRUCTURAL PLAN.

TABLE 1004.5 MAX FLOOR AREA A-2, 15 NET ALLOWANCES PER OCCUPANT: B, 150 GROSS SECTION 1005 MEANS OF STAIRS 0.2/OCC., W/ SPRINKLER EXCEPTION EGRESS SIZING: OTHER EGRESS 0.15/OCC., W/ SPRINKLER EXCP TABLE 1006.2.1 SPACES WITH ONE A-2: 49 OCC., 75' MAX. PATH OF EGRESS EXIT OR EXIT ACCESS DOORWAY: B: 49 OCC., 100' MAX. PATH OF EGRESS TABLE 1006.3.2 MINIMUM 2 EXITS REQ.D W/ OCCUPANT LOAD/STORY 1-500 NUMBER OF EXITS PER STORY: 3 EXITS REQ.D W/ OCCUPANT LOAD/STORY 500-1000 1009.3.3 AREA OF REFUGE: NOT REQUIRED W/ SPRINKLER EXCEPTION 1009.8 TWO-WAY COMMUNICATION: REQ'D. AT EACH ELEV. LANDING ABOVE GRADE 1011.2 STAIRWAY WIDTH CAPACITY: 44" MIN. UNOCCUPIED ROOF, ACCESS VIA ROOF HATCH 1011.12 STAIRWAY TO ROOF: 1014.2 HANDRAIL HEIGHT: 34" MIN. - 38" MAX. EXTEND HORIZONTALLY 12" BEYOND TOP RISER 1014.6 HANDRAIL EXTENSIONS: CONTINUE SLOPE 1 DEPTH TREAD AT BOTTOM 42" MIN. HEIGHT, 4" MAX. OPENING 1015 GUARDS: TABLE 1017.2 EXIT ACCESS A: 250' W/ 13 SPRINKLER TRAVEL DISTANCE: B: 300' W/ 13 SPRINKLER 1019 EXIT ACCESS STAIRWAYS: 1 HOUR RATED PER 713 TABLE 1020.1 CORRIDOR RATING: A & B: NO RATING REQ.D W/ 13 SPRINKLER 1020.1.1 HOISTWAY OPENING PROTECTION: NOT REQUIRED PER 3006.2

TABLE 1020.2 MIN. CORRIDOR WIDTH: 44" MIN. 1020.4 DEAD ENDS: A: 20'-0" MAX. B: 50'-0" MAX.

CHAPTER ELEVEN

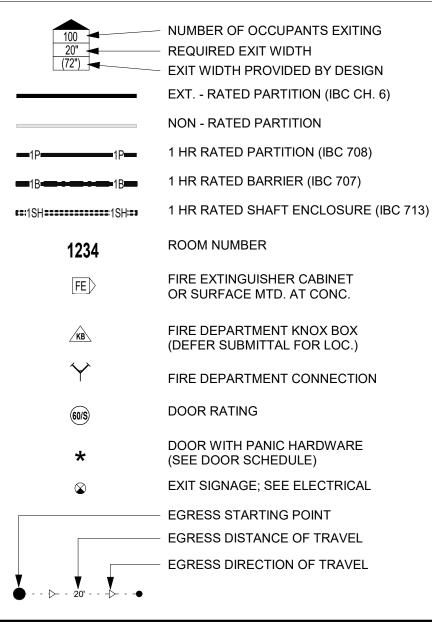
ACCESSIBILITY TO COMPLY WITH THIS CH. OF IBC, ICC A117.1, ADA, & FAIR HOUSING TABLE 1106.1 ACCESSIBLE PARKING SPACES:



				13553 SF		859
2000	В	LOBBY	Business Areas	177 SF	150	2
2001	ہگر	COMMERCIAL	Business Areas	12833 SF	150	86
2002	$\begin{bmatrix} B \\ 1 \end{bmatrix}$	MECH./MAINT.	Accessory Storage Areas, Mechanical Equipment Room	42 SF	300	1
E1-2	В	ELEV.	(none)	50 SF		
S1-2	В	STAIR	(none)	225 SF		
S2-2	В	STAIR	(none)	227 SF		
				13554 SF		89

Building total 27106 SF

CODE PLAN LEGEND



1 12/12/24 City Comment Response

PRINTS ISSUED

REVISIONS:

11/20/24 - CITY SUBMITTAL

SUMMIT

 \square

DISC

=

里

SHEET TITLE CODE ANALYSIS

PROJECT NUMBER: 23096

INTERIOR PARTITION ASSEMBLIES (METAL-NON-RATED)

METAL 6" - NON-RATED - INTERIOR (INSIDE PILASTER)

6" METAL STUDS, SPACED 16" O.C. (GAUGE DETERMINED BY WALL

METAL 3 5/8" STUD - NON-RATED PARTITION - INTERIOR SOUND DAMPENING • (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD • (1) LAYER 1/2" RESILIENT CHANNEL, 25 MSG, SPACED 24" O.C.

3-1/2" BÁTT INSULATION, NON FACED

(1) LAYER 5/8" TYPE 'X' GYPSUM BOARD

a. ATTACH GYPSUM WITH 1-1/4" TYPE 'W' STEEL SCREWS SPACED 12" O.C.

INTERIOR BARRIER ASSEMBLIES (METAL-RATED)

METAL 6" STUD - 1HR BARRIER - INTERIOR

• (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD PER UL

• (1) LAYER 1/2" RESILIENT CHANNEL, 25 MSG, SPACED 24" O.C. 6" METAL STUDS SPACED PER UL AND STRUCTURAL ENGINEER (MIN 20)

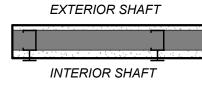
6" BATT INSULATION PER UL

• (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD PER UL

a. ASSEMBLY TO COMPLY WITH UL DESIGN U423 (FEB 14, 2022) b. REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS c. STC SHALL BE 50 OR OVER AT UNITS, MEETING ASTM E90 (STC 50

BASED UPON TESTING NGC 2013019 WITH STUDS SPACED 24" O.C.) d. WHERE BARRIER IS USED FOR STRUCTURAL SHEAR, GC TO COORDINATE ADDITIONAL LAYERS OF STRUCTURAL MATERIAL PER STRUCTURAL DRAWINGS. THESE LAYERS TO BE ADDITIVE TO THE ASSEMBLY LISTED ABOVE AND SHALL BE INCORPORATED PER UL 263.

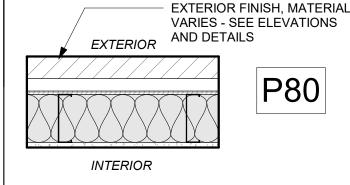
INTERIOR SHAFT ASSEMBLIES (METAL-RATED)



METAL 2 1/2" C-H STUD - 1HR RATED SHAFT - INTERIOR (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD PER UL
2-1/2" C-H STUDS SPACED 24" O.C.

NOTES:
a. ASSEMBLY TO COMPLY WITH UL DESIGN U415, SYSTEM A (FEB 14, 2022) b. REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS

EXTERIOR PARTITION ASSEMBLIES (METAL)



METAL 6" STUD - NON-RATED PARTITION - EXTERIOR

 EXTERIOR FINISH SYSTEM PER ELEVATIONS - BRICK SHOWN WEATHER RESISTANT BARRIER PER SPECIFICATIONS (1) LAYER SHEATHING PER STRUCT. DRAWINGS

• 6" METAL STUDS SPACED PER STRUCTURAL ENGINEER (MIN 20 MSG) BATT INSULATION PER IECC NOTES:

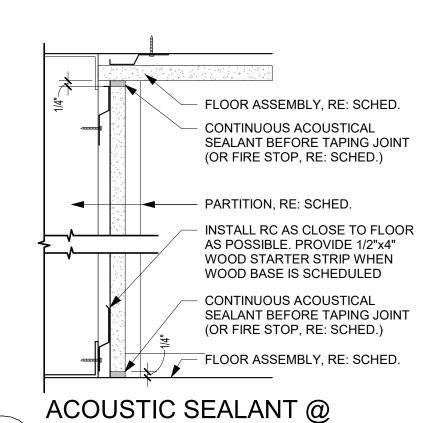
INTERIOR ASSEMBLIES (CMU)

a. R-11 MIN. INSULATION R-VALUE b. STUD CAVITIES TO BE LEFT EXPOSED

P40

• 8" CMU (REINFORCING PER STRUCT)

a. RATING SHALL MEET IEC 2018 SECTION 721 - PRESCRIPTIVE FIRE RESISTANCE FOR 1HR NATING SHALL MEET TABLE 721.1(2).3. -CONCRETE MASONRY UNITS. ALL TIES. MORTAR TO MEET IBC SECTION 721. b. APPLY WATERPROOFING AT ALL SUBGRADE PORTION OF WALLS



FLOOR/CEILING

PRINTS ISSUED

REVISIONS:

11/20/24 - CITY SUBMITTAL

1 12/12/24 City Comment Response

SHEET TITLE **ASSEMBLIES**

PROJECT NUMBER: 23096

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction. • Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials
- and alternate methods of construction. • Only products which bear UL's Mark are considered Certified.

Fire-resistance Ratings - ANSI/UL 263

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States Design Criteria and Allowable Variances

encountered in the field.

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada Design Criteria and Allowable Variances

> Design No. **U423** February 14, 2022

Bearing Wall Ratings — 3/4 Hr, 1, 1-1/2 or 2 Hr (See Items 5 & 7) This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

5. **Gypsum Board*** — Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered when load is reduced to 90 percent of max stud capacity. When load is at 100 percent, horizontal edge joints and horizontal butt joints on opposite sides of studs staggered a min of 12 in. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered at 100 percent load with Type ULIX. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) with Type ULIX need not be staggered. When used in widths other than 48 in., gypsum panels to be installed horizontally. The thickness and number of layers and percent of design load for the 45 min, 1 hr, 1-1/2 hr, and 2 hr

Wallboard Protection on Each Side of Wall

Rating	No. of Layers & Thkns of Panel	% of Design Load
45 Min	1 layer, 1/2 in. thick	100
1 hr	1 layer, 5/8 in. thick	100
1-1/2 hr	2 layers, 1/2 in. thick	100
2 hr	2 layers, 5/8 in. thick	80
2 hr@	2 layers, 5/8 in. thick	100
2 hr	3 layers, 1/2 in. thick	100
2 hr	2 layers, 3/4 in. thick	100

@Rating applicable when Batts and Blankets (Item 7) are used.

ratings are as follows:

CGC INC — 1/2 in. thick Type IP-X2, IPC-AR, C, WRC, or; 5/8 in. thick Type SCX, SHX, WRX, IP-X1, AR, C, IP-AR, IP-X2, IPC-AR, ULIX, ULX, or WRC; 3/4 in. thick Types AR, IP-AR, IP-X3, ULTRACODE

UNITED STATES GYPSUM CO — 1/2 in. thick Type C, IP-X2, IPC-AR, or WRC; 5/8 in. thick Type AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, WRX, or WRC; 3/4 in. thick Types AR, IP-AR or IP-X3, ULTRACODE

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, ULTRACODE

USG MEXICO S A DE C V — 1/2 in. thick Type C, IP-X2, IPC-AR, WRC; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, WRX or WRC; 3/4 in. thick Types AR, IP-AR, IP-X3, ULTRACODE

5A. Gypsum Board* — (As an alternate to Item 5 when used as the base layer on one or both sides of wall, For direct attachment only, not to be used with Item 4) — Nom 5/8 in. or 3/4 in. may be used as alternate to all 5/8 in. or 3/4 in. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 in. or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 1A, 2A 8, 8A(a). Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. To be used with Lead Batten Strips (see Item 12) or Lead Discs or Tabs (see Item 13). **RAY-BAR ENGINEERING CORP** — Type RB-LBG

5B. **Gypsum Board*** — (As an alternate to Items 5 and 5A) — Nom 5/8 in. thick gypsum panels with square edges, applied horizontally or vertically. For the 1 hour single layer system -when the gypsum board panels are installed horizontally the joints are to be staggered by a minimum of 12 in. on opposite sides of assembly, they are to be secured on each side of the studs with 1-1/4 in. long Type S-12 bugle head steel screws spaced 8 in. OC to the top and bottom tracks and in the field with screws 1 in. and 4 in. from the horizontal joints. When the gypsum board panels are installed vertically all vertical joints must be centered over studs and staggered min 1 stud cavity on opposite sides of studs. Gypsum board secured to studs with 1-1/4 in. long Type S-12 steel screws

screws offset 8 in. from first layer. Three-layer systems: First layer- 1 in. long for 1/2 in. thick panels, spaced 24 in. OC. Second layer-1-5/8 in. long for 1/2 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below.

in. OC. Second layer- 1-5/8 in. long for 1/2 in. and 5/8 in. thick panels or 2-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC with

7. Batts and Blankets* — (Required as indicated under Item 5) — Nom 2 in. thick mineral wool batts, friction fitted between studs and runners. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies.

7A. Batts and Blankets* — (Optional, Not Shown) — Placed in stud cavities, any glass fiber or mineral wool insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. See **Batts and Blankets (BKNV or BZJZ)** Categories for names of Classified companies.

7B. Batts and Blankets* — (Optional, Not Shown) — Placed in stud cavities, glass fiber insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. **OWENS CORNING** — Type QuietZone Acoustic Batts

7C. **Fiber, Sprayed*** — (Optional) — As an alternate to Batts and Blankets (Item 7) — Not for use with Items 8A or 8B) — Spray applied mineral wool insulation. The fiber is applied with adhesive, at a minimum density of 4.0 pcf, to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. See Fiber, Sprayed (CCAZ). **AMERICAN ROCKWOOL MANUFACTURING, LLC** — Type Rockwool Premium Plus

8. **Furring Channels** — (Optional on one or both sides, not shown, for single or double layer systems) — Resilient furring channels fabricated from min 25 MSG corrosion-protected steel, spaced vertically a max of 24 in. OC. Flange portion attached to each intersecting stud with 1/2 in. long Type S-12 panhead steel screws. Not for use with type FRX-G gypsum panels and Item 5A, 5C, 5D,

8A. Steel Framing Members (Not Shown)* — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 8, furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with type FRX-G gypsum panels and Item 5A, 5C, 5D, or 5E.

b. Steel Framing Members* — Used to attach furring channels (Item 8a) to studs (Item 2). Clips spaced max. 48 in. OC., and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels. **PAC INTERNATIONAL L L C** — Types RSIC-1, RSIC-1 (2.75).

8B. Steel Framing Members* — (Not Shown) — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 8, furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with

b. Steel Framing Members* — Used to attach furring channels to studs (Item 2). Clips spaced max. 48 in. OC., and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into **PLITEQ INC** — Type GENIECLIP

type FRX-G gypsum panels and Item 5A, 5C, 5D, or 5E.

5D, or 5E.

8C. **Steel Framing Members*** — (Not Shown) — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 8, furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel

wire. Gypsum board attached to furring channels as described in Item 6. Not for use with type FRX-G gypsum panels and Item 5A, 5C,

99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5A) and optional at remaining stud locations. Required behind vertical joints.

12A. Lead Batten Strips — (Not Shown, for use with Item 5D) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.140 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 6) and optional at remaining stud locations.

13. Lead Discs or Tabs — (Not Shown, For Use With Item 5A) — Used in lieu of or in addition to the lead batten strips (Item 12) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 5A) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

13A. Lead Discs — (Not Shown, for use with Item 5D) — Max 5/16 in. diam by max 0.140 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.5% meeting the Federal Specification QQ-L-201f, Grades "B, C or D".

14. Lead Batten Strips — (Not Shown, For Use With Item 5C) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.142 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5C) and optional at remaining stud locations.

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

16. Wall and Partition Facings and Accessories* — (CLBV) (Optional, Not Shown) — For use with Item 1, Item 2 to 2C, Item 3, Item 5, Item 6, Item 7A, Item 8 and Item 9. For a maximum fire rating of 1 hour. On one side of the wall, over the first layer of Gypsum Board (Item 5), install RefleXor membrane with the gold side facing outwards. Membrane installed with T50 staples spaced 12 inches on center in both directions as per manufacturer's instructions, seams in membrane to be overlapped by 2 inches. When RefleXor membrane is used an additional layer of Gypsum Board identical to the one used in the first layer and as specified in Item 5 shall be installed over the membrane. Additional layer of Gypsum Board to be installed through the membrane to the stud as specified in Item 5 except the fastener length shall be increased by a minimum of 5/8 inch. Install Batts and Blankets in the stud cavity as per Item 7A.

On the other side of the wall prior to the installation of the Gypsum Board install Resilient Channels as per Item 8. Over the Resilient Channels install 3/4 inch thick SONOpan panel secured to the Resilient Channels with min. 1-1/4 in. long drywall screws and washers spaced at 16 in. OC on the perimeter of the panel and 8 in. OC in the field of the panel. Over the SONOpan panel install the same Gypsum Board as specified in Item 5 with the fastener length increased by minimum 3/4 inch. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

Alternately, on the other side of the wall prior to the installation of the Gypsum Board (Item 5), install 3/4 in. thick SONOpan panels, secured to one side of studs either horizontally or vertically. Panels secured to each stud with min. 1-1/4 in. long drywall screws spaced 12 in. OC. Over the SONOpan, install 25 MSG galv steel, Resilient Channels, spaced vertically 24 in. OC. Resilient Channels fastened through panels to each stud with min. 2 in. long drywall screws or self-tapping screws. Over the Resilient Channels install Gypsum Board as specified in Item 5 with drywall screws as specified in Item 6. Panels not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

MSL — RefleXor membrane, SONOpan panel.

17. Foamed Plastic* – (Optional, Not Shown) Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud

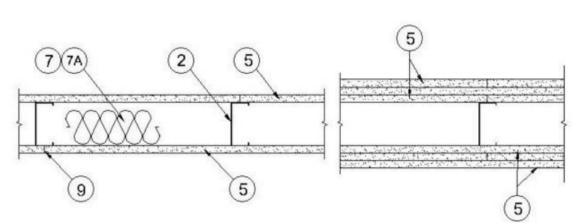
CARLISLE SPRAY FOAM INSULATION – Types SealTite Pro Closed Cell (CC), SealTite Pro Open Cell (OC), SealTite Pro OCX, SealTite Pro No Trim 21, SealTite Pro One Zero, Foamsulate Closed Cell, Foamsulate OCX, Foamsulate 70, and Foamsulate HFO

Last Updated on 2022-02-14

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL Solutions' Follow - Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL Solutions' Follow - Up Service. Always look for the Mark on the product.

UL Solutions permits the reproduction of the material contained in Product iQ subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from Product iQ with permission from UL Solutions" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "©2022 UL LLC."



1. Floor and Ceiling Runners — (Not Shown) — Channel shaped, fabricated from min 0.0329 in., bare metal thickness (No. 20 MSG) corrosion-protected steel, that provide a sound structural connection between steel studs and adjacent assemblies such as floors, ceilings and/or other walls. Attached to floor and ceiling assemblies with steel fasteners spaced not greater than 24 in. OC.

1A. Floor and Ceiling Runners — (Not Shown, As an alternate to Item 1, For Use With Item 5A and 5C) — Channel shaped runners min 3-1/2 in. deep with 1-1/4 in. flanges fabricated from min No. 20 MSG corrosion-protected steel. Attached to floor and ceiling assemblies with steel fasteners spaced not greater than 24 in. OC.

2. Steel Studs — Min 0.0329 in., bare metal thickness (No. 20 MSG) corrosion-protected steel studs, min 3-1/2 in. wide, cold formed, designed in accordance with the current edition of the Specification for the Design of Cold-Formed Steel Structural Members by the American Iron and Steel Institute (AISI). All design details enhancing the structural integrity of the wall assembly, including the axial design load of the studs, shall be as specified by the steel stud designer and/or producer, and shall meet the requirements of all applicable local code agencies. The max stud spacing shall not exceed 24 in. OC. Studs attached to floor and ceiling runners with 1/2 in. long Type S-12 steel screws on both sides of the studs or by welded or bolted connections designed in accordance with the AISI specifications.

2A. Steel Studs — (As an alternate to Item 2, For use with Item 5A, 5C, 5D, and 5E) — Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, 3-1/2 in. min width, min 1-1/2 in. flanges and 1/4 in. return, spaced a max of 16 in. OC. Studs friction-fit into floor and ceiling runners.

2B. Steel Studs — (As an alternate to Item 2 and 2A, For Use With Item 5B) — Min 0.0329 in., (No. 20 MSG) corrosion-protected cold formed steel studs, min 3-1/2 in. deep by 1-5/8 in. wide with 1/2 in. returns. Braced at mid-height and designed in accordance with the current edition of the Specification for the Design of Cold-Formed Steel Structural Members by the American Iron and Steel Institute (AISI). All design details enhancing the structural integrity of the wall assembly, including the axial design load of the studs, shall be as specified by the steel stud designer and/or producer, and shall meet the requirements of all applicable local code agencies. The max stud spacing shall not exceed 24 in. OC. Studs attached to floor and ceiling runners with 1/2 in. long Type S-12 steel screws on both sides of the studs or by welded or bolted connections designed in accordance with the AISI specifications.

2C. Framing Members - Steel Studs — (As an alternate to Item 2, For use with Item 5C) — Channel shaped, fabricated from min 20 MSG (0.0327 in. thick) corrosion-protected or galv steel, 3-1/2 in. min width, min 1-1/2 in. flanges and 1/4 in. return, spaced a max of 16 in. OC. Studs friction-fit into floor and ceiling runners. Studs to be cut 5/8 to 3/4 in. less than assembly height.

3. Lateral Support Members — (Not shown) — Where required for lateral support of studs, support shall be provided by means of steel straps, channels or other similar means as specified in the design of a particular steel stud wall system.

4. Wood Structural Panel Sheathing — (Optional, For use with Item 5 only) — (Not Shown) — 4 ft wide, 7/16 in. thick oriented strand board (OSB) or 15/32 in. thick structural 1 sheathing (plywood) complying with DOC PS1 or PS2, or APA Standard PRP-108, manufactured with exterior glue, applied horizontally or vertically to the steel studs. Vertical joints centered on studs, and staggered one stud space from wallboard joints. Attached to studs with flat-head self-drilling tapping screws with a min. head diam. of 0.292 in. at maximum 6 in. OC. in the perimeter and 12 in. OC. in the field. When used, gypsum panels attached over OSB or plywood panels and fastener lengths for gypsum panels increased by min. 1/2 in.

The maximum loading on the steel studs was evaluated with the steel studs braced at mid-height and not braced by the plywood sheathing.

spaced 8 in. OC to the top and bottom tracks and in the field with screws 1 in and 4 in. from the perimeter. For the 2 hour double layer system - when the gypsum board panels are installed horizontally the joints need not be staggered on opposite sides of assembly. Base layer secured on each side of the studs with 1-1/4 in. long Type S-12 bugle head steel screws spaced 16 in. OC to the top and bottom track and in the field with screws beginning 1 in. and 8 in. from the horizontal joints. Face layer horizontal joints staggered 8 in from base layer joints and secured with 1-5/8 in. long Type S-12 bugle head steel screws spaced 16 in. OC to the top and bottom tracks and in the field with screws beginning 1 in. and 8 in. from the horizontal joints. Face layer screws offset 8 in. from base layer screws. When the gypsum board panels are installed vertically all vertical joints must be centered over studs and staggered min 1 stud cavity on opposite sides of studs. Face layer gypsum boards secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 16 in. OC with screws 2 in. and 16 in. from the perimeter. Base layer gypsum boards secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 16 in. OC with screws 1-1/2 in and 8 in. from the perimeter. Face layer screws offset 8 in. from base layer **CGC INC** — Type USGX

UNITED STATES GYPSUM CO — 5/8 in. thick Type USGX (Joint tape and compound, Item 9, optional with Type USGX)

USG BORAL DRYWALL SFZ LLC — 5/8 in. thick Type USGX (Joint tape and compound, Item 9, optional with Type USGX)

USG MEXICO S A DE C V — Type USGX

5C. Gypsum Board* — (As an alternate to Item 5 when used as the base layer on one or both sides of wall, For direct attachment only, not to be used with Item 4) — Nominal 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 (or #6 by 1-1/4 in. long bugle head fine driller) steel screws spaced 8 in. OC at perimeter and 12 in. OC in

NEW ENGLAND LEAD BURNING CO INC, DBA NELCO — Nelco

5D. **Gypsum Board*** — (As an alternate to Item 5 when used as the base layer on one or both sides of wall, For direct attachment only, not to be used with Item 4) — Nom 5/8 or 3/4 in. may be used as alternate to all 5/8 or 3/4 in. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 1A, 2A 8, 8A(a). Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. To be used with Lead Batten Strips (see Item 12A) or Lead Discs (see Item 13A). MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

5E. Gypsum Board* — (As an alternate to Item 5 when used as the base layer on one or both sides of wall, For direct attachment only, not to be used with Item 4) — Nom 5/8 in. may be used as alternate to all 5/8. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 1A, 2A 8, 8A(a). Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field.. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". **RADIATION PROTECTION PRODUCTS INC** — Type RPP - Lead Lined Drywall

5F. Gypsum Board* — (As an alternate to Item 5 when Foam Plastic insulation (Item 17) is used) — Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 5 above. Applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Gypsum panels secured to studs with 1 in. long Type S steel screws spaced 8 in. OC at perimeter and in the field. For 2 layer assemblies outer layer will be attached to studs over inner layer with the 1-5/8 in. long steel screws spaced 8 in. OC.

6. Fasteners — (Not Shown) — For use with Item 5 - Type S-12 steel screws used to attach panels to runners (Item 1 or 1A) and studs (Item 2 or 2A) or furring channels (Item 8). Single layer systems: 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 8 in. OC when panels are applied horizontally, or 12 in. OC when panels are applied vertically. Single layer system with Type ULIX: 1 in. long, spaced 12 in. OC along the perimeter and in the field when panels are applied horizontally or vertically. Two layer systems: First layer- 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16

b. Steel Framing Members* — Used to attach furring channels to studs (Item 2). Clips spaced max. 48 in. OC., and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips. **STUDCO BUILDING SYSTEMS** — RESILMOUNT Sound Isolation Clips - Type A237R

8D. Steel Framing Members* — (Not Shown) — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 8, furring channels and Steel Framing Members as described below:

a. Furring Channels — Formed of No. 25 MSG galv steel, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 8Db. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 6. Not for use with type FRX-G gypsum panels and Item 5A, 5C, 5D, or 5E.

b. Steel Framing Members* — Used to attach furring channels to studs (Item 2). Clips spaced max. 48 in. OC, and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. **REGUPOL AMERICA** — Type SonusClip

8E. Steel Framing Members* — (Not Shown) — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 8, resilient channels and Steel Framing Members as described below:

a. Resilient Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 5. Not for use with type FRX-G gypsum panels and Item 5A, 5C, 5D, or 5E.

b. Steel Framing Members* — Used to attach resilient channels (Item 8Ea) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. **KEENE BUILDING PRODUCTS CO INC** — Type RC+ Assurance Clip

8F Steel Framing Members* — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 8, furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel. 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in.

and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on

b. Steel Framing Members* — Used to attach furring channels (Item 8Fa) to studs. Clips spaced maximum 48 in. OC. Clips secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips.

CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip

each flange of the channel. Gypsum board attached to furring channels as described in Item 5.

9. **Joint Tape and Compound** — Vinyl or casein, dry or premixed joint compound applied in two coats to joints and screw heads of outer layers. Paper tape, nom 2 in. wide, embedded in first layer of compound over all joints of outer layers. Paper tape and joint compound may be omitted when gypsum boards are supplied with square edges.

10. Siding, Brick or Stucco — (Optional, Not Shown) — Aluminum, vinyl or steel siding, brick veneer or stucco, meeting the requirements of local code agencies. Brick veneer attached to studs with corrugated metal wall ties attached to each stud with steel screws, not more than each sixth course of brick.

11. Caulking and Sealants* — (Optional, Not Shown) — A bead of acoustical sealant applied around the partition perimeter for sound control. **UNITED STATES GYPSUM CO** — Type AS

12. Lead Batten Strips — (Not Shown, For Use With Item 5A) — Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of Ш

DISCOV

PRINTS ISSUED

REVISIONS:

11/20/24 - CITY SUBMITTAL

1 12/12/24 City Comment Response

SHEET TITLE UL ASSEMBLIES - U423

PROJECT NUMBER: 23096

use of UL Certified products, equipment, system, devices, and materials. • Authorities Having Jurisdiction should be consulted before construction.

• Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance

• Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and

encountered in the field. • When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide

Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States Design Criteria and Allowable Variances

<u>See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada</u>

Design Criteria and Allowable Variances

• Only products which bear UL's Mark are considered Certified.

Design No. D916

May 16, 2023

Restrained Assembly Ratings — 3/4, 1, 1-1/2, 2 or 3 Hr. (See Items 1, 6, 7, 8 and 11) Unrestrained Assembly Rating — 0 Hr. (See Items 3, 4 and 4A) Unrestrained Beam Ratings — 1, 1-1/2, 2 and 3 Hr.

(See Items 4, 4A, 7 and 11) This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

Supports — 8x28 min size steel beams. Or steel joists or joist girders (not shown), composite or noncomposite. Welded or bolted to end supports. Designed per S.J.I. specifications for a max tensile stress of 30 ksi. May be either uncoated or provided with a shop

coat of paint. For the 2 h or less Restrained or Unrestrained Beam Ratings, top and bottom chords shall each consist of two angles

with a min total area of 0.96 and 0.77 sq in., respectively. Web members shall be either round bars or angles. Min area of the end

diagonal web shall be 0.444 sq in. Min area of each of the first six interior diagonal webs shall be 0.406 sq in. All other interior webs shall have a min area of 0.196 sq in. For the 3 h Restrained or Unrestrained Beam Ratings, each of the top and bottom chords shall

each consist of two angles with a min total area of 1.74 sq in. Web members shall be either round bars or angles. Min area of each of

specifications is required when noncomposite joists are used. For noncomposite joists, steel filler pieces of proper size, 1 to 2 in. long

the first five end diagonal webs shall be 0.886 sq in. All other interior webs shall have a min area of 0.441 sq in. Bridging per S.J.I.

1. **Normal Weight or Lightweight Concrete** — Normal weight concrete carbonate or siliceous aggregate, 3500 psi compressive

strength, vibrated. Lightweight concrete, expanded shale, or slate aggregate by rotary-kiln method, or expanded clay aggregate by

(Type)

Normal Weight

Normal Weight

Normal Weight

Normal Weight

rotary-kiln or sintered-grate method, or pelletized expanded blast furnace slag aggregate, 3000 psi compressive strength, vibrated, 4

Concrete Unit

Weight pcf

147-153

147-153

107-113

107-113

107-116

107-113

Concrete

3-1/2

4-1/2

5-1/4

2-1/2

2-5/8

3-1/4

3-1/4*

3-1/2

4-3/16

Thkns In.

shall be welded to and between the top chord angles at midway between all top chord panel points.

to 7 percent entrained air.

Assembly Rating Hr

3/4 or 1 (See Item 6)

*For use with 2 or 3 in. steel floor and form units only.

2. Welded Wire Fabric — 6x6 - W1.4xW1.4.

3. Steel Floor and Form Units* — Composite or non-composite, 1-1/2, 1-5/8, 1-13/16, 2 or 3 in. deep galv units or 4-1/2 in. deep noncomposite galvanized units. Fluted units may be uncoated or phosphatized/painted. Min gauges are 22 MSG for fluted and 20/20 MSG for cellular units. The following combinations of units may be used: (1) all 18, 24, 26, 28 or 36 in. wide cellular.

(2) all fluted.

(3) one or two 3 in. deep, 12 in. wide, 18/18 MSG min cellular units, alternating with 3 in. deep fluted or other cellular.

(4) any blend of fluted and 18, 24, 26, 28, or 36 in. wide cellular.

(5) 3 in. deep, 30 in. wide cellular with 8-1/8 in. wide valley along side joints may be used when 3/8 in. diam reinforcing bars are placed 1-1/2 in. to each side of side joints and 1 in. above bottom of unit.

(6) Corrugated, 1-5/16 in. deep, 30 in. wide, 24 MSG min galv units with shear wires factory welded to deck corrugations. Welded to supports 12 in. OC. through welding washers. For shear wire spacing of 8 in. or less the steel deck stress shall not exceed 20 KSI. For shear wire spacing greater than 8 in. OC. but less than or equal to 12 in. OC., steel deck stress shall not exceed 12 KSI. ASC STEEL DECK, DIV OF ASC PROFILES L L C — 32 in. wide Types NH-32, NHN-32, NHF-32; 36 in. wide Types BH-36, BHN-36, BHN-35-1/4, BHF-36, BHF-36A, 2WH-36, 2WHS-36, 2WHF-36, 2WHF-36A, 3WxH-36, 3WxHF-36, 3WxHF-36A, 3WH-36, 3WHF-36A, 3WHF-DG3W-36, DG3WF-36. All units may be galvanized or Prime Shield. Non-cellular decks may be vented designated with a "V" suffix to the product name. Cellular deck top and bottom sections may be riveted together (designated with "Fr") vs. arc spot welded, "F".

CANAM GROUP INC — 36 in. wide Type P-3623, P-3606, P-3615 and 24 in wide Type P-2432 composite; 24 or 36 in. wide Type 3 in. LOK-Floor; 36 in. wide Types 1.5B, 1.5Bl, 1.5BL and 1.5BL.

CANAM STEEL CORP — 24 in. wide, Types 1-1/2, 2 or 3 in. LOK-Floor and LOK-Floor Cell; 36 in. wide, Types 2 or 3 in. LOK-Floor and LOK-Floor Cell; 24 in. wide, Types N-LOK and N-LOK Cell; 24, 30 or 36 in. wide, Type 1-1/2 in. B-LOK and B-LOK Cell.

KAM INDUSTRIES LTD, DBA CORDECK — QL Types, 24 in. wide 3 or 3 inverted, UKX, UKX-3, 2 in. 99, AKX, 21 or 21 inverted, 121, NKX, TKX; 24 or 30 in. wide GKX, GKXH, GKX-A; 36 in. wide 99, AKX, WKX; 24, 26, or 36 in. wide NKX; 1.5NKC, NKC, AKX, 2 or 3 in. TKC; 12 in. wide noncomposite Sec. 12; 17 in. wide 21; 26 or 28 in. wide UKX, 87.5 cm wide. Side joints of QL, 99, 121, WKX, TKX, TKC, and Metric units -QL-77-900; QLC-78-900 may be welded together 60 in. OC. Side joints of 99, AKX, WKX, GKX-A, TKX and Metric units - QL-77-900 and QLC-78-900 may be fastened together with min 1 in. long No. 12x14 self-drilling, self-tapping steel screws 36 in. OC.

CHIA TEH CONSTRUCTION MATERIAL CO LTD — 24 or 36 in. wide Mac-Lok 3; 24 in. wide CFD-3.

DECK WEST INC — 36 in. wide Type B-DW, Inverted B-DW, BA-DW, Inverted BA-DW, 2-DW or 3-DW. Side joints of Type 2-DW and 3-DW may be fastened together with min 1 in. long No. 12 x 14 self-drilling, self-tapping steel screws 36 in. OC.

DECKCO LLC – 36 in. wide, Types DC 1.5B, DC 1.5 Form, DC 1.5 Inverted Composite, DC 1.5 Inverted Form, DC 1.5 Composite, DC 2 Form, DC 2 Composite, DC 3 Form, DC 3 Composite.

DESIGN ASSISTANCE CONSTRUCTION SYSTEMS INC — 36 in. wide Type DACS1.5CD, or 24 in. wide Type DACS2.0CD, or DACS3.0CD.

EPIC METALS CORP — 24 in. wide Types EC150, ECP150, EC300, ECP300, EC366, ECP366, EC150, EC300 inverted, ECA, 30 in. wide Types ECB150, ECBR150; 36 in. wide Type EC266.

HAMBRO STRUCTURAL SYSTEMS, DIV OF CANAM STEEL CORP — 36 in. wide, 1-1/2 in. Type P3615HB. The max superimposed loadings for Type P3615HB units shall not exceed 250 PSF. For single spans, the use of the units shall be limited to 5 ft 6 in., 6 ft 0 in. and 6 ft 6 in. max spans for the 22, 20 and 18 gauge units, respectively. For multiple spans, 18 gauge units may be used on a max 7 ft 6 in. spans with a max total

superimposed loading of 240 PSF.

INTSEL STEEL EAST LLC — 36 in. wide Types 1.5" COMPOSITE/FLOOR, 2" COMPOSITE/FLOOR, 3" COMPOSITE/FLOOR.

KAM INDUSTRIES LTD, DBA CORDECK — 24 in. wide, Types 2 or 3 in. WDR.

MARLYN STEEL DECKS INC — Type 1.5 CF, 2.0 CF or 3.0 CF.

NEW MILLENNIUM BUILDING SYSTEMS L L C — 24 in. wide Type Versa-Dek.

NEW MILLENNIUM BUILDING SYSTEMS L L C — 24 or 36 in. wide Types 2.0CD, 3.0CFD, 3.0CFD, 3.0CFD, 3.0CFDES; 24, 30 or 36 in. wide Types 1.5CD, 1.5CDI, 1.5CDR, 1.5CFD. Fluted units may be phos/painted or galvanized.

ROOF DECK INC — 36 in. wide Types LOK 1 1/2, LOK 1 1/2 R; 24 in. wide Types LOK-2, LOK-3.

STEEL MASTERS INTERNATIONAL DEPENDABLE STEEL — 36 in. wide Types 2WH-36, 3WH-36. Units may be phos/painted or galvanized.

TATA STEEL INTERNATIONAL MIDDLE EAST FZE — 36 in. wide, Type ComFlor 46.

VALLEY JOIST+DECK — 24 or 36 in. wide Types WVC 1-1/2 or WVC 2.

VERCO DECKING INC - A NUCOR CO — FORMLOK™ deck types PLB, B, BR, PLN3, N3, PLN, N, PLW2, W2, PLW3, W3. Units may be galvanized, phos./ptd., or mill finish. Units may be cellular or acoustical cellular, with the suffix "CD" or "CD-AC" added to the product name, respectively. All non-cellular deck may be vented or non-vented. 12 in. wide PLW2, W2, PLW3 or W3 units may be blended with 24 or in. wide PLW2, W2, PLW3 or W3 units, respectively; or Types N3, PLN3.

VICWEST INC. — Types HB938, HB938CL, HB938-INV, HB308-INV, HB306, HB30V; Types HBS938, HBS938CL and HBS938CL-IN Composite Steel Decks; Types RDS938, RDS938CL and RDS938CL-IN Non-Composite Steel Decks.

VULCRAFT, DIV OF NUCOR CORP — 24, 30 or 36 in. wide Types 1.5VL, 1.5PLVLI, 1.5VLP, 1.5VLP, 1.5VLP, 1.5VLR; 24 or 36 in. wide Types 1.5VLPA, 1.5PLVLPA, 2VLI, 2.0PLVLI, 2VLJ, 2VLP, 2.0PLVLP, 2VLPA, 2.0PLVLPA, 3VLI, 3.0PLVLI, 3VLJ, 3VLP, 3.0PLVLP, 3VLPA, 3.0PLVLPA. Types 1.5VL, 1.5VLI, 1.5PLVLI, 1.5VLR, 2VLI, 2.0PLVLI, 2VLJ, 3VLI, 3.0PLVLI, 3VLJ units may be phos/ptd. 24 or 36 in. wide Types 2VLJ, 3VLJ units ++ may be used for max 2 hr Restrained Assembly Rating. Side joints of Type 1.5VL may be fastened together with min 1 in. long No. 12x14 self-drilling, self-tapping steel screws 36 in. OC max. 36 in. wide Types 1.5 SB, 1.5 SBR; 24 or 36 in wide Types 2.0 SB, 3.0 SB, 36 in. wide Type High Strength 1.5 SBI, 36 in. wide Type High Strength 1.5 SBN.

Spacing of welds attaching units to supports shall be 12 in. OC for 12, 24, and 36 in. wide units, four welds per sheet for 30 in. wide units, 6 in. OC for 18 in. wide and Sec. 12 units. Unless noted otherwise, adjacent units button-punched or welded together 36 in. OC along side joints. Adjacent 18 in. wide units welded together 30 in. OC along side joints. For 3 Hr. Rating, units with overlapping type side joints welded together 24 in. OC max.

When a superimposed load of 250 PSF is desired the spacing of welds or button-punches shall not exceed 24 in. OC along side joints.

++ Side joints of Types 2VLJ or 3VLJ units may be fastened together with No. 8, 3/4 in. long self-drilling Tek screws driven diagonally from the top side through the joint of the units at 36 in. O. C. max.

The Unrestrained Assembly Rating is equal to the Unrestrained Beam Rating for a max of 3 Hr. and is limited to the following units and

(a) 1-1/2 in. deep, 24 or 36 in. wide, 22 MSG or thicker fluted with clear spans not more than 7 ft 8 in. (b) 1-1/2 in. deep, 24 or 36 in. wide, 20 MSG or thicker fluted with clear spans not more than 8 ft 8 in.

(c) 1-1/2 in. deep, 24 or 36 in. wide, 16 MSG or thicker fluted and 18/18 MSG or thicker cellular with clear spans not more than 9 ft 11 in.

(d) 3 in. deep, 36 in. wide, 18 MSG or thicker fluted and 24 in. wide, 20/18 MSG or thicker cellular with clear spans not more than 13 ft 2 in.

^

4. **Spray-Applied Fire Resistive Materials*** — Applied by mixing with water and spraying in one or more coats to a final thickness as shown in the tables below, in the tables below to steel beam surfaces which must be clean and free of dirt, loose scale and oil. Min avg and min ind density of 15/14 pcf respectively. Min avg and min ind density of 19/18 pcf respectively for Type 7GP and 7HD. For method of density determination, refer to Design Information Section.

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Fire Resistive Mtl Thkns on Beam In.
1	1	1	1/2
1-1/2	1	1	1/2
1-1/2	1-1/2	1-1/2	13/16
2	1	1	1/2
2	2	2	1-1/16
3	1-1/2	1-1/2	13/16
3	3	3	1-9/16

The thicknesses of Spray-Applied Fire Resistive Materials shown in the table below are applicable when the thickness applied to the beams' lower flange edges is reduced by 1/2 that shown in the table:

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Fire Resistive Mtl Thkns on Beam In.
1	1	1	9/16
1-1/2	1	1	9/16
1-1/2	1-1/2	1-1/2	7/8
2	1	1	9/16
2	2	2	1-3/16
3	1-1/2	1-1/2	7/8
3	3	3	1-3/4

The thicknesses of Spray-Applied Fire Resistive Materials shown in the table below are applicable when the thickness applied to the beams' lower flange edges is reduced by 1/2 that shown in the table and the beams are supporting all fluted floor or form units w/lightweight concrete only:

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Spray Applied Fire Resistive Mtl Thkns on Beam In.
1	1	1	7/16+
1-1/2	1	1	7/16+
1-1/2	1-1/2	1-1/2	3/4

2	1	1	7/16+
2	2	2	1
3	1-1/2	1-1/2	3/4
3	3	3	1-9/16

+Thickness applied to beams' lower flange edge to be 1/4 in. min.

The thickness of material required on the steel joist for the various ratings are shown in the following table:

Restrained or Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Spray Applied Fire Resistive Mtl Thkns on Joist & Bridging In.
1	1	1-1/8
1-1/2	1-1/2	1-3/4
2	2	2-1/4
3	3	2-7/8

GCP KOREA INC — Types MK-6/CBF, MK-6/ED, MK-6/HY, MK-6s, Monokote Acoustic 1.

PYROK INC — Type LD.

the companies to the companies of the co

SOUTHWEST FIREPROOFING PRODUCTS CO — Types 4, 5, 5EF, 5GP, 5MD, 7GP, 7HD, 8EF, 8GP, 8MD, 9EF, 9GP, 9MD.

GCP APPLIED TECHNOLOGIES INC — Types MK-6/HY, MK-6s, RG, Monokote Acoustic 1.

4A. Alternate Spray-Applied Fire Resistive Materials* — Applied by mixing with water and spraying in one or more coats to a final thickness as shown in the tables below to steel beam surfaces which must be clean and free of dirt, loose scale and oil. When fluted steel deck is used the area between the steel deck and the beams top flange shall be sprayed min avg and min ind density of 19/18 pcf, respectively for Types 7GP, 7HD, 105. Min avg and min ind density of 22/19 pcf, respectively for Types Z-106, Z-106/G, Z-106/HY. For method of density determination, refer to Design Information Section.

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Fire Resistive Mtl Thkns on Beam In.
1	1	1	1/2
1-1/2	1	1	1/2
1-1/2	1-1/2	1-1/2	13/16
2	1	1	1/2
2	2	2	1-1/16
3	1-1/2	1-1/2	13/16
3	3	3	1-9/16

The thicknesses of Spray-Applied Fire Resistive Materials shown in the table below are applicable when the beams are supporting all fluted floor

or form units w/lightweight concrete only:

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Spray Applied Fire Resistive Mtl Thkns on Beam In.
1	1	1	7/16
1-1/2	1	1	7/16
1-1/2	1-1/2	1-1/2	3/4
2	1	1	7/16
2	2	2	1
3	1-1/2	1-1/2	3/4
3	3	3	1-5/16

+Thickness applied to beams lower flange edge to be 1/4 in. min.

The thickness of material required on the steel joist for the various Ratings are shown in the following table:

Restrained or Unrestrained Assembly	Type of Unrestrained Concrete		Spray Applied Fire Resistive Mtl Thkns In.
Rating Hr	Beam Rating Hr	Slab	Joist & Bridging
1	1	NW or LW	1-1/8
1-1/2	1-1/2	NW or LW	1-3/4
2	2	NW or LW	2-1/4
3	3	NW or LW	2-7/8

GCP KOREA INC — Types Z-106, Z-106/G, Z-106/HY, Monokote Acoustic 5.

SOUTHWEST FIREPROOFING PRODUCTS CO — Types 7GP, 7HD.

GCP APPLIED TECHNOLOGIES INC — Types Z- 105, Z-106, Z-106/G, Z-106/HY, Monokote Acoustic 5.

4B. **Alternate Spray-Applied Fire Resistive Materials** — Applied by mixing with water and spraying in one or more coats to a final thickness as shown in the tables below to steel beam surfaces which must be clean and free of dirt, loose scale and oil. The thicknesses shown in the table below are applicable to beams supporting all fluted floor or form units. Min avg and min ind density of 40/36 pcf, respectively. Min avg and min ind density of 40/36 pcf respectively for Types Z-146, Z-146PC and Z-146T cementitious mixture. Min avg and min ind density of 50/45 pcf respectively for Types Z-156, Z-156T and Z-156PC. For density determination refer to Design Information Section.

Unrestrained Beam Rating Hr	Restrained Assembly Rating Hr	Concrete Type	Spray Applied Fire Resistive Mtl Thkns on Beam In.
1	1, 1-1/2, 2	LW	9/16
1-1/2	1, 1-1/2, 2, 3	LW	7/8

_			_
1	1, 1-1/2, 2	LW	3/4
1-1/2	1, 1-1/2, 2, 3	LW	1

GCP KOREA INC — Type Z-146 investigated for exterior use

GCP APPLIED TECHNOLOGIES INC — Types Z-146, Z-146T, Z146PC, Z-156, Z-156T and Z-156PC investigated for exterior use

5. Shear-Connector Studs — Optional — Studs 3/4 in. diam by 3 in. long, for 1-1/2 in. deep form units to 5-1/4 in. long for 3 in. deep form units, headed type or equivalent per AISC specifications. Welded to the top flange of the beam through the steel form

6. Electrical Inserts — (Not shown) Classified as "Outlet Boxes and Fittings Classified for Fire Resistance." KAM INDUSTRIES LTD, DBA CORDECK — Preset Inserts

For use with 2-1/2 in. lightweight concrete topping over QL-WKX steel floor units. Installed over factory-punched holes in floor units per

Spacing shall not be more than one insert in each 14 sq ft. of floor area with spacing along floor units not less than 48 in. OC. The holes cut in insert cover for passage of wires shall be no more than 1/8 in. larger diam, than wire. Restrained Assembly Rating is 3/4 hr with Tapmate II-FS-1 and 1 hr with Tapmate II-FS-2 inserts.

KAM INDUSTRIES LTD, DBA CORDECK — Tapmate II-FS-1, II-FS-2; Series KEB.

(2) Wiremold Co. — After set Inserts.

Single-service after set inserts installed per accompanying installation instructions in 2-1/2 in. diam hole core-drilled through min 3-1/4 in. thick concrete topping to top of cell of any min 3 in. deep cellular steel floor unit specified under Item 3. Spacing shall be no more than one insert in each 10 sq ft of floor area in each span with a min center to center spacing of 16 in. If the high potential and low potential raceways of the cellular steel floor unit are separated by a valley filled with concrete, the center to center spacing of the high potential and low potential singleservice after set inserts may be reduced to a min of 7-1/2 in. Restrained Assembly Rating is 2 hr or less with internally protected type 436 after set insert with Type M4-, M6- or M8- Series single-service activation fitting.

WIREMOLD CO — Internally protected Type 436 after set insert with Type M4-, M6- or M8- Series single-service activation fitting.

7. Mineral and Fiber Boards* — (Optional, not shown). Applied over concrete floor with no restriction on board thickness. When mineral and fiber boards are used, the unrestrained beam rating shall be increased by a minimum of 1/2 hr. See Mineral and Fiber Board (CERZ) category for names of manufacturers.

8. Roof Covering Materials* — (Optional, not shown)Consisting of materials compatible with insulations described herein which provide Class A, B or C coverings. See Built-Up Roof Covering Materials in Building Materials Directory.

9. Insulating Concrete — (not shown) Optional. Various types of insulating concrete prepared and applied in the thickness

A. Vermiculite Concrete — (not shown) Optional. 1. Blend 6 to 8 cu. ft. of Vermiculite Aggregate* to 94 lb. Portland Cement and air entraining agent. Min thickness of 2 in. as measured to the top surface of the structural concrete or foamed plastic (Item 10) when it is used.

SIPLAST INC

VERMICULITE PRODUCTS INC

ELASTIZELL CORP OF AMERICA

2. Blend 3.5 cu. ft. of Type NVC Concrete Aggregate* or Type NVS Vermiculite Aggregate* coat, 1/8 in. thickness beneath foamed plastic (Item 10) when used, 1 in. min topping thickness. SIPLAST INC

VERMICULITE PRODUCTS INC

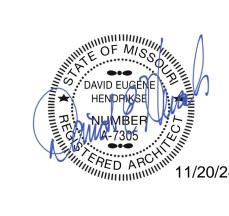
Vermiculite concrete may be covered with Roof Covering Materials (Item 8).

REVISIONS:

PRINTS ISSUED

11/20/24 - CITY SUBMITTAL

12/12/24 City Comment Response



UMMIT,

SHEET TITLE UL ASSEMBLIES - D916

PROJECT NUMBER: 23096

REVISIONS:

PRINTS ISSUED

1 12/12/24 City Comment Response

11/20/24 - CITY SUBMITTAL

CELCORE INC — Type Celcore with cast dry density of 31 (+ or - 3.0) pcf or Type Celcore MF with cast dry density of 29 (+ or - 3.0) pcf.

ELASTIZELL CORP OF AMERICA — Type II. Mix #1 of cast dry density 39 (+ or -) 3.0 pcf, Mix #2 of cast dry density 40 (+ or -) 3.0 pcf, Mix #3 of cast dry density 47 (+ or -) 3.0 pcf.

C. **Cellular Concrete-Roof Topping Mixture*** — Concentrate mixed with water and Portland cement per manufacturers specifications. 28-day min. compressive strength of 190 psi as determined with ASTM C495-66. **SIPLAST INC** — Mix No. 1 or 2. Cast dry density of 32+3 (Mix No. 1) or 36+3 (Mix No. 2) pcf.

D. **Perlite Concrete** — 6 cu ft. of Perlite Aggregate* to 94 lb of Portland Cement and 1-1/2 pt air entraining agent. Min. thickness 2 in. as measured to the top surface of structural concrete or foamed plastic (Item 10A) when it is used.

See Perlite Aggregate (CFFX) in Fire Resistance Directory for names of manufacturers.

E. **Cellular Concrete** — **Roof Topping Mixture*** — Foam Concentrate mixed with water, Portland Cement and UL Classified Vermiculite Aggregate per manufacturer's application instructions. Cast dry density of 33 (+ or -) 3.0 pcf and 28-day compressive strength of min 250 psi as determined in accordance with ASTM C495-86. **AERIX INDUSTRIES** — Mix No. 3.

SIPLAST INC — Mix No. 3.

AERIX INDUSTRIES — Cast dry density of 37 (+ or -) 3.0 pcf.

F. **Floor Topping Mixture*** — (Optional, not shown) — Approx 4.5 gal of water to 41 lbs of NVS Premix floor topping mixture. Slurry coat 1/8 in. thickness beneath foamed plastic (Item 10) when used , 1 in. min topping thickness. **SIPLAST INC**

Floor Topping Mixture may be covered with Built-Up or Single Membrane Roof Covering.

10. **Foamed Plastic*** — (optional — Not Shown) For use only with vermiculite (Item 9A) or cellular (Item 9C) concretes — Rigid polystyrene foamed plastic insulation having slots and/or holes sandwiched between vermiculite concrete slurry which is applied to the normal or lightweight concrete surface and vermiculite concrete topping (Item 9A). **SIPLAST INC**

VERMICULITE PRODUCTS INC

10A. **Foamed Plastic*** — For use only with cellular concrete. Nominal 24 by 48 in. polystyrene foamed plastic insulation boards having a density of 1.0 + 0.1 pcf encapsulated within cellular concrete topping (Item 9B). Each insulation board shall contain six nominal 3 in. diameter holes oriented in two rows of three holes each with the holes spaced 12 in. OC, transversely and 16 in. OC longitudinally.

See Foamed Plastic* (BRYX) category in Building Materials Directory or Foamed Plastic* (CCVW) category in Fire Resistance Directory for list of manufacturers.

11. **Foamed Plastic*** — (Optional, not shown). Polyisocyanurate roof insulation, applied over concrete floor with no restriction on insulation thickness. When polyisocyanurate insulation is used, the unrestrained beam rating shall be increased by a minimum of 1/2

12. **Metal Lath** — (Not Shown) — (Required with Z-146, Z-146T, Z146PC, Z-156, Z-156T and Z-156PC, otherwise optional) - Metal lath may be used to facilitate the spray application of Spray-Applied Fire Resistive Materials on steel bar joist and trusses. The diamond mesh, 3/8 in. expanded steel lath, 1.7 to 3.4 lb per sq yd is secured to both sides of each steel joist with No. 18 SWG galv steel wire at joist web and bottom chord members spaced 15 in. OC max. When used, the metal lath is to be fully covered with Spray-Applied Fire Resistive.

See **Foamed Plastic** (CCVW) category for list of manufacturers.

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification

(such as Canada), respectively.

Last Updated on 2023-05-1

the the transmission of th

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL Solutions' Follow - Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL Solutions' Follow - Up Service. Always look for the Mark on the product.

UL Solutions permits the reproduction of the material contained in Product iQ subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from Product iQ with permission from UL Solutions" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "©2023 UL

rosemann & ASSOCIATES

DAVID EUGENE
HENDRIKSE
HENDRIKSE
NUMBER
11/20

THE VILLAGE AT DISCOVERY
LOT 1
LEE'S SUMMIT, MO

SHEET TITLE
UL ASSEMBLIES - D916

PROJECT NUMBER: 23096

SHEET NUMBER:

G-204



DISCOVERY MO 64064

PRINTS ISSUED

REVISIONS:

11/20/2024 PERMIT SUBMITTAL

M°CLURETM

2001 W Broadway Columbia, MO 65203 P 573-814-1568

NOTICE:

McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively,

"Losses") which arise from failure to follow

these Plans, Specifications, and the engineering intent they convey, or for

Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged

errors, omissions, inconsistencies, ambiguities, or conflicts contained within the Plans or Specifications.

MISSOURI CERTIFICATE OF AUTHORITY NO. E-2006023253 EXPIRES: DECEMBER 31, 2024

1 12/12/2024 Addendum 1

SHEET TITLE **ROOF FRAMING PLAN**

SHEET NUMBER:

ROOF FRAMING NOTES:

1. TOP OF STEEL BEAMS SHALL BE AT ELEVATION 137'-0" UNLESS NOTED THUS (+/+ 0") ON PLAN

2. SEE SHEETS S001 AND S002 FOR STRUCTURAL GENERAL NOTES

3. SEE SHEET S002 FOR BEAM REACTION SCHEDULE

6. LOCATION OF STEEL FRAMING FOR SUPPORT OF ROOF TOP

MECHANICAL UNITS AND PENETRATIONS MUST BE COORDINATED AND VERIFIED BY THE GENERAL CONTRACTOR BEFORE STEEL

4. LOCATION OF FLOOR AND ROOF PENETRATIONS TO BE DETERMINED. ADDITIONAL FRAMING MAY BE REQUIRED 5. JOIST BRIDGING AND BRACING PER JOST MANUFACTURER

FABRICATION

PROJECT NUMBER: 2023000333

S102

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

REFERENCE G-003 FOR GENERAL NOTES

PLAN LEGEND

NON-RATED PARTITION; SEE ASSEMBLIES 1 HR RATED PARTITION; SEE ASSEMBLIES DOOR TYPE; SEE DOOR SCHEDULE P7—— PARTITION TYPE; SEE ASSEMBLIES 6'-0" FRAMING DIMENSIONS

PRINTS ISSUED

REVISIONS:

11/20/24 - CITY SUBMITTAL

1 12/12/24 City Comment Response

THE VILLAGE AT DISCOVERY
LOT 1

LEE'S SUMMIT

SHEET TITLE SECOND FLOOR PLAN

PROJECT NUMBER: 23096 SHEET NUMBER:

A-102

PRINTS ISSUED

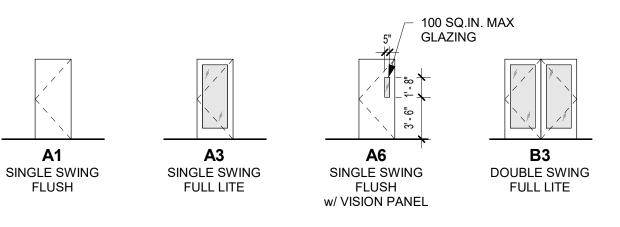
1 12/12/24 City Comment Response

11/20/24 - CITY SUBMITTAL REVISIONS:

DOOR TYPES

DOOR COMMENTS:1. BOTTOM RAIL TO BE MINIMUM 10" TO ALLOW FOR A 10" KICK PLATE; TYPICALL ALL DOORS.

- 2. SEE SPECIFICATIONS FOR DOOR HARDWARE SCHEDULE; FINAL HARDWARE SCHEDULE AND FINAL GROUPS TO BE DETERMINED BY DOOR SUB-CONTRACTOR. VERIFY FINAL HARDWARE INSTALLATION WITH CLIENT AND ARCHITECT.
- 3. DOOR HARDWARE SHALL NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING, OR TWISTING OF THE WRIST TO OPERATE.
- 4. DOOR FRAMES TO BE FINISHED PER SCHEDULE.
- VERIFY KEYING SCHEDULE WITH OWNER. ALL KEYS TO BE GIVEN TO OWNER AT SUBSTANTIAL COMPLETION.
- 6. ALL DOOR HARDWARE TO BE LEVER TYPE HARDWARE,
- 7. ALL COMMON AREA RATED DOORS TO HAVE SMOKE SEALS (GASKETS), CLOSURES, AND LATCH HARDWARE.



FRAME TYPES	3		
	PER SCHED		PER SCHED 2" 2" 2" 2" Z"
2" 2"		57 2 2 2 3 4 4 5 5 7 5 7 1 1 1 1 1 1 1 1 1 1	PER SCHED2" 2"
KD KNOCK DOWN w/ TRIM	KD-S KNOCK DOWN w SIDE LITE w/ TRIM	WLD WELDED w/ APPLIED TRIM	EE [FRAME MATERIAL] w/ TRANSOM & SIDELITES SINGLE MULLED

DOOR SCHEDULE ABBREVIATIONS:								
ALUM	ALUMINUM	FGL / FBG	FIBERGLASS	N/A	NOT APPLICABLE	STL	STEEL	
ANO	ANODIZED	HC WOOD / HCWD	HOLLOW CORE WOOD	PER MFR	PER MANUFACTURER	WD CLAD	WOOD CLAD	
BLK	BLACK	НМ	HOLLOW METAL	PRE-FIN	PRE-FINISHED			
BRZ	BRONZE	INSUL MTL	INSULATED METAL	PT / PTD	PAINTED			
CLR	CLEAR	MTL	METAL	SC WOOD / SCWD	SOLID CORE WOOD			

DOOR SCHEDULE													
Door#	Location	Location	Width	Height	Thickness	Fire Rating (Minutes)	Panic Hardware	Door Type	Door Door Material	Door Finish	Frame Type	ame Frame Finish	Comments
1000	LOBBY	EXTERIOR	6' - 0"	7' - 6"	1 3/4"		Yes	B3	ALUM	PRE-FIN	ALUM	PRE-FIN	
1001A	EXTERIOR	COMMERCIAL	6' - 0"	7' - 6"	1 3/4"		Yes	B3	ALUM	PRE-FIN	ALUM	PRE-FIN	
1001B	EXTERIOR	COMMERCIAL	6' - 0"	7' - 6"	1 3/4"		Yes	B3	ALUM	PRE-FIN	ALUM	PRE-FIN	
1001C	EXTERIOR	COMMERCIAL	6' - 0"	7' - 6"	1 3/4"		Yes	B3	ALUM	PRE-FIN	ALUM	PRE-FIN	
1001D	EXTERIOR	COMMERCIAL	3' - 0"	7' - 6"	1 3/4"		Yes	A3	ALUM	PRE-FIN	ALUM	PRE-FIN	
1001E	COMMERCIAL	EXTERIOR	3' - 0"	7' - 6"	1 3/4"		Yes	A3	ALUM	PRE-FIN	ALUM	PRE-FIN	
1001F	COMMERCIAL	EXTERIOR	6' - 0"	7' - 6"	1 3/4"		Yes	B3	ALUM	PRE-FIN	ALUM	PRE-FIN	
1002	EXTERIOR	RISER ROOM	3' - 0"	7' - 0"	1 3/4"		No	A1	НМ	PTD	HM	PTD	
S1-1	STAIR	EXTERIOR	3' - 0"	7' - 6"	1 3/4"		Yes	A3	ALUM	PRE-FIN	ALUM	PRE-FIN	
S2-1	STAIR	EXTERIOR	3' - 0"	7' - 6"	1 3/4"		Yes	A3	ALUM	PRE-FIN	ALUM	PRE-FIN	
			T		I	ı							
	LOBBY	COMMERCIAL	3' - 0"	7' - 6"	1 3/4"		Yes	A3	ALUM	PRE-FIN	ALUM	PRE-FIN	
2002	LOBBY	MECH./MAINT.	3' - 0"	6' - 8"	1 3/4"	\sim		A1 1 /1	HM	PTD	HM	PTD	
	STAIR	LOBBY	3' - 0"	6' - 8"		60 }	Yes	A6	НМ	PTD	HM	PTD	
S2-2	STAIR	COMMERCIAL	3' - 0"	6' - 8"	1 3/4"	60 }	Yes	A6	HM	PTD	HM	PTD	

	ROOM FINISH SCHEDULE					
Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Comments	
LOBBY						
STAIR						
ELEV.						
STAIR						
COMMERCIAL						
LOBBY						
STAIR						
MECH./MAINT.						
ELEV.						
STAIR						
COMMERCIAL						
RISER ROOM						
EXTERIOR						
COMMERCIAL						

PUBLIC ROOM FINISH COMMENTS:

1. PAINT BULKHEADS

GENERAL NOTES:

1. BASE FINISH
A. RB-1 = VINYL TOED/TOELESS - STANDARD COLOR

SHEET NUMBER:

DOOR / FINISH SCHEDULES

PROJECT NUMBER: 23096

SHEET TITLE

ELECTRICAL SPECIFICATIONS

CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL NECESSARY PIECES AND COMPONENTS TO PROVIDE A 1.1. COMPLETE AND COMPLIANT ELECTRICAL SYSTEM UNLESS OTHERWISE NOTED ON PLANS.

THE ENTIRE ELECTRICAL SYSTEM SHALL BE CONTINUOUSLY GROUNDED. EVERY BRANCH CONDUIT SHALL INCLUDE A GREEN GROUND CONDUCTOR SIZED PER NEC.

ARC-FAULT CIRCUITS SHALL BE RUN WITH A DEDICATED NEUTRAL AS REQUIRED BY MANUFACTURER. PROVIDE PERMANENT ARC-FLASH LABEL AFFIXED TO EVERY DISCONNECT AND PANEL.

ALL ELECTRICAL SYSTEM COMPONENTS SHALL BE INSTALLED LEVEL, PLUMB, AND

PROVIDE TYPE WRITTEN PANEL SCHEDULE FOR EACH PANEL.

PARALLEL/PERPENDICULAR TO BUILDING ORIENTATION WHERE POSSIBLE. ALL ELECTRICAL DEVICES AND LIGHT FIXTURES SHALL BE INSTALLED IN A SAFE, FIRST-CLASS MANNER WITH ATTENTION GIVEN TO OVERALL AESTHETICS. CARE SHOULD BE TAKEN TO ALLOW FOR FUTURE REPLACEMENT AND ACCESS FOR SERVICE.

3. MATERIALS

CONDUIT & CONDUCTORS 3.1.

ALL CONDUCTORS SIZES INDICATED ARE COPPER UNLESS NOTED OTHERWISE ON PLANS.

ABOVE GRADE CONDUCTORS SHALL BE TYPE THHN. BELOW GRADE CONDUCTORS SHALL BE TYPE XHHW-2.

MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG UNLESS NOTED OTHERWISE. 120-VOLT, 20-AMP CIRCUITS WITH CONDUCTOR LENGTHS GREATER THAN 100' SHALL BE #10 AWG MINIMUM. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR MEASURING ACTUAL CONDUCTOR LENGTH AND INCREASING CONDUCTOR SIZE TO COMPENSATE FOR VOLTAGE DROP AS REQUIRED BY NEC.

RIGID GALVANIZED OR SCHEDULE 40 PVC CONDUIT SHALL BE USED FOR SERVICE WIRING, BELOW GRADE INSTALLATIONS, OR WHERE EXPOSED TO WEATHER.

IN APPLICATIONS OTHER THAN THOSE LISTED IN 3.1.4, EMT OR MC CABLE IS ACCEPTABLE. WHERE CONDUCTORS ARE PROTECTED FROM DAMAGE, ENCLOSED IN BUILDING MATERIALS, AND CONSTRUCTION IS OF A PERMITTED TYPE, NM CABLE MAY BE USED.

FOR CAST-IN-PLACE CONCRETE, TILT-UP WALL CONSTRUCTION, OR PRE-MANUFACTURED WALL SYSTEMS, COORDINATE EXACT LOCATIONS OF ALL DEVICES WITHIN WALLS WITH WALL SUPPLIER. CONDUIT EMBEDDED IN WALLS SHALL BE SCHEDULE 80 PVC OR LFMC, OR OTHER SYSTEM APPROVED BY WALL MANUFACTURER.

EXPOSED CONDUIT SHALL BE PAINTED TO MATCH ADJACENT SURFACES, VERIFY COLOR WITH ARCHITECT/OWNER.

3.2.

CONTRACTOR TO PROVIDE J-BOXES, COVER PLATES, AND ANY ACCESSORIES REQUIRED TO

PROVIDE A COMPLETE SYSTEM. SEE ARCHITECTURAL PLANS FOR DEVICE COLORS. DUPLEX RECEPTACLES SHALL BE TAMPER RESISTANT, 20-AMP, EQUAL TO LEVITON #TBR-20.

SINGLE POLE TOGGLE WALL SWITCHES SHALL BE EQUAL TO LEVITON CS120-2. THREE-WAY TOGGLE WALL SWITCHES SHALL BE EQUAL TO LEVITON CS320-2.

DIMMER SWITCHES SHALL BE TESTED WITH FIXTURES AND LAMPS FOR COMPATIBILITY. SEE LIGHTING PLANS FOR DETAILS.

WHERE GFCI PROTECTION IS SHOWN ON PLANS AND UNLESS OTHERWISE NOTED, PROVIDE A LISTED GFCI-PROTECTED RECEPTACLE WHERE THE RECEPTACLE IS ACCESSIBLE ON PLANS. IF THE RECEPTACLE LOCATION IS NOT ACCESSIBLE AS DEFINED BY NEC, PROVIDE GFCI PROTECTION AT

DO NOT INSTALL OCCUPANCY/VACANCY SENSORS WITHIN 48" OF HVAC DIFFUSERS/GRILLES OR SIMILAR OBSTRUCTION THAT MAY AFFECT SENSOR FUNCTIONALITY. ALL SENSORS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

ALL APPLICABLE SWITCHES, RECEPTACLES, CONTROLS, ETC. SHALL BE MOUNTED AT ADA-ACCESSIBLE HEIGHTS.

WIRING DEVICES SHOWN ON PLANS NEXT TO ONE ANOTHER SHALL UTILIZE A SINGLE COVER PLATE UNLESS NOTED OTHERWISE.

WIRING DEVICES SHOWN BACK-TO-BACK ON EACH SIDE OF A WALL SHALL BE OFFSET TO REDUCE SOUND TRANSMISSION.

EACH RECEPTACLE COVER SHALL BE NEATLY AND LEGIBLY LABELED WITH CORRESPONDING PANEL AND CIRCUIT NUMBER FOR CIRCUIT IDENTIFICATION.

4. EMERGENCY LIGHTING

ELECTRICAL SPECIFICATIONS

EACH METER PERMANENTLY LABELED.

CALCULATIONS IF NECESSARY.

4. METER CENTER AIC-RATINGS BASED ON:

PHONE / CABLE PEDESTALS (SEE CIVIL PLANS FOR LOCATIONS) —

COORDINATE DETAILS & REQUIREMENTS OF NEW ELECTRIC SERVICE WITH EVERGY.

4.2. METER CENTER LOCATION INSTALLED APPROXIMATELY WHERE SHOWN ON PLANS.

4.1. TRANSFORMER: 500 kVA, 100% POWER FACTOR, 4.5% Z, LOCATED APPROXIMATELY WHERE SHOWN ON

CONTRACTOR TO FIELD VERIFY FINAL EQUIPMENT LOCATIONS AND PERFORM ADDITIONAL AIC RATING

PRIMARY CONDUIT

(CONDUCTORS BY EVERGY) -

208Y/120V, 3PH

PAD-MOUNTED

TRANSFORMER BY

EVERGY

ELECTRICAL PANEL LOCATIONS INSTALLED APPROXIMATELY WHERE SHOWN ON PLANS.

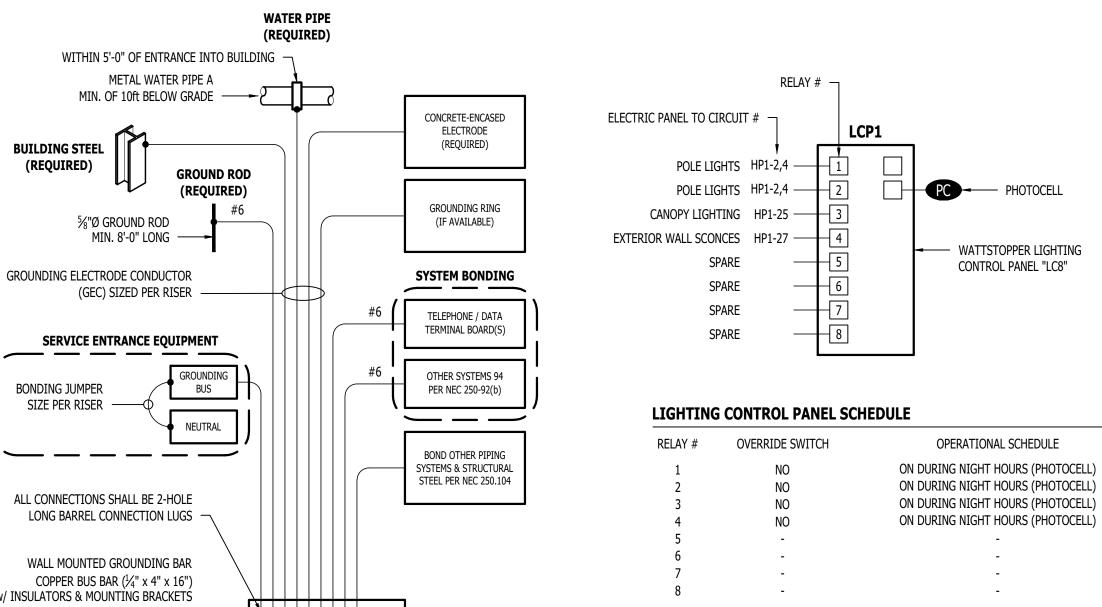
ALL NEW METERING EQUIPMENT MUST BE APPROVED BY EVERGY.

BRANCH CIRCUIT FEEDING EMERGENCY FIXTURE(S) SHALL BE SAME BRANCH CIRCUIT AS THAT SERVING NORMAL LIGHTING IN SAME AREA AND CONNECTED AHEAD OF ANY LOCAL SWITCHES.

EMERGENCY LIGHTING SYSTEM SHALL PROVIDE 1FC AVERAGE AND 0.1FC MINIMUM ALONG EGRESS PATHS. ADJUST ANY EMERGENCY FIXTURES AS NECESSARY TO PROVIDE PROPER ILLUMINATION WITHOUT OBSTRUCTION FROM FURNITURE OR OBSTACLES.

LIGHT FIXTURE SCHEDULE MA NUFA CTURER MODEL NUMBER WATTS NOTES DESCRIPTION MOUNTING CCT (°K) CRI **VOLTA GE** OUTPUT (OR EQUAL) (OR EQUAL) HALO SLD6129SE010MW 6" LED SURFACE CAN CEILING / SURFACE 1200 3500 90 120 15 C2 HALO SLD6129SE010MW 6" LED SURFACE CAN CANOPY / SURFACE 1215 4000 120 WITH PAINTABLE TRIM; PAINT TO MATCH UNDERSIDE OF CANOPY E1 SURE LITES APCH7R INTERIOR EXIT LIGHT WITH HEADS WALL / CEILING UNV WITH RED LETTERS E2 SURE LITES APCH7R WITH APWR2 INTR EXIT LIGHT WITH EXTR RMT HD SURFACE / CEILING UNV WITH RED LETTERS E3 SURE LITES APEL EMERGENCY EGRESS LIGHT SURFACE / WALL UNV MOUNT AT 8' A.F.F. WITH 'EL14W' BATTERY BACKUP WHERE INDICATED W1 METALUX 4SNX-SL3-LW-UNV-CC83-CD-1-FKO-U 4' LED WALL BRACKET SURFACE / WALL 4000 3500 85 120 42 UP/DOWN WALL SCONCE W2 TECH LIGHTING 7000WVEX9404ZUNV EXTERIOR WALL 554 4000 120 19 W3 METALUX 4VT3-LD5-8-G-UNV-EL10W-L840-CD1-U 4' VAPORTITE LED ELEVATOR PIT 8694 4000 80 120 67

- 1. VERIFY LIGHT FIXTURE FINISHES WITH OWNER / ARCHITECT PRIOR TO INSTALLATION.
- 2. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR CEILING TYPES THROUGHOUT. COORDINATE EXACT MOUNTING DETAILS WITH GENERAL CONTRACTOR.
- 3. CONTACT JUSTIN HATFIELD (573) 289-0880 (JHATFIELD@LAIWEB.NET) OR PAUL WARNER (314) 531-3500 (PWARNER@LAIWEB.NET) AT LIGHTING ASSOCIATES FOR NATIONAL ACCOUNT DETAILS. 4. CONTACT TRAVIS VOGT (471) 621-5210 (TVOGT@CED1135.COM) AT CED-PHILLIPS & COMPANY FOR NATIONAL ACCOUNT DETAILS.



_	TYPICAL GRO	UNDING & BONDING	DETAIL	LIGHTING CONTROL PANEL
	ACE FOR UP TO E METER SECTIONS	<u>AIC RATING=</u> <u>30,048A</u>	— 208Y/120V, 3PH, 4-GANG METER SECTIONS EACH WITH 225A, 3PH SERVICES RATED CIRCUIT BREAKERS	PHONE / CABLE DEMARCATIONS
	M 225 M 225 M 225 M 225	208Y/120V, 3PH 2000 AMP MCB TAP BOX	M 225	
4" CONDUIT WITH EITHER: #400 CU. OR (4) #750 AL. IINUM AS ALTERNATE BID) PARE 4" CONDUIT ITH PULL-STRING		2000	2½" CONDUIT WITH EITHER: (4) #4/0 CU. & (1) #4 CU. EQ. GR (4) #300 AL. & (1) #2 AL. EQ. GR (AL. AS ALTERNATE BID) 4' CONDUIT WITH PULL-STRING	

POWER	RISER -	- METER	CENTER #2

	PA NEL S	SPECIFICATIONS						TOTAL CONNECTED LO	OA D
VO	LTA GE: 120/208V 3-PH	NEMA RATIN	G: 1					PHASE "A" LOAD: 137.	5 AMPS
AMP	ACITY: 225A MLO	PANEL MOUNTIN	S: SURFACE					PHASE "B" LOAD: 11	4 AMPS
AIC-R	ATING: 10kA							PHASE "C" LOAD: 13	6 AMPS
CIRCUIT NUMBER	I DESCRIPTION		BREAKER SIZE	AMPS	PHASE	AMPS	BREAKER SIZE	DESCRIPTION	CIRCUI NUMBE
1	ROOFTOP	RECEPTS.	20-1	4.5	Α	6	20-2	POLE LIGHTS	2
3	ELEVATOR SUM	P PUMP RECEPT.	20-1	8	В	6	-	-	4
5	ELEVATOR P	IT RECEPTS.	20-1	3	С	41	60-2	AHU-1	6
7	EXTERIOR	RECEPTS.	20-1	6	Α	41	-	•	8
9	EXTERIOR RECEPTS.			6	В	14	25-2	CU-1	10
11	ACCESS CONTROLS			3	С	14	-	-	12
13	RISER ROOM RECEPTS.			6	Α	14	20-2	WALL HEATER	14
15	FACP		20-1	1	В	14	-	-	16
17	LOBBY RECEPTS.		20-1	3	С	14	20-2	WALL HEATER	18
19	LIGHTING CONTR	OL PANEL 'LCP1'	20-1	1	Α	14	-	-	20
21	INTERIOR	LIGHTING	20-1	3	В	14	20-2	WALL HEATER	22
23	STAIRTOWE	R LIGHTING	20-1	4	С	14	-	-	24
25	EXTERIOR	LIGHTING	20-1	5	Α	40	60-3	ELEVATOR	26
27	EXTERIOR	LIGHTING	20-1	5	В	40	-	-	28
29	SPA	.RE	20-1		С	40	-	-	30
31	SPARE		20-1		Α		ST	SHUNT TRIP SPACE	32
33	SPARE		20-1		В	3	20-1 ST	ELEVATOR CAB LIGHTS	34
35	SPA	RE	20-1		С		ST	SHUNT TRIP SPACE	36
37	SPA	RE	20-1		Α			OPEN	38
39	SPA	RE	20-1		В			OPEN	40
41	SPA	ARE	20-1		С			OPEN	42

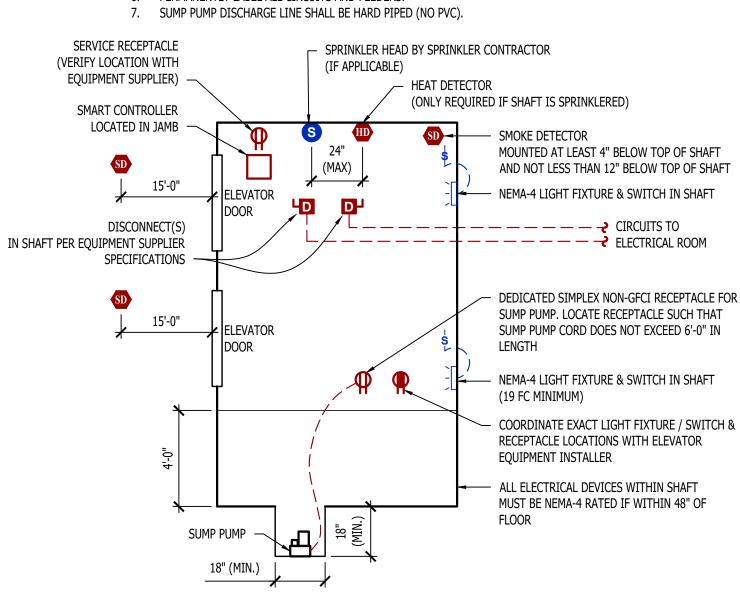
A: PANEL SHALL BE EQUAL TO SQUARE D MODEL "QO"

B: ELECTRICIAN SHALL VERIFY EXACT EQUIPMENT OVERCURRENT PROTECTION REQUIREMENTS PRIOR TO PURCHASE & INSTALLATION OF EQUIPMENT.

C: AFTER COMPLETION OF WORK, ELECTRICAN SHALL PROVIDE A TYPE WRITTEN PANEL DIRECTORY IN NEW PANEL.

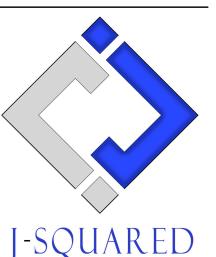
NOTES:

- ALL MATERIALS LOCATED WITHIN ELEVATOR SHAFT MUST BE OF NON-COMBUSTIBLE MATERIAL. ALL ELECTRICAL CONDUCTORS WITHIN ELEVATOR PIT MUST COMPLY WITH NEC 620.21.
- 3. SUMP PUMP RECEPTACLE, SHAFT / PIT RECEPTACLES, & SHAFT LIGHTING TO ALL BE ON EMERGENCY POWER IF
- ELEVATOR IS ON EMERGENCY POWER. 4. ADDITIONAL SMOKE DETECTOR REQUIRED IN ELEVATOR MACHINE ROOM (IF APPLICABLE).
- 5. IN CASES WHERE ELEVATOR IS NOT SHUNT-TRIP PROTECTED, A LABELED SPRINKLER SHUT-OFF MUST BE
- LOCATED OUTSIDE THE ELEVATOR HOISTWAY AND/OR EQUIPMENT ROOM.
- 6. PERMANENTLY LABEL ALL CIRCUITS AND FEEDERS.



MACHINE - ROOM - LESS ELEVATOR DETAIL

James Watson, P.E. December 12, 2024 PE-2015017071 MO Certificate of Authority # 2018029680



2400 Bluff Creek Drive, Suite 101

Columbia, Missouri 65201

573.234.4492

www.j-squaredeng.com

J2 PROJECT No:	J21003
J2 DESIGN:	ACW
ISSUE TITLE	DATE
CITY SUBMITTAL	11 - 20 - 2024
CITY COMMENTS	12 - 12 - 2024

P **D** 0

5

Villa

AHJ APPROVAL STAMP

SHEET TITLE

ELECTRICAL DETAILS & SCHEDULES