# **RED FRONT SHELL RENOVATION**

# **1125 BELMONT AVENUE** CHARLOTTE, NC 28205 **CONSTRUCTION DOCUMENTS - 07/08/2021**



**GENERAL NOTES - CONSTRUCTION:** 

- OTHERWISE NOTED. 3. EXTEND WALLS TO DECK ABOVE STOREFRONT SYSTEMS AND GLASS WALL PARTITIONS.
- BOARD.
- ANY EVIDENCE OF DEMOLITION OR REPAIR WORK.
- PLUMBING FIXTURES.
- PRIOR TO THE PERFORMANCE OF WORK.
- 9. COORDINATE AND PROVIDE BLOCKING IN PARTITIONS AND CEILING

- CENTER LINE OF COLUMN OR WINDOW MULLION, UNLESS OTHERWISE NOTED.

# **OWNER'S REPRESENTATIVE**

Orion Growth 2033 EUCLID AVENUE, UNIT B CHARLOTTE, NC 28203 888-247-4498 John Ramseur

# OWNER

6 SUMMIT 2820 Selwyn Ave., Ste. 616 Charlotte, NC 28209 Phone

Dylan Kwasniewski

1. WORK NOTED "BY OTHERS" OR "NIC" IS NOT IN CONTRACT. 2. WORK OUTSIDE "AREA OF WORK", IS NOT IN CONTRACT, UNLESS

4. WHERE NEW PARTITION ALIGNS WITH THE FACE OF AN EXISTING FURRED COLUMN OR PARTITION, REMOVE CORNER BEAD, TAPE, SPACKLE AND SAND JOINT BETWEEN NEW AND EXISTING GYPSUM

### 5. EXISTING WALL SURFACES AND PARTITIONS TO REMAIN SHALL BE PATCHED, SPACKLED AND SANDED SMOOTH SO AS NOT TO LEAVE

6. PROVIDE FIRE EXTINGUISHER CABINETS, SMOKE DETECTORS AND ALL OTHER LIFE SAFETY DEVICES AS REQUIRED BY CODE. PROVIDE DRAWING SHOWING LOCATION, OF DEVICES FOR REVIEW PRIOR TO FRAMING OF WALLS. DO NOT PLACE IN FIRE RATED PARTITIONS. 7. PROVIDE OR REUSE HOT AND COLD WATER LINES, SOIL, VENT LINES AND PRESSURE AND SHUTOFF VALVES AS REQUIRED IN ACCORDANCE WITH LOCAL BUILDING AND PLUMBING CODES FOR

8. VERIFY DIMENSIONS AND FIELD CONDITIONS TO CONFIRM CONSTRUCTABILITY. ANY CONFLICTS OR OMISSIONS SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT FOR CLARIFICATION

### FOR MILLWORK, WALL AND CEILING ATTACHED ITEMS. 10. DO NOT SCALE DRAWINGS. ALL PARTITION LOCATIONS, DIMENSIONS

AND TYPES, DOOR AND WINDOW LOCATIONS SHALL BE AS SHOWN ON PARTITION PLAN. IN CASE OF CONFLICT. NOTIFY ARCHITECT. PARTITION PLAN SUPERSEDES OTHER PLANS. 11. COORDINATE SCHEDULE FOR TELEPHONE, DATA, SECURITY AND AUDIO VISUAL INSTALLATIONS, WITH TENANT AND OWNER.

12. PARTITIONS ARE DIMENSIONED FROM FINISH FACE TO FINISH FACE, UNLESS OTHERWISE NOTED. DIMENSIONS MARKED "CLEAR" SHALL BE MAINTAINED AND SHALL ALLOW FOR THICKNESS OF FINISHES. 13. PARTITIONS AT BUILDING PERIMETER SHALL BE CENTERED ON

- 14. COLUMN CENTER LINES, OR GRID LINES, ARE SHOWN FOR DIMENSIONING, VERIFY EXACT LOCATIONS IN FIELD.
- 15. PROVIDE PARTITION TYPE WITH THE HIGHEST UL AND/OR ACOUSTICAL PERFORMANCE RATING WHERE MORE THAN ONE PARTITION TYPE IS INDICATED.
- 16. ALIGN FINISHES ON EXPOSED SIDE OF PARTITION AND FURR CONCEALED SIDE OF PARTITION AS REQUIRED TO PROVIDE FLUSH INSTALLATION WHERE ADJACENT PARTITION TYPES DIFFER IN OVERALL THICKNESS.
- 17. PROVIDE GLASS-MAT WATER RESISTANT GYPSUM WALL BOARD FOR INTERIOR PARTITIONS IN A TOILET ROOM, JANITOR'S CLOSET AND LOCATIONS TO RECEIVE TILE.
- 18. CROSS BRACE CHASE PARTITIONS FROM STUD TO STUD AT 4'-0" O.C. VERTICAL MINIMUM AND PER MANUFACTURER'S RECOMMENDATIONS.
- 19. PROVIDE SOUND BATT INSULATION FULL HEIGHT OF PARTITIONS AROUND PERIMETER OF TOILET ROOMS, MECHANICAL ROOMS, MECHANICAL SHAFTS, PLUMBING CHASES AND ABOVE SCHEDULED CEILINGS WHERE PARTITIONS DO NOT EXTEND TO UNDERSIDE OF DECK ABOVE.
- 20. PROVIDE ACOUSTICAL CAULKING AROUND PERIMETER EDGES AND PENETRATIONS AT SOUND INSULATED WALLS. OFFSET ELECTRICAL AND TELEPHONE OUTLETS 16" MINIMUM IN SEPARATE STUD CAVITIES.
- 21. OFFSET ELECTRICAL AND TELEPHONE OUTLETS 16" MINIMUM IN SEPARATE STUD CAVITIES.
- 22. MATERIALS USED IN UL RATED PARTITIONS SHALL CONFORM TO REFERENCED STANDARDS.
- 23. STENCIL BOTH SIDES OF UL RATED PARTITIONS ABOVE SCHEDULED CEILING WITH REQUIRED PROTECTION TEXT.
- 24. FIRE STOP PENETRATIONS IN UL RATED PARTITIONS TO MAINTAIN/ACHIEVE LEVEL OF PROTECTION REQUIRED FOR PARTITION TYPE. FIRE STOP ALONG PERIMETER OF RATED PARTITIONS WHERE VOIDS OCCUR.



Sheet Number	Sheet Name
00 - COVERSH	EET
CS	COVER SHEET
01 - GENERAL	/ LIFE SAFETY
G001	BUILDING CODE SUMMARY
G010	FIRE RESISTANCE DESIGNS
G020	FIRE RESISTANCE DESIGNS
G111	LIFE SAFETY PLANS
03 - LANDSCA	PE
L001	EXISTING CONDITIONS AND DEMOLITION PLAN
L100	SITE PLAN
L101	LANDSCAPE PLAN
L102	UTILITY PLAN
L200	GRADING AND ESC PLAN
L300	DETAILS
L301	DETAILS
04 - ARCHITEC	TURE
AD111	DEMOLITION FLOOR PLAN
AD121	DEMOLITION ELEVATIONS
A010	WALL TYPES - INTERIOR PARTITIONS
A110	ARCHITECTURAL SITE PLAN
A111	FLOOR PLANS
A112	ROOF PLAN
A121	REFLECTED CEILING PLAN
A210	ELEVATIONS
A310	ENLARGED ELEVATION + EXTERIOR DETAILS
A400	ENLARGED TOILET PLANS AND ELEVATIONS
A601	VERTICAL CIRCULATION
A900	DOOR AND FRAME TYPES

ARCHITECT Little

615 S. College St. Ste. 1600

Charlotte, NC 28202

704-525-6350

Nicholas Ault

CIVIL

# PLUMBING

Landworks Design Group, PA 1230 West Morehead St., Ste. 304 Charlotte, NC 28208 704-841-1604 Matt Langston

Wilde Engineering 15822 Kelly Park Circle Huntersville, NC 28078 704-439-7038

Matt Lewis

### 05 - PLUMBING PLUMBING NOTES, LEGENDS, AND SYMBOLS P001 P101 PLUMBING PLAN - DEMO P102 SUPPLY PIPING PLAN - NEW WORK P201 PLUMBING PLAN - DEMO P202 SUPPLY PIPING PLAN - NEW WORK 06 - MECHANICAL MECHANICAL NOTES, LEGENDS, AND DETAILS M001 M101 MECHANICAL PLANS - NEW WORK 07 - ELECTRICAL E001 ELECTRICAL NOTES, LEGENDS, AND DETAILS

Sheet Number

ELECTRICAL SPECIFICATIONS E002 ELECTRICAL PENETRATION DETAILS E003 E004 ELECTRICAL PWER RISER, DETAILS, AND SCHEDULES ELECTRICAL PLANS - EXISTING AND DEMO E101 E102 ELECTRICAL PLANS - NEW WORK E201 PANEL SCHEDULE

Sheet Name

# MECHANICAL

Wilde Engineering 15822 Kelly Park Circle Huntersville, NC 28078 704-439-7038 Matt Lewis

# ELECTRICAL

Wilde Engineering 15822 Kelly Park Circle Huntersville, NC 28078 704-439-7038 Matt Lewis



				-								
	2018	Appendix B			Α	llowable	Area Cla	assificat	ion & Us	es		Life Sa
	BUILDING CODE SUMMARY	FOR ALL COMMER	CIAL PROJECTS	Primary Occuj	pancy Classificat	tion(s):						Life Safety Plan Sheets: G111
	(EXCEPT 1 AND 2-FAMIL)	Y DWELLINGS AND TOWNHO	DUSES)	Assembly	<u>Business</u>	Haza	ardous Ir (Detenate)	nstitutional	Mercantile St	torage	Utility & Misc.	Fire and/or smoke rated wall locations (Chapter 7)
	(REPRODUCE THE FOLLOWING DA	ATA ON THE BUILDING PLAN	S SHEET 1 OR 2)	☐ A-1 □ A-2	Education	☐ H-1 ( ☐ H-2 (	(Deflagrate) 🗌 I-	1 (Condition 1) 1 (Condition 2)	Residential	S-1 (Moderate	e) [U d)	(if not on the site plan)
	ADDRESS: 1125 Belmont Avenue, Charlotte, N	۱C	ZIP CODE: 28205	□ A-3	E	□ H-3 (	(Combust) 🗌 I-2	2 (Condition 1)	□ R-1 □	] S-2 (Low)		assumed property lines (705.8)
	OWNER/AUTHORIZED AGENT: Orion Growth	- John Ramseur		= □ A-4 □ A-5	<u>Factory</u> □ F-1 (Mod	□ H-4( erate) □ H-5(	(Health) □ I-2 (HPM) □ I-3	2 (Condition 2) 3 (Condition 1)	□ R-2 □	] S-2 (High Piled	d) ie (Open)	Occupancy Use for each area as it relates to occup calculation (Table 1004.1.2)
	PHONE NUMBER: (T) 888.247.4498				☐ F-2 (Low)	)		3 (Condition 2)	□ R-4 □	Parking Garag	je (Enclosed)	<ul> <li>Occupant loads for each area</li> <li>Exit access travel distances (1017)</li> </ul>
F	E-MAIL: johnr@oriongrowth.com			_				3 (Condition 3)		] Repair Garage	e	Common path of travel distances
	OWNED BY: 📕 Private 🗌 City 🔲 Count	ty 🗆 State 🛛 Other City /	AHJ: N/A	_				3 (Condition 4)				$\square \text{ Dead end lengths (1020.4)}$
		ity 📕 County 🗆 State Cour	nty AHJ: N/A	Accessory Oc	cupancy Classifi	ication(s): <mark>S-2</mark>	- <i>4</i>	4				Clear exit widths for each exit door Maximum calculated occupant load capacity each
	PRIMARY POINT OF CONTAC	T:		Incidental Use	s (Table 509):							can accommodate based on egress width (1005.3)
	NAME: Nicholas Ault		704 561 2422	Special Uses (	Chapter 4 - List (	Code Sections):	:					Accessible
	EMAIL: nick.ault@littleonline.com	Summy PHONE NUMBER:	704.301.3422	Special Provis	ions (Chapter 5	- List Code Sect	tions):					
	Architect of Record:			Mixed Occupa	ncy? 📕 No	Se	eparation: 📕 N	A Except	ion: <mark>N/A</mark>			Total Units Units Units Units Frequired Provided F
	NAME: Eddie Portis	LICENSE NUMBER: 10188			☐ Yes, (Sect	Non-Separated L tion 508.3)	Jse 🗌 1	Hour 2 Hou	ır.			NO DWELLING O
	COMPANY: Little Diversified Architectural Consulting	PHONE NUMBER: <u>704.561.8</u>	3772		☐ Yes, (Sect	Separated Use tion 508.4)			11			Accessi
	Civil Engineer of Record:					Ser	parated Use Calcı	ulations (Table 5	506.2)			Total # of Parking Spa
	COMPANY: <u>N/A</u>	PHONE NUMBER: N/A		Occup	ancy Type	Actual	l Area (ft²)	Allowabl	e Area (ft²)	[Actual Area]÷	[Allowable Area]	Lot or Parking Area
	EMAIL: <u>N/A</u>							LICAB	SLE			
	NAME: Matthew Lewis	LICENSE NUMBER: 049228					T APP					Name/Description00Name/Description00
E	COMPANY: <u>Wilde Engineering</u>	PHONE NUMBER:704.439.7	7038			NC						Totals: 0 0
	Fire Alarm Engineer of Record:						Mowable Area Inc					
	NAME: N/A COMPANY: N/A	LICENSE NUMBER: N/A				A	(A)	(B)	(C)		(D)	Water Closets
	EMAIL: <u>N/A</u>			Story #	Description	& Use E	Building Area per Story [Actual]	Table 506.2 <sup>4</sup> Area	Area for Fror Increase <sup>1</sup>	ntage Allov <sup>,5</sup> Story	wable Area per or Unlimited <sup>2,3</sup>	Use Male Female Unis
	Plumbing Engineer of Record: NAME: Matthew Lewis	LICENSE NUMBER: 049228		Level 01	Future Business	Occupancy	2,677 ft²	28,500 ft <sup>2</sup>	15,213 ft	2	43,713 ft <sup>2</sup>	Existing     0     0       PUSINESS     Now     0     0
	COMPANY: Wilde Engineering	PHONE NUMBER: 704.439.7	7038		Future Business							OCCUPANCY Required 0 0 3
_	EMAIL: <u>mlewis@wildeengineering.com</u>			Level 02	Tenar	nt	2,703 ft <sup>2</sup>	28,500 ft <sup>2</sup>	15,213 ft	2	43,713 ft <sup>2</sup>	
	NAME: Matthew Lewis	LICENSE NUMBER: 049228		<sup>1</sup> Frontage are	a increases from	Section 506.2 are	e computed below:	:				SP
	COMPANY: <u>Wilde Engineering</u>	PHONE NUMBER:704.439.7	7038	a. b.	Perimeter whic Total Building I Batio = (F/P)	ch fronts a public Perimeter = (P)	way or open space	e having 20 feet n	minimum width = (I	F). (F) = 174'-0" (P) = 222'-0" (E/P) = 0.78/	, , ,	<b>Special approvals:</b> (Local Jurisdiction, Department of Described Below:
	Fire Suppression & Sprinkler Standpipe Engi	neer of Record:		d. e.	Minimum width Percent of fron	n of public way = ( ltage increase I <sub>f</sub> =	(W) = 100[F/P – 0.25] x	: W/30		$(P/P) = 0.78^{2}$ (W) = 30' - 0 (If) = 53.38%	+ )" 0	HISTORIC BUILDING REVIEW
	NAME: <u>N/A</u> COMPANY: N/A	LICENSE NUMBER: <u>N/A</u> PHONE NUMBER: N/A		<sup>2</sup> Unlimited are <sup>3</sup> Maximum Bu	ea applicable unde	er conditions of S	ection 507.	* D (Maxumum 3	stories) (506-2)	()	-	
	EMAIL: N/A			<sup>4</sup> The maximum traffic control to	m area of open pa owers must comp	arking garages mi bly with Table 412	ust comply with Ta 2.3.1.	able 406.5.4. The	e maximum area of	fair		
	Structural Engineer of Record: NAME: N/A	LICENSE NUMBER: N/A		<sup>5</sup> Frontage incl	rease is based on	the unsprinklered	ed area value in Tab	ble 506.2.				
D	COMPANY: N/A	PHONE NUMBER: N/A				FIRE	PROTECTIO	N REQUIREI	MENTS			
	EMAIL: <u>N/A</u> Retaining Walls (> 5'-0" high) Engineer of Re	cord:		Building	Fire Separation	R	Rating	Detail # &	Design # for	Sheet # for	Sheet # for	ENERGY REQUIREMENTS:
	NAME: N/A	LICENSE NUMBER: N/A		Element	Distance (feet)	Required	Section ###	Sheet #	Assembly	Rated Penetration	Rated Joints	The following data shall be considered minim shall also be provided. Each Designer shall f
	COMPANY: <u>N/A</u> EMAIL:	PHONE NUMBER: <u>N/A</u>		Structural Frame								plan data sheet. If performance method, stat
	Other Discipline Designer of Record			(Columns, girders,	N/A	N/A	N/A	N/A	N/A	N/A	N/A	annual energy cost for the proposed design.
	NAME: <u>N/A</u> COMPANY: N/A	LICENSE NUMBER: <u>N/A</u> PHONE NUMBER: N/A		trusses, etc.)			Paarin					EXISTING BUILDING ENVELOPE COMPLI
	EMAIL: N/A			Exterior			Dearin					EXEMPT BUILDING: Ves 🗆 No
	Other Discipline Designer of Record NAME: N/A	LICENSE NUMBER:		North	n N/A	N/A	N/A	N/A	N/A	N/A	N/A	Code or Statutory Reference: <u>EXISTING HIST</u> Climate Zone: 3A
	COMPANY:	PHONE NUMBER:		Wes	t N/A t N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	METHOD OF COMPLIANCE: No Chang
	EMAIL:			South	ו N/A	N/A	N/A	N/A	N/A	N/A	N/A	☐ Prescripti
	2018 NC Building Code: 🗌 N/A 📕 New Build	ling 🗌 Addition 🗌 1st Time	e Interior Completion	Interior B	Bearing Walls	1-HR	1-HR Nonbearing W	1 / G010	U-305	E003	G010	
	Renovation      Sh     * Contact local inspection	ell & Core*  Phased Cons	truction - Shell & Core*	Exterior						1		20
				– North	n N/A	N/A	N/A	N/A	N/A	N/A	N/A	BUILDING CODE SUMMAR
	2018 NC Existing Building Code: 🗌 N/A 🗌 P	Prescriptive 🗆 Repair 🗆 Cl	hapter 14	Wes	t N/A	N/A N/A	N/A N/A	N/A N/A	N/A	N/A	N/A N/A	Roof/Ceiling Assemblies:
C	☐ Alteratio	n Level 1 🗋 Alteration Level	2 Alteration Level 3	South	n N/A	N/A	N/A	N/A	N/A	N/A	N/A	Mark/Tag
				Interior Wa Floor Constr	alls & Partitions	N/A	N/A	N/A	N/A	N/A	N/A	Description
	Constructed: (date) 01/01/1905	Current Occupancy(s):	(Ch. 3) N/A	supporting Floor Ceil	beams`& joists)	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	Assembly Total U-Value
			5). <u>(011. 0) DOOINEOO</u>	Columns Su	upporting Floors	N/A	N/A	N/A	N/A	N/A	N/A	R-Value of Insulation
	(Table 1604.5)			Roof Constr supporting	uction (Including beams & joists)	N/A	N/A	N/A	N/A	N/A	N/A	Skylights in Assembly Skylight Area in Assembly
				Roof Ceil	ing Assembly	N/A	N/A	N/A	N/A	N/A	N/A	Skylight Assemblies:
	BASIC B			Shaft End	closures - Exit	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	Mark/Tag
	Construction Type: 🗌 I-A 🔲 I-B 🔲 II-A 🗌		□ V-A □ V-B	Shaft Encl	osures - Other	N/A	N/A	N/A	N/A	N/A	N/A	Assembly U-Value
	Sprinklers: 🗖 N/A 🗆 Yes 🗆 No 🔅 Par	tial		Corridor	r Separation	N/A	N/A	N/A	N/A	N/A	N/A	
	. 📕 N/A 🗌 NFPA 13 🗌 NFPA 13	R 🗌 NFPA 13D		Sep Party/Fire V	paration	N/A	N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	Mark/Tag
	Standpipes: 📕 N/A 🗌 No 🔲 Class I - Wet	t 🗌 Class I - Dry 🔲 Class	II - Wet 🛛 Class II - Dry	Smoke Bar	rrier Separation	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A	N/A N/A	Description
	Class III - We	et 🔲 Class III - Dry		Smok	e Partition	N/A	N/A	N/A	N/A	N/A	N/A	Assembly Total II Value
	Primary Fire District: 🗌 Yes 📕 No			Tenant/Dwell Unit S	ling Unit/Sleeping Separation	N/A	N/A	N/A	N/A	N/A	N/A	R-Value of Insulation
В	Flood Hazard Area: 🗌 Yes 📕 No			Incidental L	Jse Separation	N/A	N/A	N/A	N/A	N/A	N/A	Openings (Windows/Doors with Glazing):
	Special Inspections Required: 🗌 Yes* 🗖 No	)			p		a Safaty Syste		manta			Mark/Tag
		nal precedures & requirements.		Emergency	l iahtina:		No Smoke	e Detection :	Svstem - 📕 Y	es 🗆 No		Assembly U-Value SHGC
	PROJECT SCOPE OF WORK AF			Exit Signs:	J 9'	■ Yes □ I	No		Pa	artial		Projection Factor
	RENOATION OF HISTORIC PROPERTY. BUIL		CUPIED, ALL EXISTING	Fire Alarm:		🗆 Yes 📕 I	No Carbo	n Monoxide	Detection:	🗆 Yes 📕 N	No	Door R-Value
	WILL BE KEPT AS A COLD DARK SHELL TO E	BE UPFIT BY A FUTURE BUSI	NESS OCCUPANCY		D -	ercontago of	f Wall Ononin	n Calculatio	ons (Tabla 70)	5 81		Walls Below Grade:
				=	Fire Sep	eration Degr	ee of Openings D	rotection		,		
		ilding Area Table		<b>_</b>	Distance Propert	y Line	(Table 705.8)	A	allowable Area (%	Actual Sh	iown on Plan (%)	
	Gross Bul	nunny Area Table		Northern Eleve	ation 12'-	0"   0"	UP, NS		15% 70%		14%	R-Value of Insulation
	Floor Existing Building Are	ea New Building Area	Sub-Total	Southern Elev	ation 26'-	0"	UP, NS		70%		12 /0	Floors Over Unconditioned
	Level 01         2,677 SF           Level 02         2,703 SF	0 SF	2,017 SF 2,703 SF	Western Eleva	ation 30'-	0"	UP, NS		NO LIMIT		0%	Mark/Tag
	<b>Totals:</b> 5,380 SF	0 SF	5,380 SF				A 11 - ·					Description
				<b>_</b>			Allowable	Show	n on Plans	Code Re	eferences	Assembly Total U-Value
				Building Heigh	it in Feet (Table 50	04.3)	55'-0"	;	34'-4"	N	N/A	R-Value of Insulation
A						"Shown on Plana	o s" quantity is not be	ased on Table 504	∠ 4.3 or 504 ∕	N		Floors Slab-on-Gra
				r iovide COO			- yaanuty is not da					Mark/Tag
												Description
												Assembly Total U-Value

\_ ∩

1



R-Value of Insulation Horizontal/Vertical Req.

Slab Heated?

4

### UL Product iQ

encountered in the field.

Design Criteria and Allowable Variances

Design Criteria and Allowable Variances

# BXUV.U305

Design/System/Construction/Assembly Usage Disclaimer

and use of UL Certified products, equipment, system, devices, and materials.

Authorities Having Jurisdiction should be consulted before construction.

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States

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

alternate materials and alternate methods of construction.

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

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

· 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

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

When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the

States

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

Canada

Design No. U305

Bearing Wall Rating — 1 Hr

Finish Rating - See Items 3, 3A, 3D, 3E, 3F, 3G, 3H, 3J and 3L.

STC Rating - 56 (See Item 9)

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.

are to be installed horizontally. rating 25 min.)

CGC INC — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SCX (finish rating 24 min), Type SHX (finish rating 24 min), Type WRC (finish rating 24 min), Type WRX (finish rating 24 min)

NATIONAL GYPSUM CO - Type FSW (finish rating 24 min)

UNITED STATES GYPSUM CO --- Type AR (finish rating 24 min), Type SCX (finish rating 24 min), Type SGX (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type FRX-G (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min)

rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type SCX, Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min) BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United

# CGC INC - Types AR, IP-AR

UNITED STATES GYPSUM CO - Types AR, IP-AR

USG MEXICO S A DE C V - Types AR, IP-AR

CGC INC — Type SHX

UNITED STATES GYPSUM CO - Type SHX

USG MEXICO S A DE C V - Type SHX

3D. Gypsum Board\* --- (As an alternate to Items 3, 3A, 3B, or 3C --- Not Shown) --- For Direct Application to Studs Only- Nom 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 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and 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 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in, placed on the face of studs and attached to 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 discs or tabs may be used in lieu of or in addition to the lead batten strips 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 underneath screw locations prior to the installation of the screws. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

3E. Gypsum Board\* — (As an alternate to Items 3, 3A, 3B, 3C, and 3D) — 5/8 in. thick gypsum panels, with square edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in, long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last 2 screws 1 and 4 in. from edge of board or nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. When used in widths of other than 48 in., gypsum boards are to be installed horizontally. GEORGIA-PACIFIC GYPSUM L L C - Type DGG (finish rating 20 min), GreenGlass Type X (finish rating 23 min)

inch OC thereafter CGC INC — Type USGX (finish rating 22 min)

### UNITED STATES GYPSUM CO - Type USGX (finish rating 22 min.)

USG BORAL DRYWALL SFZ LLC --- , Type USGX (finish rating 22 min.)

USG MEXICO S A DE C V - Type USGX (finish rating 22 min.)

3H. Gypsum Board\* — (As an alternate to Items 3) — Not to be used with items 6 or 7. 5/8 in. thick paper surfaced applied vertically only. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam NATIONAL GYPSUM CO - Type SBWB

31. Gypsum Board\* --- (As an alternate to Items 3 through 3H, Not Shown) --- Nominal 5/8 in. thick, 4 ft wide panels, applied vertically. Panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Panel joints covered with paper tape and two layers of joint compound. Nailheads covered with two layers of joint compound. PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM - Type QuietRock ES (finish rating 20 min)

3J. Gypsum Board\* --- (As an alternate to Item 3) --- Not to be used with items 6 or 7. 5/8 in. thick paper surfaced applied vertically or horizontally. Gypsum panels secured per item 3 or 3A. CERTAINTEED GYPSUM INC — Type SilentFX

3K. Gypsum Board\* --- (As an alternate to Item 3) --- 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 8 in. OC with the last screw 1 in. from the edge of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally NATIONAL GYPSUM CO — Type FSK (finish rating 20 min), Type FSK-G (finish rating 20 min), Type FSW (finish rating 20 min), Type FSW-2 (finish rating 24 min), Type FSW-3 (finish rating 20 min), Type FSW-5 (finish rating 22 min), Type FSW-G (finish rating 20 min), Type FSK-C (finish rating 20 min), Type FSW-C (finish rating 20 min), Type FSMR-C, Type FSW-6 (finish rating 20 min), Type FSL (finish rating 24 min).

installation of materials on either face of the studs. The minimum dry density shall be 5.79 lbs/ft3. 3L. Gypsum Board\* — (As an alternate to Item 3) — For Direct Application to Studs Only — Nom 5/8 in. thick lead backed APPLEGATE HOLDINGS L L C --- Applegate Advanced Stabilized Cellulose Insulation gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 14C. Batts and Blankets\* --- (As an alternate to Item 14B, For use with Item 14A), 3 in. thick mineral wool batts, placed to fill stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel interior of wall, attached to the 3-1/2 in. face of the studs with staples placed 24 in. OC. 5J. Foamed Plastic\* --- (Optional, Not Shown - For use with Item 3U) --- Spray applied, foamed plastic insulation, at any thickness screws spaced 8 in. OC at perimeter and in the field. Lead batten strips required behind vertical joints of lead backed gypsum THERMAFIBER INC - Type SAFB, SAFB FF wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 10 ft long with a max thickness of 0.140 from partial fill to completely filling stud cavity. GACO WESTERN L L C — Types GacoEZSpray F4500, GacoProFill FR6500R, Gaco 052N, GacoOnePass F1850, GacoOnePass Low GWP F1880, in placed on the face of studs and attached to the stud with two 1 in. long Type S-8 pan head steel screws, one at the top of the 14D. Adhesive - (For use with Item 14A) - Construction grade adhesive applied in vertical, serpentine, nominal 3/8 in. wide

strip and one at the bottom of the strip. Lead discs, max 5/16 in. diam by max 0.140 in. thick. compression fitted or adhered over the screw heads. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D". MAYCO INDUSTRIES INC - "X-Ray Shielded Gypsum"

3M. Gypsum Board\* — (As an alternate to Items 3) — For Direct Application to Studs Only — For use as the base layer or as the 6. Steel Framing Members\* ---- (Optional, Not Shown) --- Furring channels and Steel Framing Members as described below: face layer. Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints 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 24 in. OC centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field when applied as the base layer. together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels When applied as the face layer screw length to be increased to 2-1/2 in. Lead batten strips required behind vertical joints of lead 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 backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 3. 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 b. Steel Framing Members\* — Used to attach furring channels (Item 6a) to study. Clips spaced 48 in. OC. RSIC-1 and RSIC-1 the Federal specification QQ-L-201f. Grade "C". Fasteners for face layer gypsum panels (Items 4, 4A or 4B) when installed over lead (2.75) clips secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. RSIC-V (2.75) backed board to be min 2-1/2 in. Type S-12 bugle head steel screws spaced as described in Item 4. clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into RADIATION PROTECTION PRODUCTS INC - Type RPP - Lead Lined Drywall clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in, wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels. PAC INTERNATIONAL L L C - Types RSIC-1, RSIC-V, RSIC-1 (2.75), RSIC-V (2.75)

3N. Gypsum Board\* — (As an alternate to Item 3) — 5/8 in. thick, 4 ft. wide, applied horizontally or vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Secured as described in Item 3 or 3A. CERTAINTEED GYPSUM INC — Easi-Lite Type X (finish rating 24 min), Easi-Lite Type X-2 (finish rating 24 min)

30. Wall and Partition Facings and Accessories\* -- (As an alternate to Item 3, Not Shown) -- Nominal 5/8 in. thick, 4 ft wide panels, applied vertically. Panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Panel joints covered with paper tape and two layers of joint compound. Nailheads covered with two layers of joint PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM - Type QuietRock 527 (finish rating 24 min).

drywall nails spaced 8 in. OC starting with a 4" stagger NATIONAL GYPSUM CO — Type FSW (finish rating 25 min)

3R. Gypsum Board\* — (As an alternate to Item 3. For use with Item 5H) — Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 3 above. Applied either horizontally or vertically, and screwed to panels with 1-5/8 in. long Type W coarse thread steel screws at 8 in. OC at perimeter and in the field with the last two screws 4 and 3/4 in. from the edges of the board when applied as the base layer. When used in widths other than 48 in, gypsum panels are to be installed horizontally.

35. Gypsum Board\* — 3/4 in. thick paper or vinyl surfaced, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels secured as described in Item 3 with nail length increased to 2 in. PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM - Type PG-13

3T. Wall and Partition Facings and Accessories\* --- (As an alternate to 5/8 in. thick board as outlined in Item 3) --- Nominal 1-3/8 in. thick, 4 ft wide panels, applied vertically or horizontally. Fastened with #6 x 2 in. long drywall screws spaced 8 in. OC along the perimeter and 12 in. OC in the field. PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM - Type QuietRock 545

Wood Studs — Nom 2 by 4 in. spaced 16 in. OC max, effectively firestopped

2. Joints and Nail-Heads - Joints covered with joint compound and paper tape. Joint compound and paper tape may be omitted when square edge boards are used. As an alternate, nom 3/32 in, thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard with the joints reinforced with paper tape. Nailheads exposed or covered with joint compound.

 Gypsum Board\* — 5/8 in. thick paper or vinyl surfaced, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. When used in widths other than 48 in., gypsum panels are to be installed horizontally. For an alternate method of attachment of gypsum panels, refer to Items 6 through 6F, Steel Framing Members\*. When Items 6, 6B, 6C, 6D, 6E, or 6F, Steel Framing Members\*, are used, gypsum panels attached to furring channels with 1 in. long Type S

bugle-head steel screws spaced 12 in. OC. When Item 6A, Steel Framing Members\*, is used, two layers of gypsum panels attached to furring channels. Base layer attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC. Face layer attached to furring channels with 1-5/8 in. long Type S bugle-head steel screws spaced 12 in. OC All joints in face layers staggered with joints in base layers. One layer of gypsum board attached to opposite side of wood stud without furring channels as described in Item 3.

When Item 7, resilient channels are used, 5/8 in. thick, 4 ft wide gypsum panels applied vertically. Screw attached furring channels with 1 in. long, self-drilling, self-tapping Type S or S-12 steel screws spaced 8 in. OC, vertical joints located midway between studs. AMERICAN GYPSUM CO — Types AGX-1(finish rating 23 min.), M-Glass (finish rating 23 min.), Type AGX-11 (finish rating 26 min), Type AGX-12 (finish rating 22 min), Type LightRoc (finish rating 23 min.) or Type AG-C

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO - Type DBX-1 (finish rating 24 min)

CABOT MANUFACTURING ULC — Type X (finish rating 22 min), 5/8 Type X, Moisture Resistant Type X, Gypsum Sheathing Type X, Mold & Mildew Resistant Type X and Mold & Mildew Resistant AR Type X, Type Blueglass Exterior Sheathing

CERTAINTEED GYPSUM INC — Type C. Type X or Type X-1 (finish rating 26 min); Type EGRG or GlasRoc (finish rating 23 min), GlasRoc-2, Type Habito (finish rating 26 min).

CGC INC — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SCX (finish rating 24 min), Type ULX (finish rating 22 min), Type WRC (finish rating 24 min), Type WRX (finish rating 24 min), Type ULIX (finish rating 20 min)

CERTAINTEED GYPSUM INC — Type LGFC6A (finish rating 34 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX (finish rating 21 min), Type CLLX (finish rating 24 min)

GEORGIA-PACIFIC GYPSUM L L C - Type 5 (finish rating 26 min), Type 6 (finish rating 23 min), Type 9 (finish rating 26 min), Type C (finish rating 26 min), Type DGG (finish rating 20 min), Type GPFS1 (finish rating 20 min), Type GPFS2 (finish rating 20 min), Type GPFS6 (finish rating 26 min), Type DS, Type DAP, Type DD (finish rating 20 min), Type DA, Type DAPC, Type LS (finish rating 23 min), Type X, Veneer Plaster Base -Type X, Water Rated - Type X, Sheathing - Type X, Soffit - Type X, Type LWX (finish rating 22 min), Veneer Plaster Base-Type LWX (finish rating -22 min), Water Rated-Type LWX (finish rating 22 min), Sheathing Type-LWX (finish rating 22 min), Soffit-Type LWX (finish rating 22 min), Type DGLW (finish rating 22 min), Water Rated-Type DGLW (finish rating 22 min), Sheathing Type- DGLW (finish rating 22 min), Soffit-Type DGLW (finish rating 22 min), Type LWX (finish rating 22 min), Type LW2X (finish rating 22 min), Veneer Plaster Base - Type LW2X (finish rating 22 min), Water Rated - Type LW2X (finish rating 22 min), Sheathing - Type LW2X (finish rating 22 min), Soffit - Type LW2X (finish rating 22 min), Type DGL2W (finish rating 22 min), Water Rated - Type DGL2W (finish rating 22 min), Sheathing - Type DGL2W (finish rating 22 min)

NATIONAL GYPSUM CO — Type FSK (finish rating 20 min), Type FSK-G (finish rating 20 min), Type FSW-2 (finish rating 24 min), Type FSW-3 (finish rating 20 min), Type FSW-5 (finish rating 22 min), Type FSW-G (finish rating 20 min), Type FSK-C (finish rating 20 min), Type FSW-C (finish rating 20 min), Type FSMR-C, Type FSW-6 (finish rating 20 min), Type FSL (finish rating 24 min), Type FSW-8, Type FSLX (finish rating 21 min), Type RSX (finish rating 26 min).

NATIONAL GYPSUM CO - Riyadh, Saudi Arabia - Type FR, or WR.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM - Types C, PG-2 (finish rating 20 min), PG-3 (finish rating 20 min), Types PG-3W, PG-5W (finish rating 20 min). Type PG-4 (finish rating 20 min). Type PG-6 (finish rating 23 min). Types PG-3WS, PG-5WS, PGS-WRS (finish rating 20 min); Types PG-5, PG-9 (finish rating 26 min); PG-11 PG-13 (Nails increased to 2 in.); Type PG-C or PGI (finish rating 26 min)

PANEL REY S A - Type GREX, GRIX, PRC, PRC2; Types RHX, Guard Rey, MDX, ETX (finish rating 22 min), PRX2 (finish rating 21 min)

THAI GYPSUM PRODUCTS PCL — Type C, Type X (finish rating 26 min)

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1 (finish rating 26 min)

UNITED STATES GYPSUM CO — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type FRX-G (finish rating 29 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type SCX (finish rating 24 min), Type SGX (finish rating 24 min), Type ULX (finish rating 22 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type ULIX (finish rating 20 min)

USG BORAL DRYWALL SFZ LLC — Type SGX (finish rating 24 min).

USG MEXICO S A DE C V - Type AR (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), SCX (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type ULX (finish rating 22 min)

3A. Gypsum Board\* --- (As an alternate to Item 3) --- 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel

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screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths of other than 48 in., gypsum boards AMERICAN GYPSUM CO — Types AGX-1 (finish rating 25 min.), M-Glass (finish rating 25 min.), AG-C (finish rating 25 min.), LighttRoc (finish

applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Gypsum panels twisted steel wire. Gypsum board attached to furring channels as described in Item 3. nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. AMERICAN GYPSUM CO - Types AGX-1

CERTAINTEED GYPSUM INC — Type C, Type X or Type X-1 (finish rating 26 min)

USG BORAL DRYWALL SFZ LLC - Types C, SCX, SGX (finish rating 24 min).

USG MEXICO S A DE C V - Type AR (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish

38. Gypsum Board\* --- (As an alternate to Item 3) --- Nom 3/4 in. thick, installed with 1-7/8 in. long cement coated nails as

described in Item 3 or 1-3/8 in. long Type W coarse thread gypsum panel steel screws as described in Item 3A.

3C. Gypsum Board\* — (As an alternate to Items 3, 3A and 3B) — 5/8 in. thick, 2 ft wide, tongue and groove edge, applied horizontally to one side of the assembly. Installed with 1-7/8 in, long cement coated nails as described in Item 3 or 1-1/4 in, long Type W coarse thread gypsum panel steel screws as described in Item 3A. Joint covering (Item 2) not required.

RAY-BAR ENGINEERING CORP — Type RB-LBG (finish rating 24 min)

3F. Gypsum Board\* — (As an alternate to Items 3, 3A, 3B, 3C, 3D, and 3E) — 5/8 in. glass-mat faced with square edges, applied either horizontally or vertically. Gypsum panels nailed 7 in. OC around the perimeter and in the field with 6d cement coated nails

3G. Gypsum Board\* — (As an alternate to Items 3 through 3F) — 5/8 in. thick paper surfaced applied vertically. Gypsum panels. nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. GEORGIA-PACIFIC GYPSUM LLC - Type X ComfortGuard Sound Deadening Gypsum Board (finish rating 27 min)

3P. Gypsum Board\* — (As an alternate to Item 3, Not Shown) — Two layers nom. 5/16 in. thick gypsum panels applied vertically or horizontally. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered or backed by wood studs. Horizontal joints on the same side between face and base layers need not be staggered. Base layer gypsum panels fastened to studs with 1-1/4 in. long drywall nails spaced 8 in. OC. Face layer gypsum panels fastened to studs with 1-7/8 in. long

3Q. Gypsum Board\* — (As an alternate to Item 3) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in, long Type W coarse thread gypsum panel steel screws spaced a maximum 10 in, OC with the last two screws 4 and 1 in. from the edges of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally. CERTAINTEED GYPSUM INC — Type LGFC6A (finish rating 21 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX

3U. Gypsum Board\* --- (As an alternate to Item 3 - For use with Foamed Plastic products, Item 5J) --- 5/8 in. thick, 4 ft. wide,

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO - Type DBX-1

CERTAINTEED GYPSUM INC - Type X

CABOT MANUFACTURING ULC - Type X

CGC INC - Type SCX

PANEL REY S A - Type PRX

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD - Type EX-1

THAI GYPSUM PRODUCTS PCL - Type X

UNITED STATES GYPSUM CO - Types SCX and SGX

USG BORAL DRYWALL SFZ LLC - Types SCX and SGX

USG MEXICO S A DE C V - Type SCX

6G. Steel Framing Members\* — (Optional, Not Shown) — Used as an alternate method to attach resilient channels to wall studs. 3V. Gypsum Board\* --- (As an alternate to Item 3. For use with Item 5K) --- Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in A resilient sound isolation accessory shall be used at each attachment point of the resilient channels and spaced max 16 in. O.C. Item 3 above. Applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Channel ends butted and centered under the structural members and attached with one accessory at each end. Additional Gypsum panels secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter accessories used to hold resilient channels that support the gypsum board end joints. The accessory envelops the mounting edge and in the field. of the resilient channel. The accessory and resilient channel are fastened to the structural members with the screws supplied with the accessory and per the accessory manufacturer's installation instructions. 4. Steel Corner Fasteners — (Optional) — For use at wall corners. Channel shaped, 2 in. long by 1 in. high on the back side with PAC INTERNATIONAL L L C — Type RC-1 Boost

two 1/8 in. wide cleats protruding into the 5/8 in. wide channel, fabricated from 24 gauge galv steel. Fasteners applied only to the end or cut edge (not along tapered edges) of the gypsum board, no greater than 2 in. from corner of gypsum board, max spacing 16 in. OC. Nailed to adjacent stud through tab using one No. 6d cement coated nail per fastener. Corners of wall board shall be nailed to top and bottom plate using No. 6d cement coated nails.

5. Batts and Blankets\* -- (Optional -- Required when Item 6A is used (RC-1)) -- Glass fiber or mineral wool insulation. Placed to completely or partially fill the stud cavities. When Item 6A is used, glass fiber or mineral wool insulation shall be friction-fitted to completely fill the stud cavities. CERTAINTEED CORP

JOHNS MANVILLE

KNAUF INSULATION LLC

MANSON INSULATION INC ROCKWOOL — Types Acoustical Fire Batts and Type AFB, min. density 1.69 pcf / 27.0 kg/m<sup>3</sup>

ROCKWOOL MALAYSIA SDN BHD - Type Acoustical Fire Batts

ROCK WOOL MANUFACTURING CO - Delta Board

THERMAFIBER INC - Type SAFB, SAFB FF

5A. Fiber, Sprayed\* --- (Not Shown --- Not for use with Item 6) --- As an alternate to Batts and Blankets (Item 5) --- Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft3. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft<sup>3</sup>, in accordance with the application instructions supplied with the product. When Item 6B is used, Fiber, Sprayed shall be INS735, INS745, INS750LD, INS765LD or INS773LD. U S GREENFIBER L L C -- INS735, INS745 and INS750LD for use with wet or dry application. INS515LD, INS541LD, INS735, INS765LD, and INS773LD are to be used for dry application only

1-7/8 in, long, 0.0915 in, shank diam and 15/64 in, diam heads, Nails shall be placed 1 inch and 3 inch from horizontal joints and 7 5B. Fiber, Sprayed\* — (Not Shown - Not for use with Item 6) — As an alternate to Batts and Blankets (Item 5) - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instruction supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft. NU-WOOL CO INC — Cellulose Insulation

> 5C. Batts and Blankets\* - Required for use with resilient channels, Item 7, 3 in. thick mineral wool batts, friction-fitted to fill interior of wall.

THERMAFIBER INC — Type SAFB, SAFB FF

5D. Glass Fiber Insulation - (As an alternate to Item 5C) - 3 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, friction-fitted to fill the interior of the wall. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies.

5E. Batts and Blankets\* --- (Required for use with Wall and Partition Facings and Accessories, Item 3D) --- Glass fiber insulation, nom 3-1/2 in. thick, min. density of 0.80 pcf, with a flame spread of 25 or less and a smoke developed of 50 or less, friction-fitted to completely fill the stud cavities. See Batts and Blankets Category (BKNV) for names of manufacturers.

5F, Fiber, Sprayed\* — (Optional, Not Shown — Not for use with Items 6, 6A, 6B, 6C, or 6D) — As an alternate to Batts and Blankets (Item 5) and Item 5A - Spray applied granulated mineral fiber material. 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

5G. Fiber, Sprayed\* --- (Optional, Not Shown --- Not for use with Items 6, 6A, 6B, 6C, or 6D). -- As an alternate to Batts and Blankets (Item 5) and Item 5A - Brown Colored Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed stud cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft<sup>3</sup>

INTERNATIONAL CELLULOSE CORP --- Celbar-RL 14A. Mineral and Fiber Board\* --- (Optional, Not Shown) --- For use with Items 14B-14E) --- For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing 5H. Foamed Plastic\* — (Optional -For use with Item 3R) — Spray applied, foamed plastic insulation, at any thickness from partial with minimum 1-3/8 in. long ring shanked nails or 1-1/4 in. long Type W steel screws, spaced 12 in. OC along board edges and 24 fill to completely filling stud cavity. in. OC in field of board along intermediate framing. Not evaluated or intended as a substitute for the required layer(s) of UL SES FOAM INC -- Nexseal<sup>TM</sup> 2.0 or Nexseal<sup>TM</sup> 2.0 LE Spray Foam and Sucraseal Spray Foam. Classified Gypsum Board.

51. Fiber, Sprayed\* - (Not Shown - Not for use with Item 6) - As an alternate to Batts and Blankets (Item 5) - Spray-applied

cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. To facilitate the installation of the material, any thin, woven or non-woven netting may be attached by any means possible to the outer face the studs. The material shall reach equilibrium moisture content before the

and Gaco WallFoam 183M 5K. Foamed Plastic\* - (Optional, Not Shown - For use with Item 3V) - Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity.

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.

6A. Steel Framing Members\* — (Optional, Not Shown) — Furring channels and Steel Framing Members on one side of studs as described below: a. Furring Channels --- Formed of No. 25 MSG galv steel, 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. Batts and Blankets placed in stud cavity as described in Item 5. Two layers of gypsum board attached to furring channels as described in Item 3.

b. Steel Framing Members\* — Used to attach furring channels (Item 6Aa) to one side of studs only. Clips spaced 48 in. OC., and secured to studs with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips. KINETICS NOISE CONTROL INC - Type Isomax

6B. Steel Framing Members\* --- (Optional, Not Shown) --- 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 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 each flange of the channel. Gypsum board attached to furring channels as described in Item 3.

b. Steel Framing Members\* - Used to attach furring channels (Item 68a) to studs. Clips spaced 48 in. OC. Genie clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. PLITEQ INC — Type Genie Clip

6C. Steel Framing Members\* — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 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 3.

b. Steel Framing Members\* - Used to attach furring channels (Item 6Ca) to studs. Clips spaced 48 in. OC., and secured to studs with No. 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 A237 or A237R

6D. Steel Framing Members\* — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below: a. Furring 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 a double strand of No. 18 AWG

b. Steel Framing Members\* — Used to attach furring channels (Item 6Da) 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. Furring channels are friction fitted into clips. REGUPOL AMERICA — Type SonusClip

6E. Steel Framing Members\* --- (Optional, Not Shown) --- 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 3

b. Steel Framing Members\* - Used to attach resilient channels (Item 6Ea) 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. pan-head self-drilling screw. KEENE BUILDING PRODUCTS CO INC - Type RC+ Assurance Clip

6F. Steel Framing Members\* --- (Optional, Not Shown) --- 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. or 1-1/2 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 NATIONAL GYPSUM CO --- Types FSK+C, FSW+C 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 each flange of the channel. Gypsum board attached to furring channels as described in Item 3.

b. Steel Framing Members\* — Used to attach furring channels (Item 6Fa) to studs. Clips spaced 48 in. OC. Clips secured to studs PANEL REY S A — Type PRC 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

Furring Channel — Optional — Not Shown — For use on one side of the wall - Resilient channels, 25 MSG galv steel, spaced vertically 24 in. OC, flange portion screw attached to one side of studs with 1-1/4 in. long diamond shaped point, double lead Phillips head steel screws. When resilient channels are used, insulation, Items 5C or 5D is required.

### Caulking and Sealants — (Not Shown, Optional) — A bead of acoustical sealant applied around the partition perimeter for sound control.

9. STC Rating — The STC Rating of the wall assembly is 56 when it is constructed as described by Items 1 through 6, except:

- A. Item 2, above --- Nailheads Shall be covered with joint compound.
- B. Item 2, above Joints As described, shall be covered with fiber tape and joint compound.
- C. Item 5, above Batts and Blankets\* The cavities formed by the studs shall be friction fit with R-19 unfaced fiberglass insulation batts measuring 6-1/4 in. thick and 15-1/4 in. wide.

D. Item 6, above — Steel Framing Members\* Type RSIC-1 clips shall be used to attach gypsum board to studs on either side of the wall assembly.

E. Item 8, above — Caulking and Sealants (Not Shown) A bead of acoustical sealant shall be applied around the partition perimeter for sound control.

F. Steel Corner Fasteners (Item 4), Fiber, Sprayed (Items 5A and 5B) and Steel Framing Members (Item 6A), not evaluated as alternatives for obtaining STC rating.

10. Wall and Partition Facings and Accessories\* - (Optional, Not Shown) - Nominal 1/2 in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-500 or QR-510 panel is installed between the wood framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

PABCO BUILDING PRODUCTS LLC, DBA PABCO GYPSUM - Type QuietRock QR-500 and QR-510

11. Cementitious Backer Units\* — (Optional Item Not Shown — For Use On Face Of 1 Hr Systems With All Standard Items Required) - 7/16 in., 1/2 in., 5/8 in., 3/4 in. or 1 in. thick, min. 32 in. wide. Applied vertically or horizontally with vertical joints centered over studs. Fastened to studs and runners with cement board screws of adequate length to penetrate stud by a minimum of 3/8 in. for steel framing members, and a minimum of 3/4 in. for wood framing members spaced a max of 8 in. OC. When 4 ft. wide boards are used, horizontal joints need not be backed by framing. NATIONAL GYPSUM CO - Type DuraBacker, PermaBase, DuraBacker Plus, or PermaBase Plus

12. Non-Bearing Wall Partition Intersection - (Optional) - Two nominal 2 by 4 in, studs or nominal 2 by 6 in, studs nailed together with two 3 in. long 10d nails spaced a max. 16 in. OC. vertically and fastened to one side of the minimum 2 by 4 in. stud with 3 in. long 10d nails spaced a max. 16 in. OC. vertically. Intersection between partition wood studs to be flush with the 2 by 4 in, studs. The wall partition wood studs are to be framed by with a second 2 by 4 in. wood stud fastened with 3 in. long 10d nails spaced a max. 16 in. OC. vertically. Maximum one non-bearing wall partition intersection per stud cavity. Non-bearing wall partition stud depth shall be at a minimum equal to the depth of the bearing wall.

13. Mesh Netting — (Not Shown) — Any thin, woven or non-woven fibrous netting material attached with staples to the outer face of one row of studs to facilitate the installation of the sprayed fiber from the opposite row.

14. Mineral and Fiber Board\* --- (Optional, Not Shown) --- For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing with 2 in. long Type W steel screws, spaced 12 in. OC. The required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board. HOMASOTE CO — Homasote Type 440-32

HOMASOTE CO - Homasote Type 440-32

14B. Glass Fiber Insulation — (For use with Item 14A) — 3-1/2 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, placed to fill the interior of the wall. See Batts and Blankets (BKNV or BZJZ) categories for names of Classified companies.

beads down the length of both vertical edges of Mineral and Fiber Board (Item 14A).

14E. Gypsum Board\* — (For use with Item 14A) — 5/8 in. thick, 4 ft wide, applied vertically over Mineral and Fiber Board (Item 14A) with vertical joints located anywhere over stud cavities. Secured to mineral and fiber boards with 1-1/2 in. Type G Screws spaced 8 in. OC along edges of each vertical joint and 12 in. OC in intermediate field of the Mineral and Fiber Board (Item 14A). Secured to outermost studs and bearing plates with 2 in. long Type S screws spaced 8 in. OC. Gypsum Board joints covered with paper tape and joint compound. Screw heads covered with joint compound. Finish Rating 30 Min. AMERICAN GYPSUM CO - Type AG-C

CERTAINTEED GYPSUM INC - Type C

CGC INC - Types C, IP-X2, IPC-AR

CERTAINTEED GYPSUM INC - Type LGFC-C/A

GEORGIA-PACIFIC GYPSUM L L C - Types 5, DAPC, TG-C

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM - Type PG-C

THAI GYPSUM PRODUCTS PCL - Type C

UNITED STATES GYPSUM CO - Types C, IP-X2, IPC-AR

USG BORAL DRYWALL SFZ LLC - Type C

USG MEXICO S A DE C V - Types C, IP-X2, IPC-AR

14F. Mineral and Fiber Board — (Optional, Not Shown) — For optional use as an additional layer on one side of wall - Nom 1/2 in, thick, 4 ft wide, square edge fiber boards applied vertically to studs on one side of the wall in between the wood studs and the UL Classified Gypsum Board (Item 3). Fiber boards installed with 1-1/4 in. long, Type W, bugle head, coarse thread gypsum board screws spaced 12 in. OC max, with the last screws spaced 2 in. and 6 in. from edge of board. Gypsum board (Item 3) installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board. BLUE RIDGE FIBERBOARD INC - SoundStop

\* 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 2021-05-20

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's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service. Always look for the Mark on the product.

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UL Product <b>iQ</b> ™	
BXUV.L522 - Fire-resistanc	ce Ra
E Sesign/System/Construction/ Authorities Having Jurisdiction should be consulted in all ca and use of UL Certified products, equipment, system, device Authorities Having Jurisdiction should be consulted before Fire resistance assemblies and products are developed by t compliance with applicable requirements. The published in encountered in the field. When field issues arise, it is recommended the first contact product manufacturer noted for the design. Users of fire re Information for each product category and each group of a	Assembly I ases as to the construction the design s formation of t for assistance assemblies.
alternate materials and alternate methods of construction.  Only products which bear UL's Mark are considered Certifie  RXLIV - Fire Resistance Ratings - J	ed. ANSI/I
Stat BXUV7 - Fire Resistance Ratings Cana	tes s - CA ada
See General Information for Fire-resistance Ratings - ANSI/UL 263 Certifi Design Criteria and Allowable Variances See General Information for Fire Resistance Ratings - CAN/ULC-S101 Cert Design Criteria and Allowable Variances	ied for Unite
Design N February C Unrestrained Assem	10. L522 05, 2021 1bly Rat
Finish Rating This design was evaluated using a load de Design Method (e.g., Working Stress employing the Limit States Design Meth	g — 16 esign m is Desig hod, su
factor shall be used — See * Indicates such products shall bear t jurisdictions employing the UL or cUL Cer	e Guide the UL o rtificatio
3 End Joint Detail 1. Finish System — The flooring system shall consist of on	3 The of the fol
Syste Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally D" or "Sheathing". Face grain of plywood or strength axis of pan Vapor Barrier — Nom 0.010 in. thick commercial rosin-sized bui Finish Flooring — Min 1 by 4 in. T & G lumber installed perpen grade "Underlayment" or "Single-Floor". Face grain of plywood or staggered.	em No. y to joists, or yel to be perp uilding paper idicular to tru or strength a em No.
C Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally D* or "Sheathing". Face grain of plywood or strength axis of pan Vapor Barrier — Nom 0.010 in. thick commercial rosin-sized bui Finish Flooring - Floor Topping Mixture* — Min 1-1/2 in. thich 1000 psi and a cast density of 100 plus or minus 5 pcf. Foam con through nozzle. Mixture shall consist of 1.4 cu feet of preformed with 5-1/2 gai of water. ELASTIZELL CORP OF AMERICA — Type FF.	/ to joists, or tel to be pen illding paper kness of floo ncentrate mi I foam conce
Deleted. Syste	em No. em No.
Subflooring — Min 1 by 6 in, T & G lumber fastened diagonally D" or "Sheathing". Face grain of plywood or strength axis of pany Vapor Barrier — Nom 0.010 in, thick commercial rosin-sized but Floor Mat Materials* — (Optional) —Floor mat material nom 5, Primer to be applied to the surface of the mat prior to the place HACKER INDUSTRIES INC — Type Hacker Sound-Mat.	/ to joists, or sel to be perp silding paper si/64 in. (2mm sment of a m
Alternate Floor Mat Materials - (Optional) — Floor mat mater Primer. Primer to be applied to the surface of the mat prior to th HACKER INDUSTRIES INC — Type Hacker Sound-Mat II.	rial nom 1/4 he placemen
Alternate Floor Mat Materials - (Optional) — Floor mat mater thickness shall be a min of 1 in. (25mm) HACKER INDUSTRIES INC — FIRM-FILL SCM 125	rial nom 1/8
Alternate Floor Mat Materials - (Optional) — Floor mat mater thickness shall be a min of 1 in. (25mm) HACKER INDUSTRIES INC — Type FIRM-FILL SCM 250, Quiet Q	rial nom 1/4 Qurl 55/025
Alternate Floor Mat Materials - (Optional) — Floor mat mater topping thickness shall be a min of 1-1/4 in. (32mm) HACKER INDUSTRIES INC — FIRM-FILL SCM 400, Quiet Qurl 60	rial nom 3/8 /0/040
Alternate Floor Mat Materials - (Optional) — Floor mat mater topping thickness shall be a min of 1-1/2 in. (38mm) HACKER INDUSTRIES INC — Type FIRM-FILL SCM 750, Quiet Q	rial nom 3/4 Qurl 65/075
Metal Lath (Optional) — For use with 3/8 in. (10 mm) floor mat over the floor mat material. Hacker Floor Primer to be applied pri- topping thickness a nom 1–1/4 in. over the floor mat. Finish Flooring - Floor Topping Mixture* — Min 1 in. thick strength of 1100 psi. Mixture shall consist of 6.8 gal of water HACKER INDUSTRIES INC — Firm-Fill Gypsum Concrete, Firm-F Span Radiant	t materials, 3 rior to the pl ickness of fli er to 80 lbs Fill 2010, Firr
A Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally D° or "Sheathing". Face grain of plywood or strength axis of pan Vapor Barrier — Nom 0.010 in. thick commercial rosin-sized bui Finish Flooring - Floor Topping Mixture* — Min 1 in. thicknes psi. Mixture shall consist of 5 to 8 gal of water to 80 lbs of floor to ULTRA QUIET FLOORS — Types UQF-A, UQF-Super Blend, UQF	em No. y to joists, or hel to be perp uilding paper ss of floor top topping mix F-Plus 2000.
Syste	em No.

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### 0

## Fire-resistance Ratings - ANSI/UL 263

### sign/System/Construction/Assembly Usage Disclaimer should be consulted in all cases as to the particular requirements covering the installation

equipment, system, devices, and materials.

should be consulted before construction. products are developed by the design submitter and have been investigated by UL for uirements. The published information cannot always address every construction nuance

ommended the first contact for assistance be the technical service staff provided by the or the design. Users of fire resistance assemblies are advised to consult the general Guide ategory and each group of assemblies. The Guide Information includes specifics concerning e methods of construction. Mark are considered Certified.

ance Ratings - ANSI/UL 263 Certified for United States

sistance Ratings - CAN/ULC-S101 Certified for Canada Ratings - ANSI/UL 263 Certified for United States

Ratings - CAN/ULC-5101 Certified for Canada

### Design No. L522

February 05, 2021

restrained Assembly Rating — 1 Hr. Finish Rating — 16 Min.

ed using a load design method other than the Limit States a., Working Stress Design Method). For jurisdictions tates Design Method, such as Canada, a load restriction hall be used — See Guide <u>BXUV</u> or <u>BXUV7</u>

### ducts shall bear the UL or cUL Certification Mark for the UL or cUL Certification (such as Canada), respectively.



### System No. 1

a lumber fastened diagonally to joists, or min 15/32 in. thick wood structural panels, min grade "Clywood or strength axis of panel to be perpendicular to joists with joints staggered. ick commercial rosin-sized building paper.

T & G lumber installed perpendicular to trusses, or min 19/32 in. thick wood structural panels, min Floor". Face grain of plywood or strength axis of panels to be perpendicular to joists with joints

### System No. 2

G lumber fastened diagonally to joists, or min 15/32 in. thick wood structural panels, min grade "Clywood or strength axis of panel to be perpendicular to joists with joints staggered. ick commercial rosin-sized building paper. Mixture\* — Min 1-1/2 in. thickness of floor topping mixture having a min compressive strength of

0 plus or minus 5 pcf. Foam concentrate mixed 40:1 by volume with water and expanded at 100 psi sist of 1.4 cu feet of preformed foam concentrate to 94 lbs Type I Portland cement, 300 lbs of sand

System No. 4 G lumber fastened diagonally to joists, or min 15/32 in. thick wood structural panels, min grade "Cywood or strength axis of panel to be perpendicular to joists with joints staggered.

-Floor mat material nom 5/64 in. (2mm) thick adhered to subfloor with Hacker Floor Primer. e of the mat prior to the placement of a min 1-1/4 in. of floor-topping mixture. e Hacker Sound-Mat.

(Optional) ---- Floor mat material nom 1/4 in. (6mm) thick adhered to subfloor with Hacker Floor e surface of the mat prior to the placement of a min 1-1/4 in. (32mm) of floor-topping mixture. e Hacker Sound-Mat II.

(Optional) — Floor mat material nom 1/8 in. (3mm) thick loose laid over the subfloor. Floor topping

(Optional) — Floor mat material nom 1/4 in. (6mm) thick loose laid over the subfloor. Floor topping e FIRM-FILL SCM 250, Quiet Qurl 55/025

(Optional) — Floor mat material nom 3/8 in. (10mm) thick loose laid over the subfloor. Floor f 1-1/4 in. (32mm) A-FILL SCM 400, Quiet Qurl 60/040

Optional) — Floor mat material nom 3/4 in. (19mm) thick loose laid over the subfloor. Floor f 1-1/2 in. (38mm)

with 3/8 in. (10 mm) floor mat materials, 3/8 in. expanded steel diamond mesh, 3.4 lbs/sq yd placed r Floor Primer to be applied prior to the placement of the metal lath. When metal lath is used, floor over the floor mat.

Mixture\* — Min 1 in. thickness of floor topping mixture having a min compressive hall consist of 6.8 gal of water to 80 lbs of floor topping mixture to 1.9 cu ft of sand. n-Fill Gypsum Concrete, Firm-Fill 2010, Firm-Fill 3310, Firm-Fill 4010, Firm-Fill High Strength, Gyp-

### System No. 5

System No. 6

G lumber fastened diagonally to joists, or min 15/32 in. thick wood structural panels, min grade "Cywood or strength axis of panel to be perpendicular to joists with joints staggered. ick commercial rosin-sized building paper.

Mixture\* — Min 1 in. thickness of floor topping mixture having a min compressive strength of 1000 gal of water to 80 lbs of floor topping mixture to 2.1 cu ft of sand. JQF-A, UQF-Super Blend, UQF-Plus 2000.

Subflooring --- Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered. Vapor Barrier - Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Flooring - Floor Topping Mixture\* — Min 3/4 in. thickness of floor topping mixture having a minimum compressive strength of 1500 psi. Refer to manufacturer's instructions accompanying the material for specific mix design. MAXXON CORP — Type Maxxon Standard and Maxxon High Strength

Floor Mat Materials\* --- (Optional) - Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.

MAXXON CORP — Type Encapsulated Sound Mat.

Floor Mat Reinforcement - (Optional) Refer to manufacturer's instructions regarding minimum thickness of floor topping for use with floor mat reinforcement.

Metal Lath — (Optional) — 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd loose laid over the floor mat material. Fiber Glass Reinforcement - (Optional, Not Shown) - 0.015 in. thick PVC coated non-woven fiberglass mesh, 0.368 lbs/sq yd loose laid over the floor mat material.

### System No. 7

Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered. Vapor Barrier - Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Floor - Mineral and Fiber Board\* - Min 1/2 in. thick, supplied in sizes ranging from 3 ft by 4 ft to 8 ft by 12 ft. All joints to be staggered a min of 12 in. with adjacent sub-floor joints. HOMASOTE CO — Type 440-32 Mineral and Fiber Board

### vstem No.

Subflooring — Min 1 by 6 in, T & G lumber fastened diagonally to joists, or min 15/32 in, thick wood structural panels, min grade "C-D\* or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered. Vapor Barrier - Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Flooring - Floor Topping Mixture\* -- Min 1-1/2 in. thickness of floor topping mixture having a min compressive strength of 1000 psi and a cast density of 100 plus or minus 5 pcf. Foam concentrate mixed 40:1 by volume with water and expanded at 100 psi through nozzle. Mixture shall consist of 1.2 cu feet of preformed foam concentrate to 94 lbs Type I Portland cement, 300 lbs of sand with 5-1/2 gal of water. AERIX INDUSTRIES ---- Floor Topping Mixture

### System No. 9

Subflooring - Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered. Vapor Barrier - Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Flooring --- Floor Topping Mixture\* -- Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

FORMULATED MATERIALS LLC - Types FR-25, FR-30, and SiteMix

Floor Mat Material\* — (Optional) Floor mat material nominal 2 - 9.5 mm thick loose laid over the subfloor. Floor topping shall be a min of 1 in.

FORMULATED MATERIALS LLC - Types M1, M2, M3, Elite, Duo, R1, and R2

### System No. 10

Subflooring - Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered. Vapor Barrier --- (Optional) --- Nom 0.030 in thick commercial asphalt saturated felt.

Finish Flooring -- Floor Topping Mixture\* -- Min 1 in, thickness of floor topping mixture, having a min compressive strength of 2100 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

### System No. 11

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered.

Vapor Barrier — (Optional) - Commercial asphalt saturated felt, 0.030 in. thick.

Vapor Barrier --- (Optional) - Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Flooring\* -- Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies. Floor Mat Materials\* --- (Optional) - Nom. 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 55/025 and Quiet Qurl 55/025 N

3/4 in.

Alternate Floor Mat Materials\* — (Optional) - Floor mat material Nom. 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC - Type Quiet Qurl 60/040 and Quiet Qurl 60/040 N

KEENE BUILDING PRODUCTS CO INC - Type Quiet Qurl 65/075, Quiet Qurl 65/075 N

Alternate Floor Mat Materials\* — (Optional) - Floor mat material Nom. 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.

Alternate Floor Mat Materials\* -- (Optional) - Floor mat material Nom. 1/8 in. thick loose laid over the subfloor. Floor topping

thickness shall be a minimum of 3/4 in. KEENE BUILDING PRODUCTS CO INC - Type Quiet Qurl 52/013 and Quiet Qurl 52/013 N

Alternate Floor Mat Materials\* -- (Optional) - Floor mat material Nom. 1/4 in. entangled net core with a compressible fabric attached to the bottom loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in. KEENE BUILDING PRODUCTS CO INC - Quiet Qurl 55/025 MT and Quiet Qurl 55/025 N MT

### System No. 12

Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered. Vapor Barrier - Nom 0.010 in, thick commercial rosin-sized building paper.

Finish Flooring -- Floor Topping Mixture\* -- Min 3/4 in: thickness of floor topping mixture having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

ACG MATERIALS — AccuCrete® Types NexGen, Green, Prime and PrePour, AccuRadiant®, AccuLevel® Types G40, G50 and SD30

Floor Mat Material\* -- (Optional) - Floor mat material nominal 2 - 9.5 mm thick loose laid over the subfloor. Floor topping shall be a min of 1 in,

ACG MATERIALS — AccuQuiet types P80, C40, D13, D-18, D25, DX38, EM.125, EM.250, EM.250, EM.2505, EM.375, EM.3755, EM.750, and EM.750S

### System No. 13

Subflooring — Min 23/32 in thick T&G wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with end joints staggered 4 ft. Panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Gypsum Board\* — One layer of nom 5/8 in. thick, 4 ft wide gypsum board, installed with long dimension perpendicular to joists. Gypsum board secured with 1 in long No. 6 Type W bugle head steel screws spaced 12 in. OC and located a min of 1-1/2 in. from side and end joints. The joints of the gypsum board are to be staggered a minimum of 12 inches from the joints of the subfloor. GEORGIA-PACIFIC GYPSUM L L C - Type DS

Floor Mat Materials\* --- (As an alternate to the single layer gypsum board) -- Floor mat material loose laid over the subfloor.

MAXXON CORP — Type Encapsulated Sound Mat.

Gypsum Board\* ---- (For use when floor mat is used) Two layers of nom 5/8 in. thick, 4 ft wide gypsum board, installed with long dimension perpendicular to joists on top of the floor mat material. Gypsum board secured to each other with 1 in. long No. 6 Type G bugle head steel screws spaced 12 in. OC and located a min of 1-1/2 in. from side and end joints. The joints of the gypsum board are to be staggered a minimum of 12 inches in between layers and from the joints of the subfloor. GEORGIA-PACIFIC GYPSUM L L C - Type DS

### System No. 14

Subflooring - Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered. Vapor Barrier --- (Optional) - Nom 0.010 in. thick commercial asphalt saturated felt.

Finish Flooring - Floor Topping Mixture\* — Min 3/4 in. thickness of floor topping mixture having a minimum compressive strength of 1800 psi. Refer to manufacturer's instructions accompanying the material for specific mix design. UNITED STATES GYPSUM CO - Types LRK, HSLRK, CSD

USG MEXICO S A DE C V - Types LRK, HSLRK, CSD

Floor Mat Materials\* --- (Optional) - Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material. UNITED STATES GYPSUM CO - Types SAM, LEVELROCK® Brand Sound Reduction Board, LEVELROCK® Brand Floor Underlayment SRM-25

### System No. 15

Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick wood structural panels, min grade "C-D\* or "Sheathing", Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered.

Vapor Barrier - Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Flooring - Floor Topping Mixture\* --- Min 3/4 in. thickness of floor topping mixture having a min compressive strength of

1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design. DEPENDABLE LLC — GSL M3.4, GSL K2.6, GSL-CSD and GSL RH

Floor Mat Materials\* --- (Optional) - Nom. 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of

KEENE BUILDING PRODUCTS CO INC - Type Quiet Qurl 55/025 and Quiet Qurl 55/025 N

Alternate Floor Mat Materials\* --- (Optional) - Floor mat material Nom. 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC - Type Quiet Qurl 60/040 and Quiet Qurl 60/040 N

Alternate Floor Mat Materials\* -- (Optional) - Floor mat material Nom. 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.

KEENE BUILDING PRODUCTS CO INC - Type Quiet Qurl 65/075, Quiet Qurl 65/075 N

Alternate Floor Mat Materials\* --- (Optional) - Floor mat material Nom. 1/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC - Type Quiet Qurl 52/013 and Quiet Qurl 52/013 N

Alternate Floor Mat Materials\* — (Optional) - Floor mat material Nom. 1/4 in. entangled net core with a compressible fabric attached to the bottom loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in. KEENE BUILDING PRODUCTS CO INC --- Quiet Qurl 55/025 MT and Quiet Qurl 55/025 N MT

### System No. 16

Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints stadgered.

Finish Flooring\* — Floor Topping Materials — Min 3/4 in. to 1-1/2 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance with a minimum compressive strength of 1500 psi. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies.

Floor Mat Materials\* --- (Optional) --- Floor mat material nom 1/8 in. to 3/4 in. thick. Loose laid over the subfloor. When used, Acousti-flor CSM (crack suppression mat) is loose laid over the floor mat material. Floor topping material thickness is dependent on thickness of floor mat used. WALFLOR INDUSTRIES INC - Type Acousti-flor, Acousti-flor CSM. Floor topping thickness depends on products used as follows:

Acousti-flor (1/8 in. thick) - Floor topping thickness shall be a minimum of 3/4 in.

Acousti-flor (1/4 in, thick) - Floor topping thickness shall be a minimum of 1 in.

Acousti-flor (3/8 in. thick) - Floor topping thickness shall be a minimum of 1 in.

Acousti-flor (3/4 in. thick) - Floor topping thickness shall be a minimum of 1-1/2 in.

material.

Metal Lath --- (Optional) -- Expanded steel diamond mesh, 2.5 lb / sq yd loose laid over floor mat material. Fiberglass Mesh Reinforcement — (Optional) — Coated non-woven glass fiber mesh grid loose laid over floor mat

### System No. 17

Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered.

Finish Flooring - Floor Topping Mixture\* — Min 1 in. thickness of floor topping mixture having a min compressive strength of 4500 psi. Refer to manufacturer's instructions accompanying the material for specific mix design. SIKA DEUTSCHLAND GMBH - Type SCHONOX AP Rapid Plus

### System No. 18

Subflooring - Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints stadgered

Vapor Barrier --- (Optional) - Commercial asphalt saturated felt, 0.030 in. thick.

Vapor Barrier --- (Optional) - Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Flooring - Floor Topping Mixture\* - Min 3/4 in, thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies.

Floor Mat Materials\* --- (Optional, Not Shown) - Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material. LOW & BONAR INC -- Enkasonic Types 125 A, 250 A, 250 A Plus, 250 B, 250 B Plus, 400 A, 400 A Plus, 750 A, and 750 A Plus.

Floor Mat Reinforcement --- (Optional) - Refer to manufacturer's instructions regarding minimum thickness of floor

topping for use with floor mat reinforcement.

Metal Lath --- (Optional) -- Expanded steel diamond mesh, 2.5 lb / sq yd loose laid over floor mat material.

Fiberglass Mesh Reinforcement - (Optional) - Coated non-woven glass fiber mesh grid loose laid over floor mat

2. Wood Joists — Min 2 by 10 in., spaced 16 in. OC and effectively fireblocked in accordance with local codes.

3. Cross Bridging — Min 1 by 3 in. or min 2 by 10 in. solid blocking.

3A. Horizontal Bridging — Used in lieu of Item 3 in same joist bay as ceiling damper (Item 4), when ceiling damper is employed. Wood 2 by 4 in. secured between joists with nails.

4. Ceiling Damper\* --- (Optional) - Max nom area shall be 198 sq in. Max rectangular size shall be 12 in. wide by 16-1/2 in. long. Max height of damper shall be 8-3/4 in. Aggregate damper openings shall not exceed 99 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 7) shall be installed in accordance with installation instructions. AIR KING VENTILATION PRODUCTS - Series FRAS, Series FRAK, Series FRAKV

CENTRAL VENTILATION SYSTEMS CO L L C -- Models C-S/R-HC(-A), C-RD-HC(-A)

GREENHECK FAN CORP -- Model CRD-1WJ

METAL-FAB INC - Models MSCDHC, MRCDHC

METAL INDUSTRIES INC --- Models CD-S/R-HC, CD-S/R-HC-A, CD-RD-HC, CD-RD-HC-A

NCA MFG INC --- Models CD-S/R-HC, CD-S/R-HC-A, CD-RD-HC, CD-RD-HC-A

BRISK MFG INC - Model BMI-50-CRD-S/R-WT

PRICE INDUSTRIES LTD --- Models CD-S/R-HC, CD-RD-HC

RUSKIN COMPANY - Model CFD7

UNITED ENERTECH CORP --- Models C-S/R-HC(-A), C-RD-HC(-A)

 Gypsum Board\* — Nom 1/2 in. thick, 48 in. wide gypsum board, installed with long dimension perpendicular to joists. Gypsum board secured with 1-3/4 in. long 5d nails spaced 6 in. OC. Nails located 1/2 and 1 in. from butted ends and side joints, respectively. End joints of gypsum board in adjacent courses staggered. AMERICAN GYPSUM CO — Type AG-C.

CERTAINTEED GYPSUM INC - Type LGFC-C/A.

GEORGIA-PACIFIC GYPSUM L L C - Types S, DAPC, TG-C

NATIONAL GYPSUM CO - Type eXP-C, FSK-1, FSK-C, FSK-G, FSW-1, FSW-C or FSW-G.

6. Finishing System --- (Not Shown) - Vinyl, dry or premixed joint compound, applied in two coats to joints and screwheads. Nom 2 in. wide paper tape embedded in first layer of compound over all joints. As an alternate, nom 3/32 in, thick veneer plaster may be applied to the entire surface of gypsum board.

7. Grille - Steel grille, installed in accordance with the installation instructions provided with the ceiling damper.

8. Discrete Products Installed in Air-handling Spaces\* — Automatic Balancing Valve/Damper — (Not Shown - Optional) - For use with item 4, Ruskin Company's Model CFD7 damper (CABS). Ceiling damper to be provided with plenum box per damper manufacturer's instructions with side outlet only. Entire assembly to be installed into any UL Class 0 or Class 1 flexible air duct in accordance with the instructions provided by the automatic balancing valve/damper manufacturer. METAL INDUSTRIES INC - Model ABV-4, ABV-5, ABV-6

### \* 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's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service. Always look for the Mark on the product.

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1 UL L522 G020 | 12" = 1'-0"

Last Updated on 2021-02-05







1 2 5

LEVEL 1		LOAD*	WC'S	LAV'S	DF'S	SHWR	
	USE	TOTAL	UNISEX	UNISEX		M / F	-
	В	26.33	1.05	0.66	1	0	
	S-1	0.15	0.01	0.01	0	0	-
LEVEL 2	В	27.03	1.08	0.68	1	0	-
SUBTOTAL		53.51	2.14	1.35	2	0	-
	REQUIRED		3	2	2	0	
	PROVIDED		3**	3	2	0	Γ

# S-1/S-2 occupancy: male/female: 1 per 100

<u>lavatory formulas:</u> A-1/A-3 occupancy: male/female: 1 per 200 B occupancy: male/female: 1 per 40 for first 80, 1 per 80 thereafter S-1/S-2 occupancy: male/female: 1 per 100

<u>drinking fountain formulas:</u> A-1/A-3 occupancy: 1 per 500 B occupancy: 25-100: 1, 101-250:2, 251-500:3 S-1/S-2 occupancy: n/a

![](_page_4_Figure_13.jpeg)

![](_page_4_Picture_23.jpeg)

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LIFE SAFETY PLANS

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