

A black and white photograph of a single-story commercial building with a gabled roof. The building features large glass windows and doors. A sign on the roof reads "Dickerson's COMPLETE AUTO CARE" with a car icon. Above that, a smaller sign says "Your CBD Store Free CBD Samples 1360 Dogwood Dr.". A dark car is parked in the foreground on the left.

PROJECT NO: 191018WAL

ISSUE FOR CONSTRUCTION

[illegible]

DESIGNED BY: GJB	DATE: 10/31/19	SOLICITATION NO.: NONE	CONTRACT NO.: 191018WAL121	PLOT DATE: 10/31/2019 8:36:06 PM
DWN BY: PT	CKO BY: GJB	CATEGORY CODE: AUTO REPAIR SHOP 04	FILE NAME: ADSU	
SUBMITTED BY:	ADSU			PLOT SCALE: AS INDICATED
				D - SIZE: D - 24 x 36

ADSU
ARCHITECTURAL DESIGN SERVICES UNLIMITED

AUTOMOTIVE REPAIR SHOP
1494 OLD SALEM RD.
CONYERS, GEORGIA 30013

COVER SHEET

SHEET NO.
A001

PROJECT INFORMATION

PROJECT ADDRESS:

1494 OLD SALEM ROAD
CONYERS, GEORGIA 30013

CODE OFFICIALS:

AUTHORITY HAVING JURISDICTION:

ROCKDALE COUNTY GOVERNMENT
958 MILSTEAD AVENUE
CONYERS, GA 30012
PHONE: 770.278.7100

CONTRACTOR SHALL ADHERE TO ALL LOCAL AND STATE ORDINANCES AS WELL AS FEDERAL LAWS INCLUDING THE AMERICAS WITH DISABILITY ACT COMMONLY REFERRED TO AS ADA.

VICINTY MAP



IMAGE: COURTESY OF GOOLE MAP

INDEX OF DRAWINGS

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- A103UL DESIGNS
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- A106UL DESIGNS
- E101ELECTRICAL PLAN

BUILDING CODES

INTERNATIONAL BUILDING CODE (IBC), 2012 EDITION, W/ GA AMENDMENTS
INTERNATIONAL RESIDENTIAL CODE (IRC), 2012 EDITION, W/ GA AMENDMENTS
INTERNATIONAL FIRE CODE (IFC), 2012 EDITION, W/ GA AMENDMENTS
INTERNATIONAL PLUMBING CODE (IPC), 2012 EDITION, W/ GA AMENDMENTS
INTERNATIONAL MECHANICAL CODE (IMC), 2012 EDITION, W/ GA AMENDMENTS
INTERNATIONAL FUEL GAS CODE (IFGC), 2012 EDITION, W/ GA AMENDMENTS
NATIONAL ELECTRICAL CODE (NEC), 2017 EDITION
INTERNATIONAL ENERGY CONSERVATION CODE (IECC), 2009 EDITION, W/GA AMENDMENTS
NATIONAL FIRE PROTECTION ASSOCIATION LIFE SAFETY CODE (NFPA 101), 2012 EDITION
AMERICAN WITH DISABILITY ACT (ADA), 2010

BUILDING INFORMATION

BUILDING OCCUPANCY: SPECIAL PURPOSE INDUSTRIAL, ORDINARY HAZARD
BUIDLING CONSTRUCTION TYPE: TYPE IIB, (UNPROTECTED & NON-SPRINKLED)

IT IS THE ARCHITECT'S INTENT TO PROVIDE DRAWINGS IN FULL COMPLIANCE WITH ALL FEDERAL, STATE, AND LOCAL CODES, ORDINANCES, REQUIREMENTS, AND THE AMERICANS WITH DISABILITY ACT AS ENACTED ON JULY 26, 1990 INCLUDING CHANGES MADE BY THE ADA AMENDMENTS ACT OF 2008, WHICH BECAME EFFECTIVE ON JANUARY 1, 2009. THE CONTRACTOR SHALL ALERT THE ARCHITECT AND OWNER OF ANY DISCREPENCIES CONFLICTING WITH THE REFERENCED CODES NOTED IN THE DRAWINGS PRIOR TO FABRICATION OR INSTALLATION OF MATERIALS OR ASSEMBLIES.

LOCATION MAP

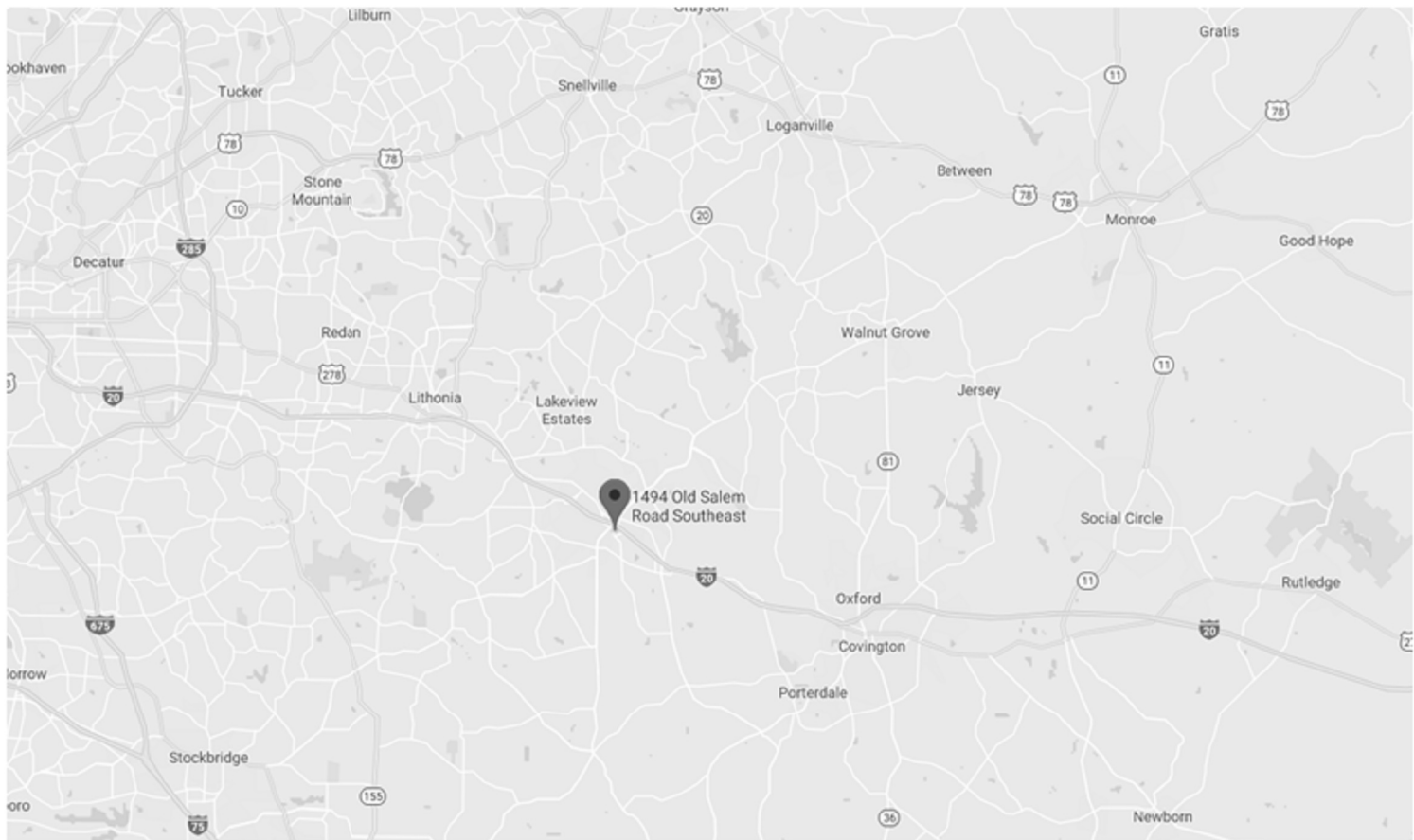


IMAGE: COURTESY OF GOOLE MAP

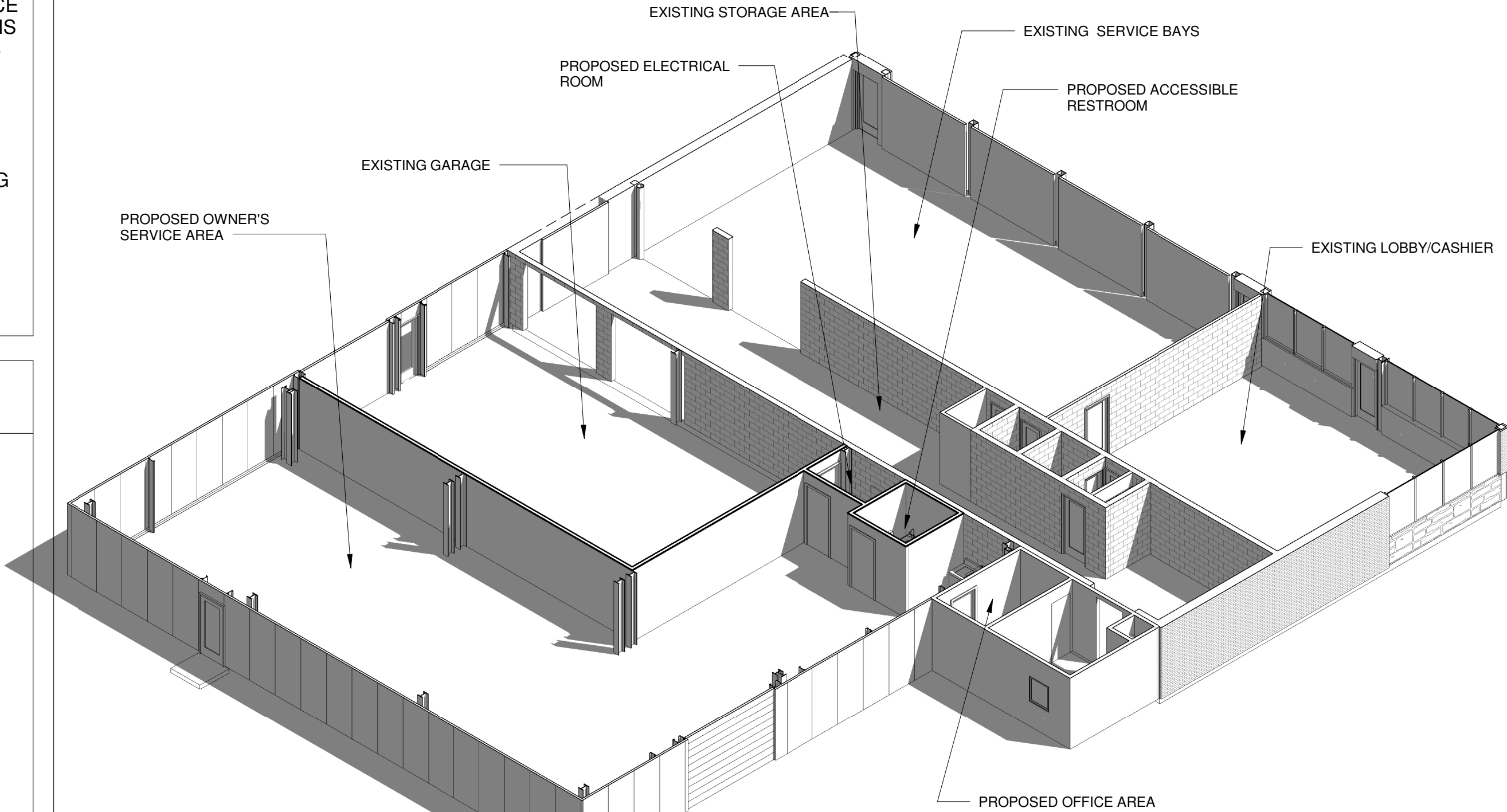
PROJECT SUMMARY

THE PROPOSED PROJECT CONSIST OF ADDING INTERIOR ROOMS TO THE EXISTING SPACE REQUIRING NO MODIFICATIONS TO THE EXISTING STRUCTURE. THE EXISTING BUILDING IS OF TYPE IIB CONSTRUCTION CONSISTING OF EXTERIOR BRICK AND METAL WALL PANELS WITH STRUCTURAL STEEL SUPPORTS AND A METAL ROOF. THE EXISTING STRUCTURE IS NON-SPRINKLED.

CLASSIFICATION OF OCCUPANCY: SPECIAL PURPOSE INDUSTRIAL, ORDINARY HAZARD

THE SOLE PURPOSE OF THE PROPOSED PROJECT IS TO SEPARATE 25% OF THE EXISTING INTERIOR SPACE FROM THE REMAINING 75% BY MEANS OF ADDING A 1HR FIRE BARRIER AND SUPPORT SPACES. THIS IS THE FULL INTENT OF THE OWNER.

3D VIEW



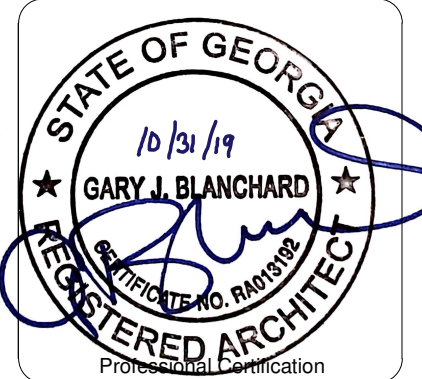
PROJECT TEAM

OWNER:

7K PROPERTIES, LLC
1494 OLD SALEM RD.
CONYERS, GA 30013
CONTACT: MR. ANDY WALKER
PHONE: 404.304.0406

ARCHITECT:

ARCHITECTURAL DESIGN SERVICES UNLIMITED, LLC
2365 WALL STREET , SE, EXECUTIVE SUITE 200, RM 06
CONYERS, GEORGIA 30013
CONTACT: MR. GARY J. BLANCHARD, RA, AIA, NCARB
PHONE: 678.522.5185



SYMBOL	ISSUED FOR CONSTRUCTION	DATE	BY
		10/31/19	GLB

DESIGNED BY: GLB	DATE: 10/31/19	SOLICITATION NO.: NONE	CONTRACT NO.: 19108WAL_121	CATEGORY CODE: AUTO REPAIR SHOP 04	PLOT DATE: 10/31/2019 9:58:19 PM
DRAWN BY: PT	CHK BY: GLB	SUBMITTED BY: ADSU	FILE NAME: ADSU	PLOT SCALE: AS INDICATED	SIZE: D 14x11 3/8

ADSU
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AUTOMOTIVE REPAIR SHOP
1494 OLD SALEM RD.
CONYERS, GEORGIA 30013

PROJECT
INFORMATION

SHEET NO.

A002

ISSUE FOR CONSTRUCTION

C

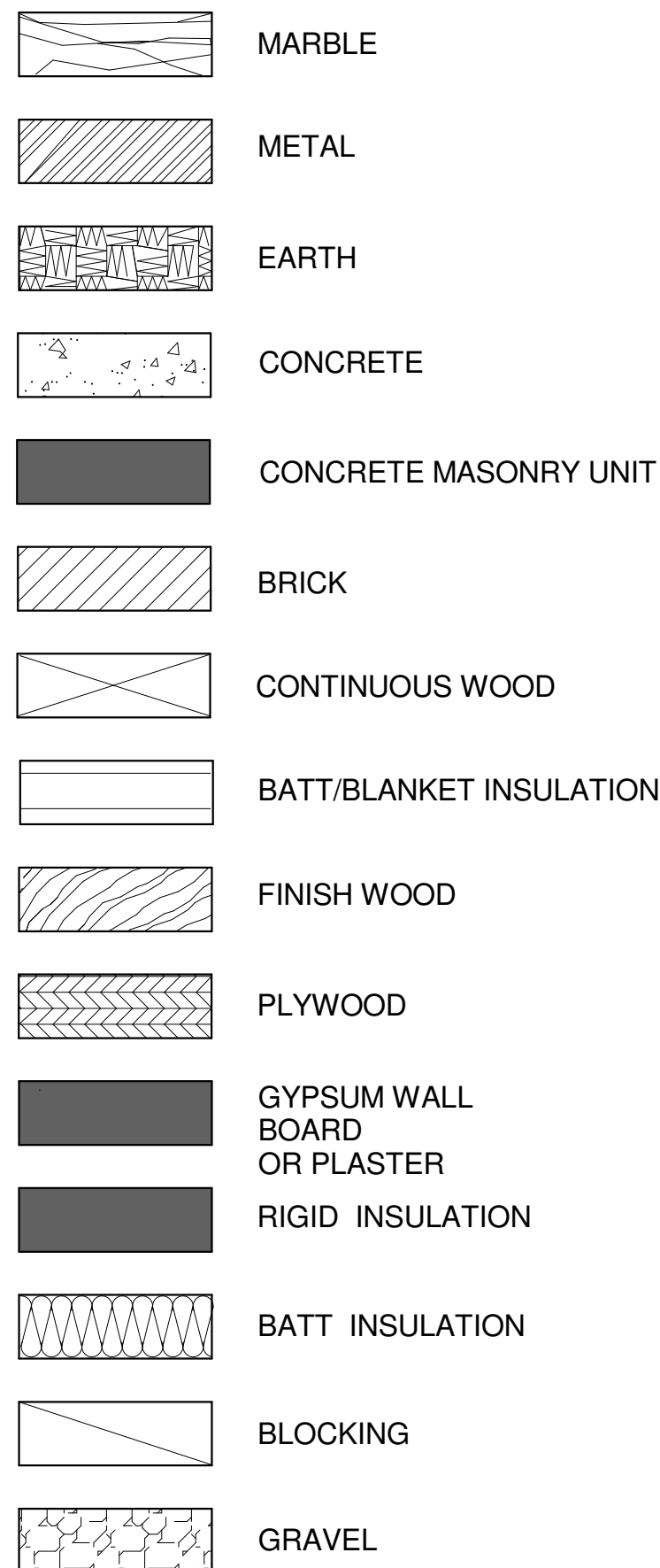
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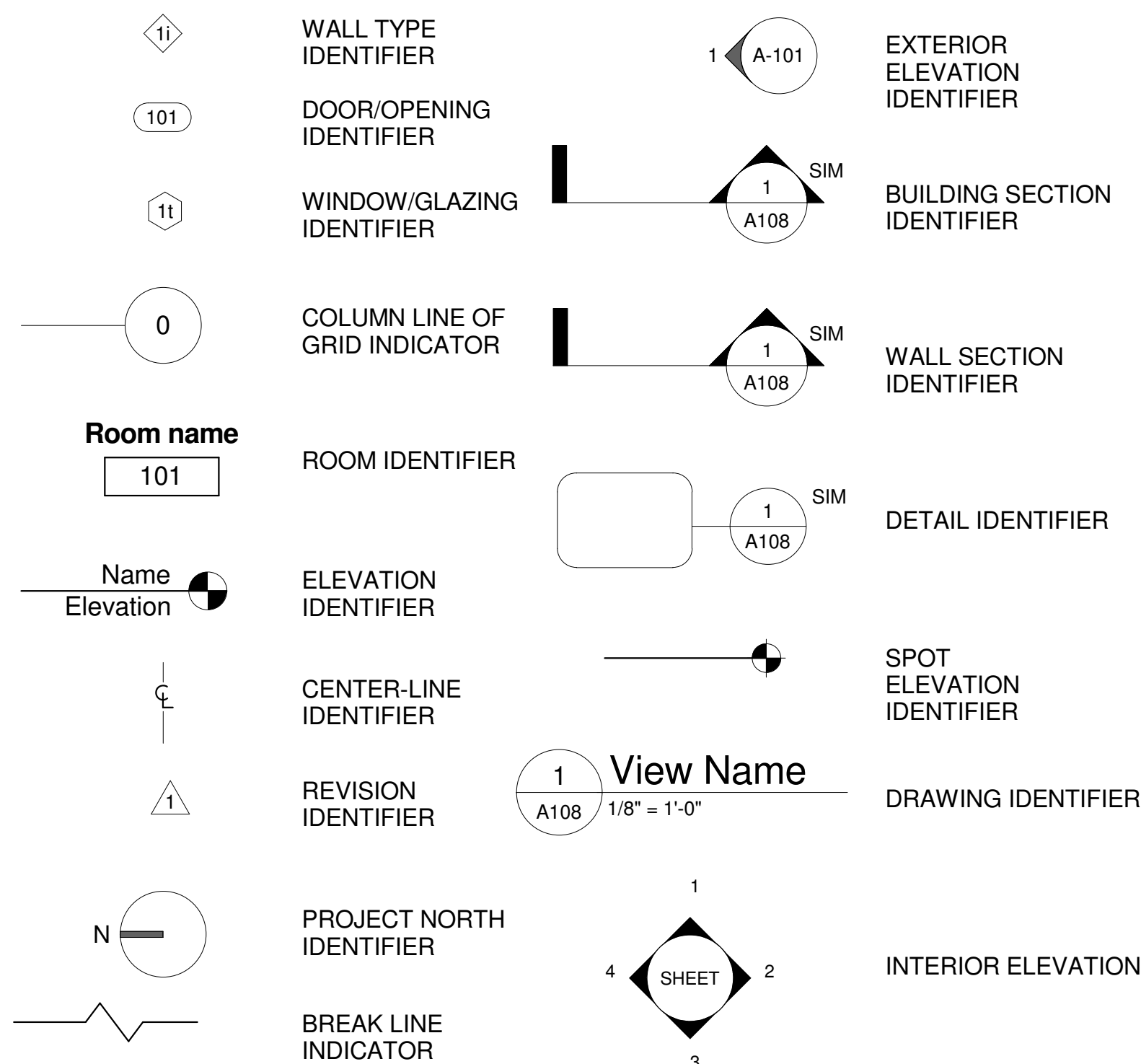
ABBREVIATIONS

AFF	ACOVE FINISH FLOOR	MFR	MANUFACTURER
ACOUST	ACOUSTICAL	MO	MASONRY OPENING
ADJ	ADJUSTABLE	MO	MATERIAL
A/C	AIR CONDITIONING	MAX	MAXIMUM
ALT	ALTERNATE	MECH	MECHANICAL
ALUM	ALUMINUM	MEP	MECHANICAL, ELECTRICAL,
ANCH	ANCHOR		PLUMBING
APPROX	APPROXIMATE	MTL	METAL
ARCH	ARCHITECT/ARCHITECTURAL	MIN	MINIMUM
@	AT	MIR	MIRROR
ASPH	ASPHALT	MISC	MISCELLANEOUS
AUTO	AUTOMATIC	NAT	NATURAL
AVG	AVERAGE	NIC	NOT IN CONTRACT
		NTS	NOT TO SCALE
		NO	NUMBER
BM	BEAM		
BLK	BLOCK	OFF	OFFICE
BD	BOARD	OC	ON CENTER
BLDG	BUILDING	OPNG	OPENING
		OPP	OPPOSITE
CAB	CABINET	OH	OPPOSITE HAND
CPT	CARPET	OD	OUTSIDE DIAMETER
CLG	CEILING		
CEM	CEMENT		
CL	CENTER LINE	PTD	PAINTED
CT	CERAMIC TILE	PERF	PERFORATED
CLO	CLOSET	PERIM	PERIMETER
COL	COLUMN	PLAS	PLASTER
CMU	CONCRETE MASONRY UNIT	P LAM	PLASTIC LAMINATE
CONST	CONSTRUCTION	PLYWD	PLYWOOD
CJ	CONTROL JOINT	PT	POINT
CONT	CONTINUOUS	LB OR #	POUND
CORR	CORRIDOR	PSF	POUND PER SQUARE FOOT
CF	CUBIC FEET	PSI	POUND PER SQUARE INCH
CY	CUBIC YARD	PL	PROPERTY LINE
		PREFAB	PREFABRICATED
		PREFIN	PREFINISHED
DEG	DEGREE		
DTL	DETAIL	QTY	QUANTITY
DIAG	DIAGONAL	QT	QUARRY TILE
DIA	DIAMETER	R	RADIUS
DIM	DIMENSION	RE	REFERENCE
DS	DOWNSPOUT	REBAR	REINFORCING BAR
DWG	DRAWING	RESIL	RESILIENT
		REQD	REQUIRED
EA	EACH	RA	RETURN AIR
EWC	ELECTRIC WATER COOLER	RD	ROOF DRAIN
ELECT	ELECTRICAL	RM	ROOM
ELEV	ELEVATOR	RO	ROUGH OPENING
ELEV	ELEVATION		
EQ	EQUAL		
EQUIP	EQUIPMENT	SCHED	SCHEDULE
EXIST	EXISTING	SECT	SECTION
EXP	EXPANSION	SHT	SHEET
EJ	EXPANSION JOINT	SIM	SIMILAR
EXT	EXTERIOR	SC	SOLID CORE
FT	FEET	SCON	SEALED CONCRETE
FIN	FINISH	S STL	STAINLESS STEEL
FF	FINISH FLOOR	SPECS	SPECIFICATIONS
FEC	FIRE EXTINGUISHER CABINET	SQ	SQUARE
FIXT	FIXTURE	STD	STANDARD
FLEX	FLEXIBLE	STL	STEEL
FLR	FLOOR	STOR	STORAGE
FD	FLOOR DRAIN	STRUCT	STRUCTURAL
FLOUR	FLOURESCENT	SCT	STRUCTURAL CLAY TILE
FRP	FIBERGLASS REINFORCED PANELS	SGT	STRUCTURAL GLAZED TILE
FURN	FURNITURE/FURNISHINGS	SUSP	SUSPENDED
GAL	GALLON	SYS	SYSTEM
GALV	GALVANIZED		
GA	GAUGE	TERR	TERRAZZO
GC	GENERAL CONTRACTOR	THK	THICK
GL	GLASS/GLAZING	TLT	TOILET
GOVT	GOVERNMENT	T&G	TONGUE AND GROOVE
GYP	GYPSPUM	TD	TOWEL DISPENSER
GWB	GYPSPUM WALL BOARD	TDR	TOWEL DISPENSER/RECEPTACLE
HC	HOLLOW CORE	TR	TOWEL RECEPTACLE
HDW	HARDWARE	TYP	TYPICAL
HD WD	HARDWOOD		
HD	HEAD	UNFIN	UNFINISHED
HVAC	HEATING, VENTING, AIR CONDITIONING	UL	UNDERWRITERS LABORATORIES
HT	HEIGHT	UNO	UNLESS NOTED OTHERWISE
HORIZ	HORIZONTAL	VAR	VARIES
		VERT	VERTICAL
INCL	INCLUDED	VEST	VESTIBULE
INFO	INFORMATION	VCT	VINYL COMPOSITION TILE
ID	INSIDE DIMENSION	VIF	VERIFY IN FIELD
INSUL	INSULATION	VWC	VINYL WALL COVERING
INT	INTERIOR		
		WT	WEIGHT
JT	JOINT	W/	WITH
JST	JOIST	W/O	WITHOUT
		WD	WOOD
LAB	LABORATORY	YD	YARD
LAM	LAMINATE		
LAV	LAVATORY		
LT	LIGHT		
LF	LINEAR FOOT		
LVR	LOUVER		

MATERIAL LEGEND



DRAFTING SYMBOL LEGEND



GENERAL PROJECT NOTES

1. FINISH FLOOR SLAB ELEVATION OF 0'-0" ON ARCHITECTURAL DRAWINGS ARE FOR REFERENCE ONLY. REFER TO OWNER PROVIDED SURVEY FOR ACTUAL ELEVATIONS.
2. ALL CONSTRUCTION WILL COMPLY WITH ALL APPLICABLE CODES NOT LIMITED TO THE REFERENCE CODES NOTED ON THE COVERSHEET.
3. THE CONTRACTOR WILL FIELD VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO COMMENCING ANY WORK AND SHALL BE RESPONSIBLE FOR COORDINATION OF ALL DIMENSIONS, WORK AND MATERIALS REQUIRED.
4. THE CONTRACTOR WILL REPORT TO THE ARCHITECT OF RECORD ANY ERROR, INCONSISTENCY OR OMISSION DISCOVERED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY ITEM(S) OF CONSTRUCTION NOT CONFORMING TO THE CONSTRUCTION DOCUMENTS.
5. THE CONTRACTOR WILL BE RESPONSIBLE FOR LOCATING ALL EXISTING ABOVE AND BELOW GROUND UTILITIES WITHIN CONTRACT LIMITS AND PROTECT THEM FROM DAMAGE DURING THE COURSE OF THIS CONSTRUCTION. THE CONTRACTOR WILL BEAR ALL EXPENSE OF, AND RESPONSIBILITY FOR, REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGE CAUSED BY HIS, OR SUBCONTRACTORS, OPERATIONS. UTILITIES DEACTIVATED OR ABANDONED IN PLACE BY THIS PROJECT SHALL BE CAPPED OR SEALED OFF IN ACCORDANCE WITH LOCAL REGULATIONS.
6. THE OWNER SHALL BE RESPONSIBLE FOR PROVIDING THE CONTRACTOR WITH ROUGH-IN INFORMATION NECESSARY. THE CONTRACTOR IS RESPONSIBLE FOR THE SCHEDULING AND SEQUENCING OF THESE ITEMS, AND FOR NOTIFYING THE OWNER OR ANY INFORMATION REQUIRED.
7. CONDITIONS AND ITEMS SHOWN IN SECTIONS AND DETAILS APPLY TO ALL SIMILAR CONDITIONS UNLESS SPECIFICALLY NOTED OTHERWISE.

THERMAL PROTECTION REQUIREMENTS (NOT REQUIRED IN NON CONDITIONED BUILDINGS):

1. THERMAL RESISTANT VALUES (R-VALUES) FOR THIS PROJECT ARE AS FOLLOWS:
 ROOF: R-19 + 11LS FLOORS: R-10ci
 WALLS: R-13 + 6.5ci

WALL AND PARTITION NOTES

1. GENERAL CONTRACTOR SHALL FURNISH AND INSTALL METAL OR WOOD BLOCKING IN STUD PARTITIONS FOR WALL ATTACHED ITEMS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING; GRAB BARS, VANITY UNIT, TOILET ACCESSORIES, HANDRAIL BRACKETS, WALL CABINETS, WALL MOUNTED FIXTURES, MARKER BOARD, TACK BOARD, ECT.
2. SCRIBE GYPSUM BOARD OF WALL AND PARTITION EXTENSIONS TO IRREGULARITIES OF DECK ABOVE. SEAL TIGHTLY AROUND ANY PENETRATIONS.

MILLWORK NOTES

1. FIELD VERIFY ALL MILLWORK AND CASEWORK DIMENSIONS PRIOR TO SHOP DRAWING SUBMITTAL AND FINAL INSTALLATION.
2. BASE CABINETS TO BE 24" DEEP, WALL CABINETS TO BE 16" DEEP UNLESS NOTED OTHERWISE REFER TO THE MILLWORK, CASEWORK AND DISPLAY CASE DRAWINGS.
3. SCRIBES, CLOSURE PANELS, AND NAILERS TO BE PROVIDED BY CASEWORK MANUF.
4. BACK SPLASHED TO BE 4" HIGH WITH RETURNS ALONG ALL ADJACENT WALLS, U.N.O.

FINISH NOTES

1. WHERE FLOOR FINISH CHANGES, SET JOINT UNDER THE CENTER OF DOOR.
2. PAINT WITH FINISH COAT ALL STEEL WHICH IS NOT TO BE CONCEALED, GALVANIZED OR OTHERWISE FACTORY FINISHED WITH A FINISH COAT (PRIMER IS NOT A FINISH COAT); THIS INCLUDES EXPOSED STRUCTURAL STEEL, DOORS AND FRAMES, BOLLARDS, LADDERS, MOUNTING BRACKETS, BRACES ETC.

DIMENSION NOTES:

1. DIMENSIONS FOR DOOR AND WINDOW OPENING ARE SHOWN NOMINAL. OPENING SHALL ALLOW FOR 1/4" SHIMMING AND SEALANT BEAD AROUND EXTERIOR FRAMES.
2. ALL OTHER DIMENSIONS ARE ACTUAL AND ARE FACE OF METAL STUDS, FACE OF MASONRY WALLS, OR CENTERLINE OF COLUMN, UNLESS NOTED OTHERWISE.

CODE ANALYSIS

Code Analysis

- 1.1 Project Name: Automotive Repair Shop
- 1.2 Applicable Codes and Standards
 - 1.2.1 International Building Code (IBC) 2012
 - 1.2.2 National Fire Protection Association Life Safety Code (NFPA 101) 2012
 - 1.2.3 International Energy Conservation Code (IECC) 2009
 - 1.2.4 GA State Amendments (2014, 15, 17 & 18)
 - 1.2.5 ADA and ABA Accessibility Guidelines for Buildings and Facilities
- 1.3 Occupancy Classification 2012 LSC Chap 6
 - 1.3.1 Chapter 6 Occupancy Classification - Industrial, Special Purpose Industrial
- 1.4 Construction Type - 2012 IBC Chap. 6
 - 1.4.1 Type II-B
- 1.5 Area Limitations - IBC Chapter 5, Table 503
 - 1.5.1 Type II-B = 15,500 SF - 2 stories.
- 1.6 Maximum Height of Buildings - 2012 IBC Sec.504
 - 1.6.1 Type II-B = 55 Feet
- 1.7 Occupant Load, LSC Chapter 7, Table 7.3.1.2
 - 1.7.1 Building Gross Net SF= Refer to Sheet A-004 Life Safety Plan for Occupant Load
- 1.8 Fire Resistive Requirements - 2012 IBC Chap. 6 Table 601, Type II-B
 - 1.8.1 Type II-B

- 1.9 Interior Finishes Requirements - 2012 LSC Chap. 10
 - 1.9.1 Class A interior wall and ceiling finish:
 - Flame spread index, 0 - 25
 - Smoke developed index, 0 - 450
 - Class B interior wall and ceiling finish:
 - Flame spread index, 26 - 75
 - Smoke developed index, 0 - 450
 - Class C interior wall and ceiling finish:
 - Flame spread index, 76 - 200
 - Smoke developed index, 0 - 450
- 1.10 Detection, Alarm and Communications Systems, 2012 LSC Chapter 40, Sect. 40.3.4.1
 - 1.10.1 Fire alarm system in accordance with Section 9.6 shall be provided, unless total occupant load is less than 100 persons and fewer than 25 persons are above or below the level of exit discharge.
 - 1.10.2 Initiation - not required.
 - 1.10.3 Occupant notification - not required
- 1.11 Means of Egress, Table 7.3.3.1
 - 1.11.1 Egress Capacity
 - Total number of occupants = 8 occ
 - Door Exit Capacity:
 - 8 Occupants x 0.2
 - Req'd door width = 1.6 inches
 - Provided = 36(5) = 180 inches
 - Door Exit Capacity: 180/0.2 = 900 occ

- 1.12 Number of Means of Egress, 2012 LSC Chap. 7, Sect. 7.4.1.1
 - 1.12.1 The number of means of egress from any balcony, mezzanine, story or portion thereof shall be not less than two.
- 1.13 Arrangement of Means of Egress, 2012 LSC Chap. 40. Section 40.2.5
 - 1.13.1 Dead end corridors shall not exceed 50 ft.
 - 1.13.2 Common path of travel shall not exceed 100 ft.
- 1.14 Travel Distance to Exits, 2012 LSC Chap. 40. Section 40.2.6
 - 1.14.1 Travel distance shall not exceed 300ft.
- 1.15 Illumination of Means of Egress, 2012 LSC Chap. 40. Section 40.2.8 (Section 7.8)
 - 1.15.1 Illumination of means of egress shall be continuous during the time at the conditions of occupancy require available use.
 - 1.15.2 The floors and other walking surfaces within an exit and within the portions of the exit access and exit discharge designated in 7.8.1.1 shall be illuminated as follows:
 - 1.15.3 The minimum illumination for floors and walking surfaces, other than new stairs during conditions of stair use, shall be to values of at least 1 ft-candle, measured at the floor.
 - 1.15.4 Required illumination shall be arranged so the failure of any single lighting unit does not result in illumination levels less than 0.2 ft-candles in any designated area.

- 1.15.5 Battery operated electric lights shall not be used as primary illumination for means of egress.
- 1.16 Emergency Lighting, 2012 LSC Chap. 40, Section 40.2.9 (Section 7.9.2)
 - 1.16.1 Not Required
- 1.17 Minimum Plumbing Facilities, 2012 IPC Chap. 4, Table 403.1
 - 1.17.1 Water Closets
1 per 100
 - 1.17.2 Urinals
Not Required
 - 1.17.3 Lavatories
1 per 100
 - 1.17.4 Bathtubs/Showers
Not Required
 - 1.17.5 Drinking Fountains
1 per 400
 - 1.17.6 Service Sink
1 Required

[illegible]

DESIGNED BY: GJB	DATE: 10/3/19
DWNN BY: GJB PT	SOLICITATION NO.: NONE
SUBMITTED BY: ADSSU	CONTRACT NO.: 191018WAL_121
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ADSU
ARCHITECTURAL DESIGN SERVICES UNLIMITED

2346 WALL STREET, SE., SUITE 200-06
CONERS, GEORGIA 30031 P. 478.822.5185

**GENERAL NOTES,
ABBREVIATIONS &
CODE ANALYSIS**

SHEET NO. _____

A003

ISSUE FOR CONSTRUCTION

B

A

ISSUED FOR CONSTRUCTION

GENERAL NOTES

EXISTING CONDITIONS:

WHERE EXISTING CONDITIONS ARE SHOWN THEY HAVE BEEN DERIVED FROM THE BEST INFORMATION AVAILABLE AND ESTIMATE OF ACTUAL CONDITIONS. DEPICTED EXISTING CONDITIONS HAVE NOT IN ALL CASES BEEN CORROBORATED BY FIELD INVESTIGATION. IT IS THE RESPONSIBILITY OF THE OWNER AND CONTRACTOR TO VERIFY ALL EXISTING UTILITIES PRIOR TO NEW CONNECTION OF SYSTEMS.

THE STRUCTURE SHOWN ON THESE DRAWINGS IS STRUCTURALLY SOUND IN ITS COMPLETED FORM. THE CONTRACTOR SHALL TEMPORARILY SHORE AND BRACE ALL EARTH, FORMS, AND CONCRETE TO RESIST GRAVITY, EARTH, WIND, SEISMIC, THERMAL, CONSTRUCTION, AND MISCELLANEOUS LOADS DURING CONSTRUCTION. DESIGN OF TEMPORARY BRACING AND SHORING SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

IT IS THE RESPONSIBILITY OF THE OWNER AND CONTRACTOR TO VERIFY THE TYPE, SIZE, LOCATION, AND NUMBER OF OPENINGS, SLEEVES, CONDUITS, EMBEDDED ITEMS, UTILITY PIPES, ETC., PRIOR TO STARTING WALL CONSTRUCTION. THE OWNER AND CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, PROTECTING, AND RELOCATING, AS REQUIRED, ALL SERVICES AND UTILITIES LOCATED IN THE VICINITY OF THE WORK SITE PRIOR TO CONSTRUCTION.

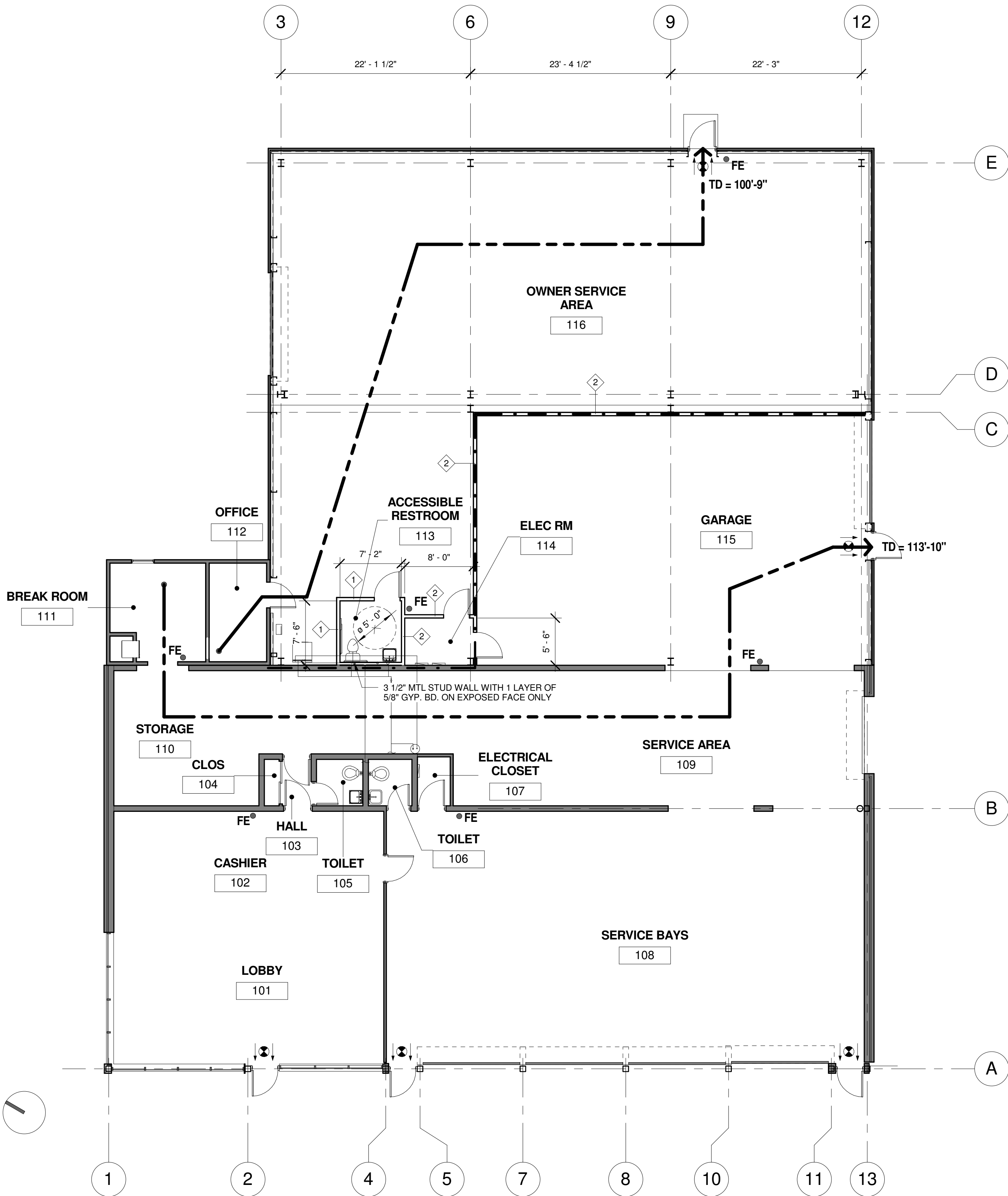
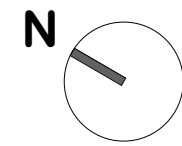
IT IS THE SOLE RESPONSIBILITY OF THE OWNER TO PROVIDE ACCURATE PROPERTY SURVEYS OUTLINING PROPERTY LIMITS AND BOUNDARIES SHOWING ALL EXISTING UTILITIES, OVERHEAD AND UNDERGROUND.

OCCUPANCY LOAD LSC 2012, CHAPTER 7 (TABLE 7.3.1.2)

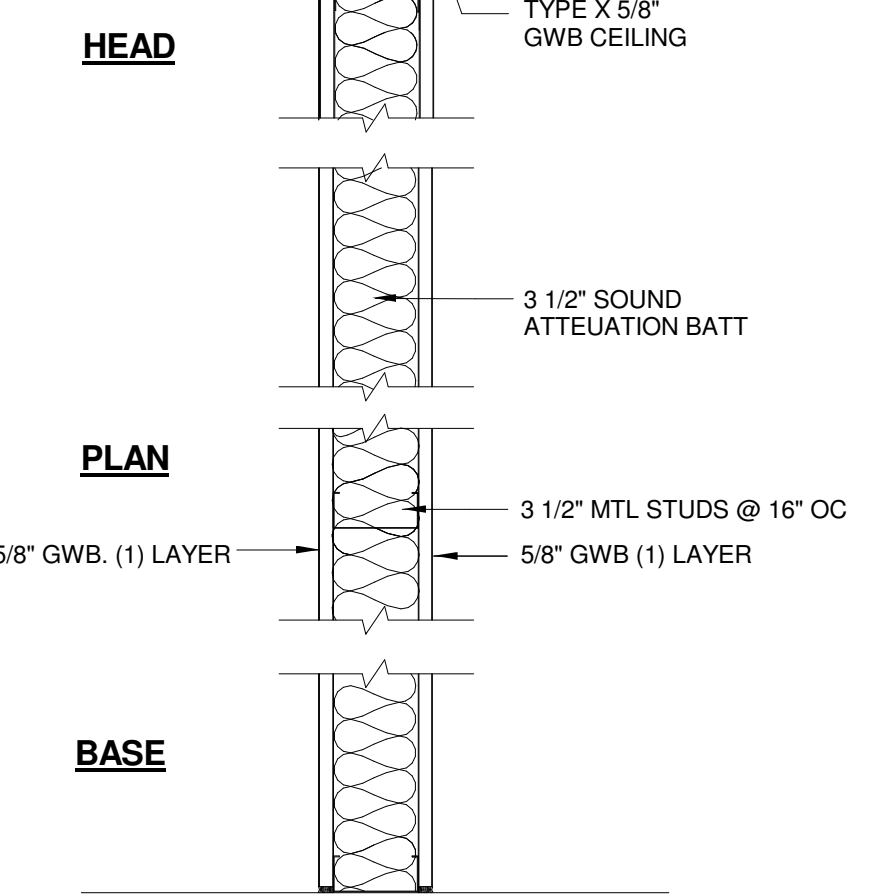
OCCUPANCY CATEGORY	NET SQ. FEET	FLOOR AREA IN SQFT. PER OCCUPANT	ACTUAL NO. OF OCCUPANTS
SPECIAL PURPOSE INDUSTRIAL	8,329 SF	SF/ PERSON = N/A	TOTAL 8 OCC.

1 LIFE SAFETY PLAN

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



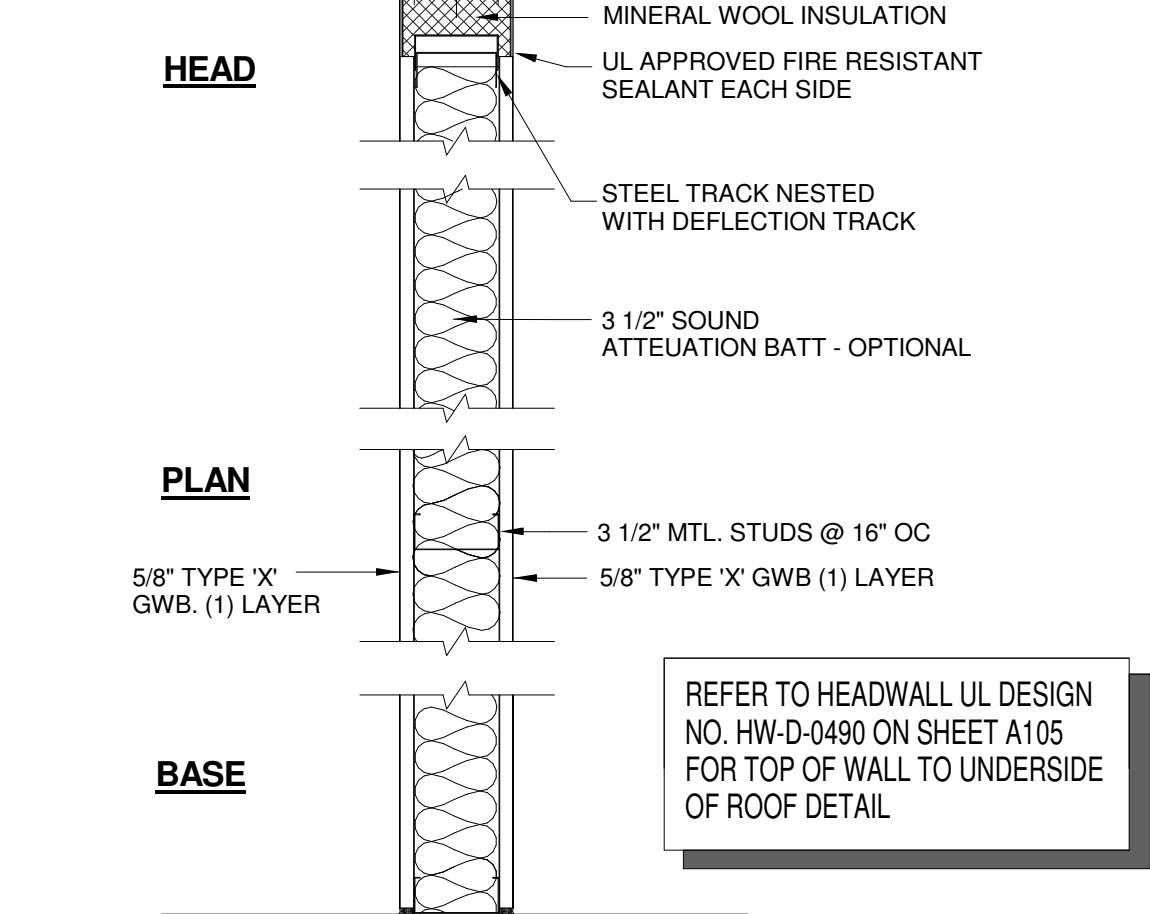
CEILING



NON-RATED INTERIOR PARTITION

1 LAYER 5/8" GWB ON EACH SIDE
3-1/2" METAL STUD SOUND ATTENUATION BATT. (OPTIONAL)

STRUCTURE



ONE HR RATED INTERIOR BEARING PARTITION

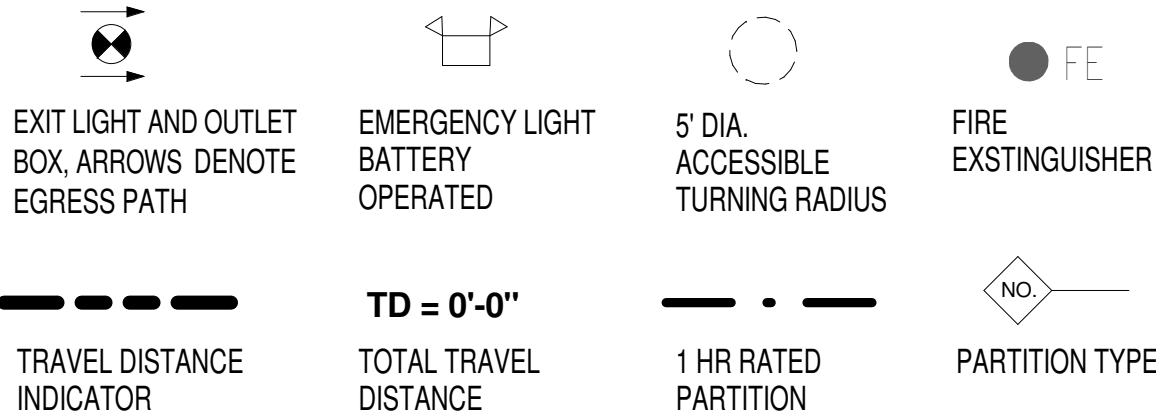
UL DESIGN NO. U419
1 LAYER 5/8" FIRE RATED GWB ON EACH SIDE
3-1/2" METAL STUD SOUND ATTENUATION BATT. (OPTIONAL)
APPROVED FIRE RESISTANT SEALANT ON EACH SIDE.

SHEET NOTES

2012 NFPA 101 CHAPTER 7 - MEANS OF EGRESS

7.1.5.1 HEAD ROOM SHALL NOT BE LESS THAN 7'-6". PROJECTIONS FROM CEILING SHALL NOT REDUCE HEAD ROOM TO LESS THAN 6'-8".
7.1.6.2 CHANGE IN ELEVATION OF WALKING SURFACE SHALL NOT EXCEED 1/4". CHANGE IN ELEVATION EXCEEDING 1/4" SHALL NOT EXCEED 1/2" AND SHALL BE BEVELED WITH A SLOPE OF 1 IN 2.
7.2.1.4.2 DOOR SHALL SWING IN THE PATH OF EGRESS WHEN SERVING 50 OR MORE OCCUPANTS.

GRAPHIC LEGEND



SQUARE FOOTAGE CALCULATIONS

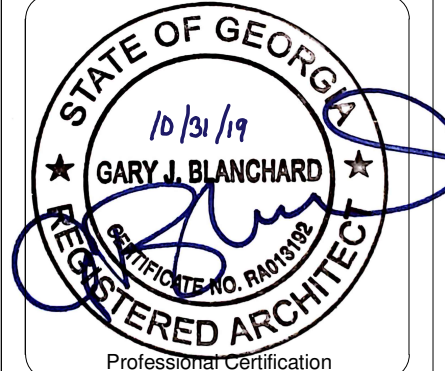
SQUARE FEET - NET AREA		
ROOM NO.	ROOM NAME	SQ. FT.
101	LOBBY	545 SF
102	CASHIER	384 SF
103	HALL	18 SF
104	CLOS	9 SF
105	TOILET	29 SF
106	TOILET	28 SF
107	ELECTRICAL CLOSET	22 SF
108	SERVICE BAYS	1653 SF
109	SERVICE AREA	611 SF
110	STORAGE	651 SF
111	BREAK ROOM	118 SF
112	OFFICE	77 SF
113	ACCESSIBLE RESTROOM	51 SF
114	ELEC RM	44 SF
115	GARAGE	1349 SF
116	OWNER SERVICE AREA	2737 SF
Grand total		8326 SF

ATTENTION IS DRAWN TO THE FACT THAT THE SCALE OF THESE DRAWINGS MAY HAVE BEEN DISTORTED DURING REPRODUCTION

THIS DOCUMENT HAS BEEN PREPARED UNDER MY DIRECT SUPERVISION TO THE BEST OF MY KNOWLEDGE, REQUIREMENTS OF THE APPLICABLE BUILDING CODES HAVE BEEN MET.

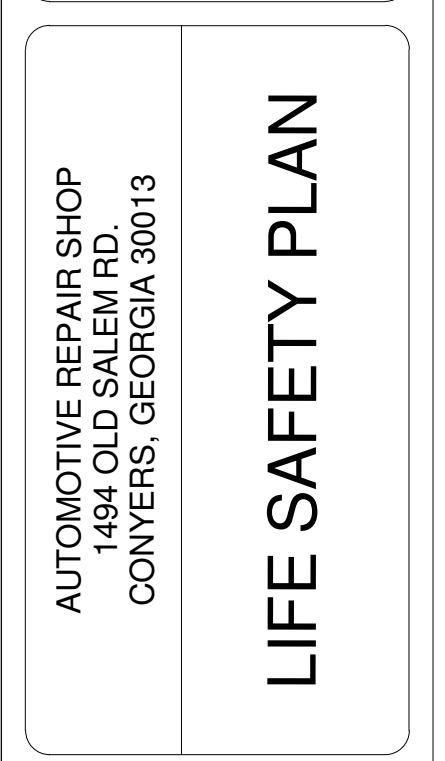
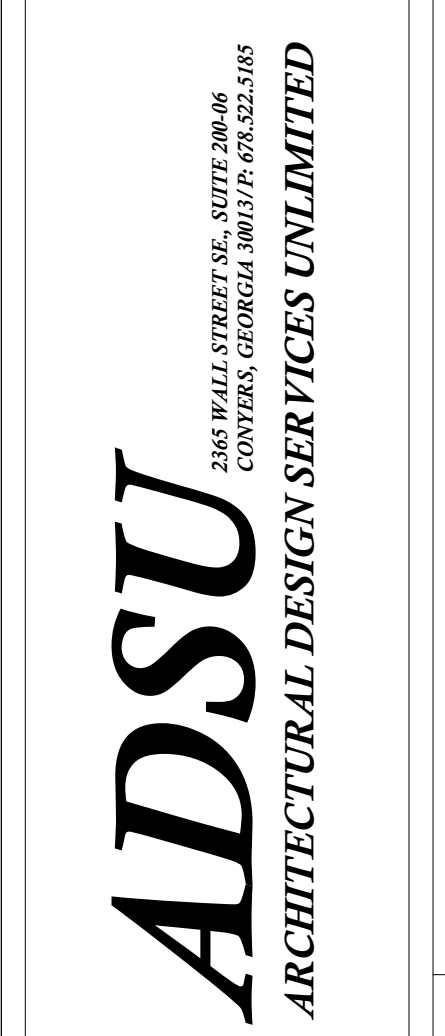
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SYMBOL	ISSUED FOR CONSTRUCTION	DATE	BY
		10/31/19	

DESIGNED BY: GJB	DATE: 10/31/19	SUBMITTAL NO.: NONE	FILE NAME: ADSU
DRAWN BY: PT	CAD BY: GJB	CONTRACT NO.: 19101BWL 121	CATEGORY CODE: AUTO REPAIR SHOP 04
SUBMITTED BY: ADSU	FILE NAME: ADSU	PLOT DATE: 10/31/2019 9:52:28 PM	PLOT SCALE: AS INDICATED
SIZE: D 14 x 36			



SHEET NO.
A004

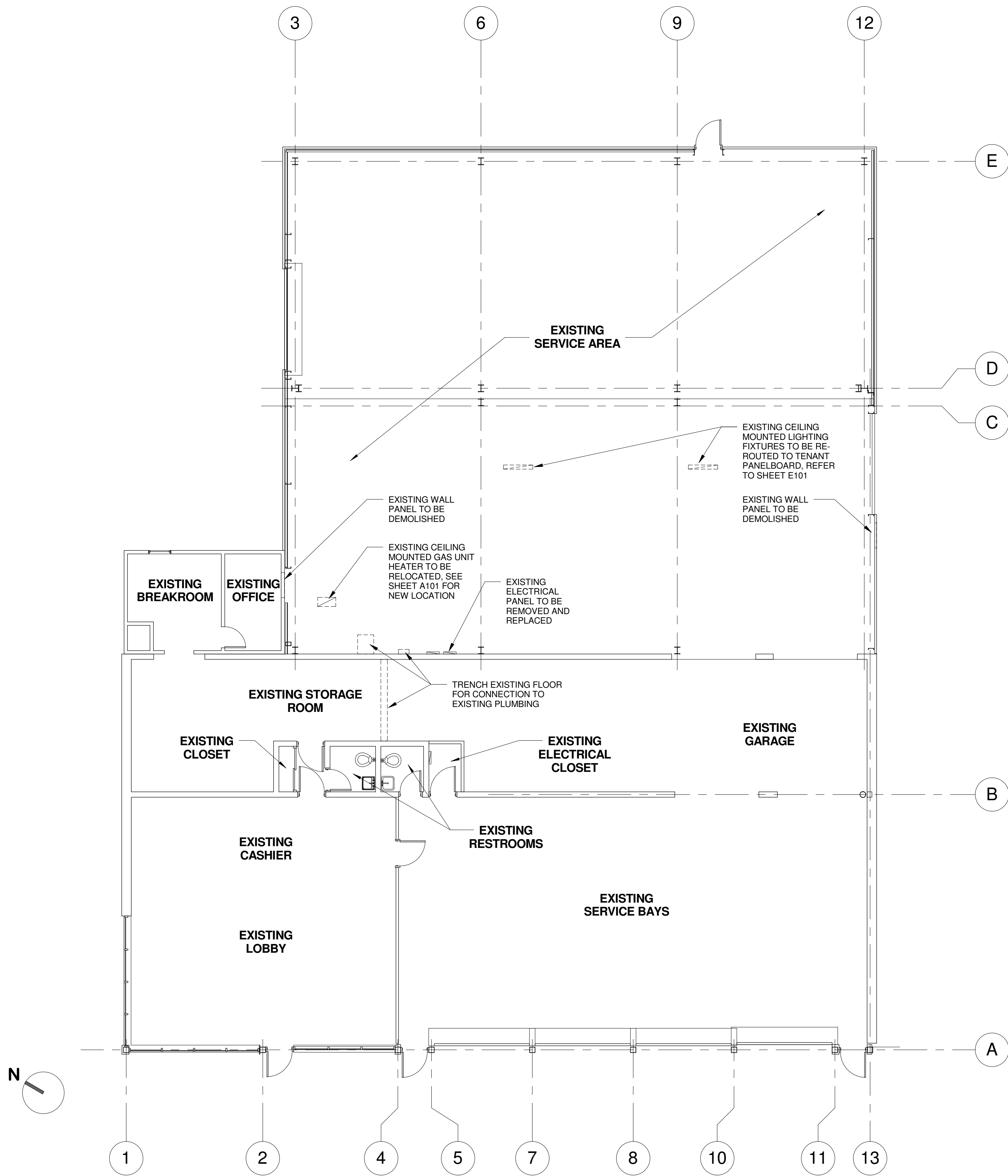
ISSUE FOR CONSTRUCTION

C

B

A

ISSUED FOR CONSTRUCTION



1 FLOOR PLAN - DEMOLITION
SCALE: 1/8" = 1'-0"

GENERAL NOTES

EXISTING CONDITIONS:

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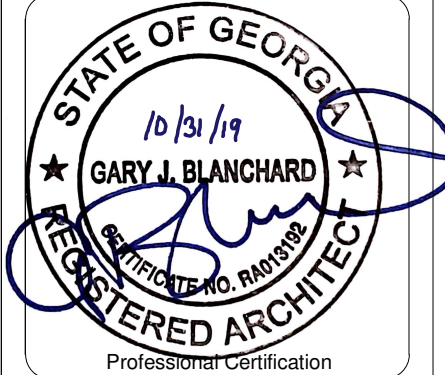
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SHEET NOTES

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- DRAWINGS INDICATE APPROXIMATE EXISTING CONDITIONS. CONTRACTOR TO VERIFY ALL VISIBLE CONDITIONS PRIOR TO BIDDING AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BETWEEN DRAWINGS AND EXISTING CONDITIONS IN ORDER THAT THESE DISCREPANCIES CAN BE CORRECTED PRIOR TO BIDDING.
- THROUGHT THE PROJECT WHERE EXISTING REMAINING SURFACES ARE DAMAGED DUE TO WORK UNDER THIS CONTRACT, REPAIR ALL DAMAGES WITH NEW MATERIALS, METHODS AND FINISHES TO MATCH EXISTING ADJACENT SURFACES. ALL AREAS SHALL BE PREPARED TO RECEIVE NEW FINISHES, DOORS, EQUIPMENT, ETC. UNLESS NOTED OTHERWISE.
- CONTRACTOR TO COORDINATE DEMOLITION OF EXISTING EQUIPMENT, DOORS, ATTIC ACCESS DOORS, PLUMBING FIXTURES, ETC. WITH OWNER PRIOR TO REMOVAL FROM SITE.
- ALL ABANDONED ELECTRICAL CONDUIT, CABLE, ELECTRICAL WIRING, EXISTING COMMUNICATION WIRING SHALL BE REMOVED FROM THE JOB SITE BY CONTRACTOR.
- ALL ABANDONED PLUMBING PIPES SHALL PLUGGED AND CAPPED BY CONTRACTOR.

GRAPHIC LEGEND

- AREA TO BE DEMOLISHED
- CEILING MOUNTED GAS HEATER TO BE RELOCATED
- CEILING MOUNTED LIGHTING FIXTURES TO BE RE-ROUTED



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		10/31/19		

DESIGNED BY: GLB	DATE: 10/31/19	SOLICITATION NO.: NONE
DRAWN BY: PT	CAD BY: GLB	CONTRACT NO.: 1910BVAL 121
SUBMITTED BY: ADSU	FILE NAME: ADSU	CATEGORY CODE: AUTO REPAIR SHOP 04
SIZE: D 14 x 36	PLOT SCALE: AS INDICATED	PLOT DATE: 10/31/2019 3:52:29 PM

ADSU
ARCHITECTURAL DESIGN SERVICES UNLIMITED
2368 WALL STREET SE., SUITE 200-06
CONVERS, GEORGIA 30013 P 606.322.445

AUTOMOTIVE REPAIR SHOP
1494 OLD SALEM RD.
CONVERS, GEORGIA 30013

DEMOLITION PLAN

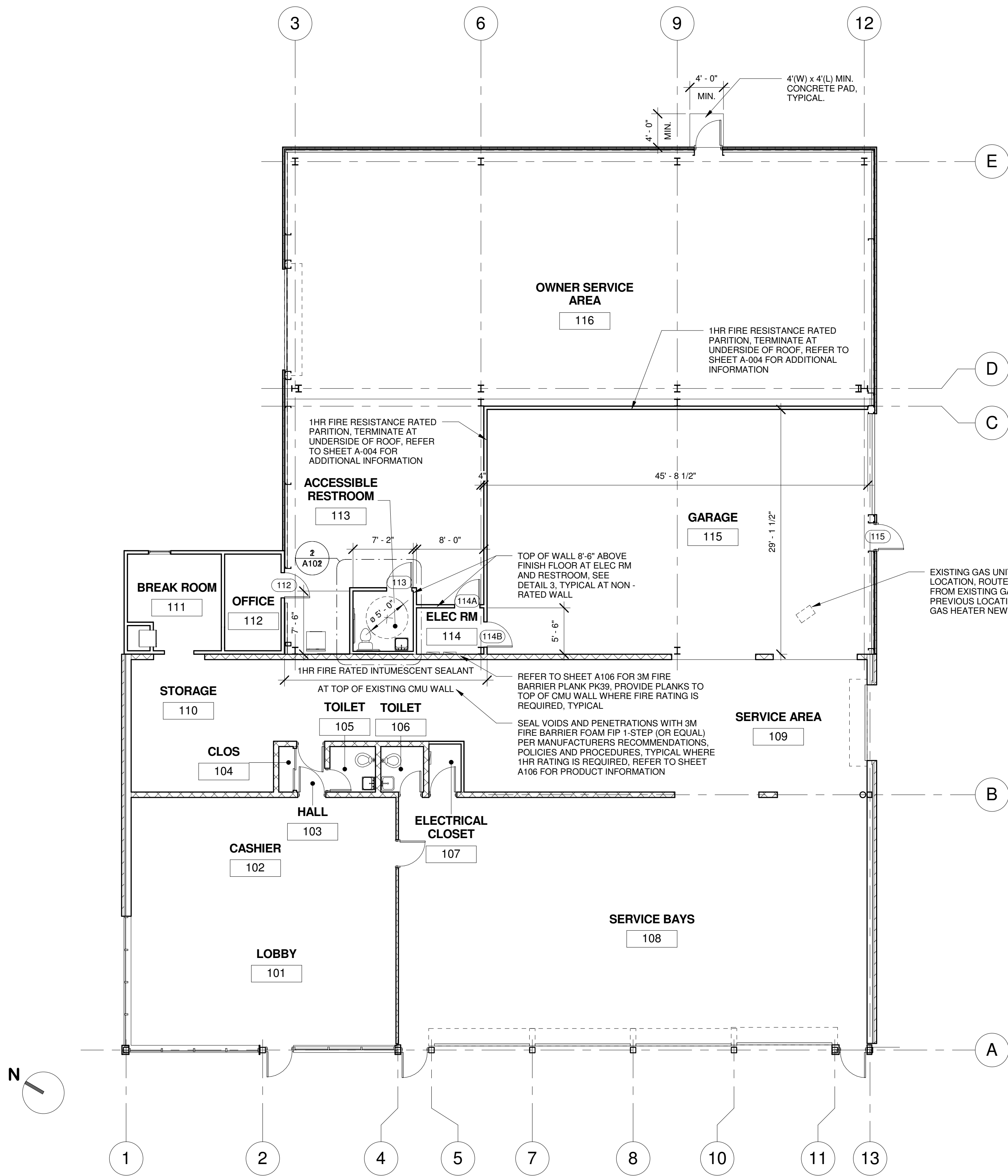
SHEET NO.
A100

ATTENTION IS DRAWN TO THE FACT THAT THE SCALE OF THESE DRAWINGS MAY HAVE BEEN DISTORTED DURING REPRODUCTION

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

GENERAL NOTES

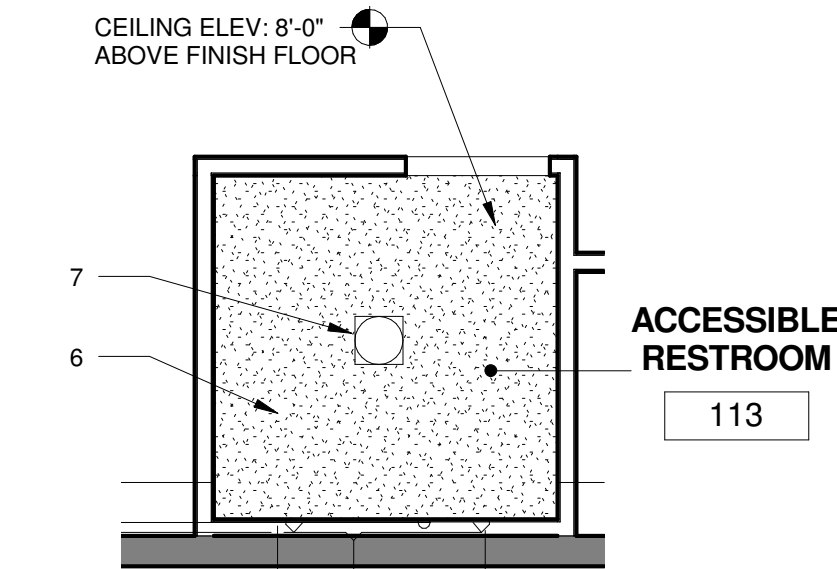
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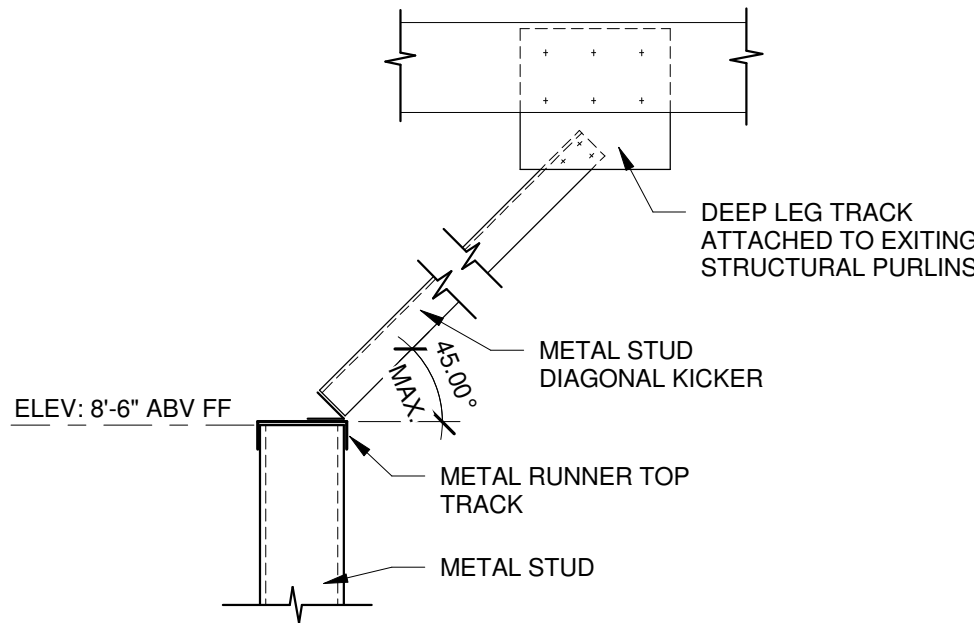
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2 REFLECTED CEILING PLAN
A101 SCALE: 1/4" = 1'-0"



3 NON-RATED TOP OF WALL DETAIL
SCALE: 1 1/2" = 1'-0"

SHEET NOTES

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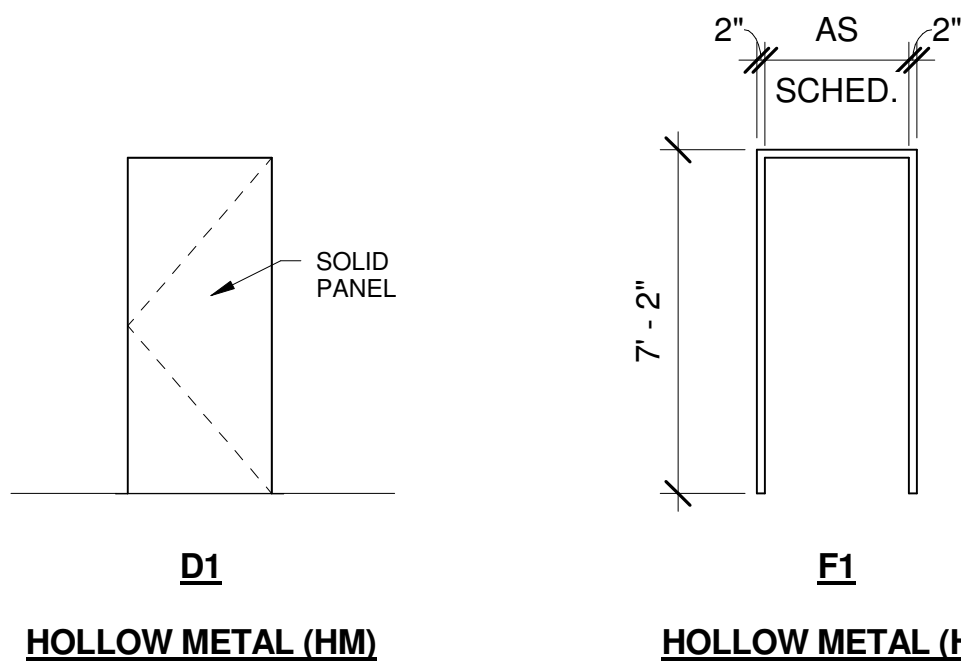
DRY WALL NOTES

- ALL GYP. BD. PARTITIONS SHALL BE TAPED, SPACKLED, AND SANDED WITH NO VISIBLE JOINTS. PATCH AND REPAIR SURFACES TO MATCH ADJACENT OR ADJOINING SURFACES WHERE REQUIRED. ALL SURFACES SHALL BE ALIGNED.
- WHERE FURRED PARTITIONS EXCEED MAXIMUM HEIGHT, BRACE TO ADJACENT STRUCTURE.
- FIRE SAFE PENETRATIONS AT RATED PARTITIONS PER APPLICABLE UL ASSEMBLY, REFER TO PARTITION DETAILS IN THE DOCUMENT SET.
- ALL INTERIOR PARTITIONS, PENETRATIONS, OTHER OPENINGS IN THE BUILDING SHELL SHALL BE SEALED, GASKETED, OR WEATHER STRIPPED.
- PROVIDE FIRE RETARDANT TREATED BLOCKING AS REQUIRED AT LOCATIONS INCLUDING BUT NOT LIMITED TO: GRAB BARS, SHELVING, OVERHEAD CABINETS, SIGNAGE, TOILET ROOMS ACCESSORIES, ETC.
- ALL GYPSUM BOARD PARTITIONS RECEIVING RUBBER BASE TO BE FINISHED SMOOTH TO THE SLAB.
- PATCH AND REPAIR EXISTING SLAB WHERE REQUIRED WITH POLYMER MODIFIED GROUT MANUFACTURED BY MASTER BUILDERS, EMACO OR EQUAL FOR NEW FLOOR FINISHES.
- ALL PARTITIONS ARE DIMENSIONED FROM FACE OF STUD TO FACE OF STUD UNLESS OTHERWISE NOTED. ALL DIMENSIONS MARKED "CLEAR" OR "CLR" SHALL BE MAINTAINED AND SHALL ALLOW FOR THICKNESSES OF ALL WALL FINISHES.
- DIMENSIONS NOTED "CLEAR" OR "CLR" MUST BE ACCURATELY MAINTAINED AND SHALL NOT VARY MORE THAN +/- 1/8" WITHOUT WRITTEN CONSENT FROM THE ARCHITECT.

DOOR SCHEDULE

DOOR SCHEDULE					
DOOR NO.	DOOR			FIRE RATING	NOTES
	W	H	T		
112	3'-0"	7'-0"	0'-1 3/4"		
113	3'-0"	7'-0"	0'-1 3/4"		
114A	3'-0"	7'-0"	0'-1 3/4"		
114B	3'-0"	7'-0"	0'-1 3/4"	45 MIN	
115	3'-0"	7'-0"	0'-1 3/4"		

DOOR NOTES
COORDINATE LOCK FUNCTIONS, ACCESS CONTROL AND FINISHES WITH OWNER PRIOT TO INSTALL.



DOOR TYPE

FRAME TYPE

ROOM FINISH SCHEDULE

ROOM FINISH SCHEDULE						
ROOM NUMBER	ROOM NAME	NORTH WALL	EAST WALL	SOUTH WALL	WEST WALL	CEILING
113	ACCESSIBLE RESTROOM	PTD	PTD	PTD	PTD	GYP
114	ELEC RM	---	---	---	---	---
115	GARAGE	PTD	PTD	---	---	---
116	OWNER SERVICE AREA	---	PTD	PTD	PTD	---

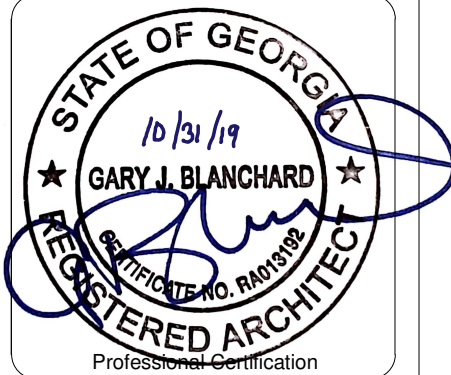
FINISH KEY
PTD - PAINTED GYPSUM BOARD
GYP - GYPSUM BOARD CEILING
RWB - RESILIENT WALL BASE (PER OWNER DIRECTION)

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		10/31/19		

DATE: 10/31/19	SOLICITATION NO.: NONE	DESIGNED BY: GLB	DESIGNED BY: GLB	CONTRACT NO.: 191018WAL121	CATEGORY CODE: AUTO REPAIR SHOP 04	PLOT DATE: 10/31/2019 9:35:35 PM
DESIGNED BY: GLB	DESIGNED BY: PT	SUBMITTED BY: ADSU	FILE NAME: ADSU	PLOT SCALE: AS INDICATED	SIZE: D 14 x 36	

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2368 WALL STREET SE., SUITE 200-06
CONOVERS, GEORGIA 30013 P 606.322.045

AUTOMOTIVE REPAIR SHOP
1494 OLD SALEM RD.
CONOVERS, GEORGIA 30013

FLOOR PLAN

SHEET NO.

A101

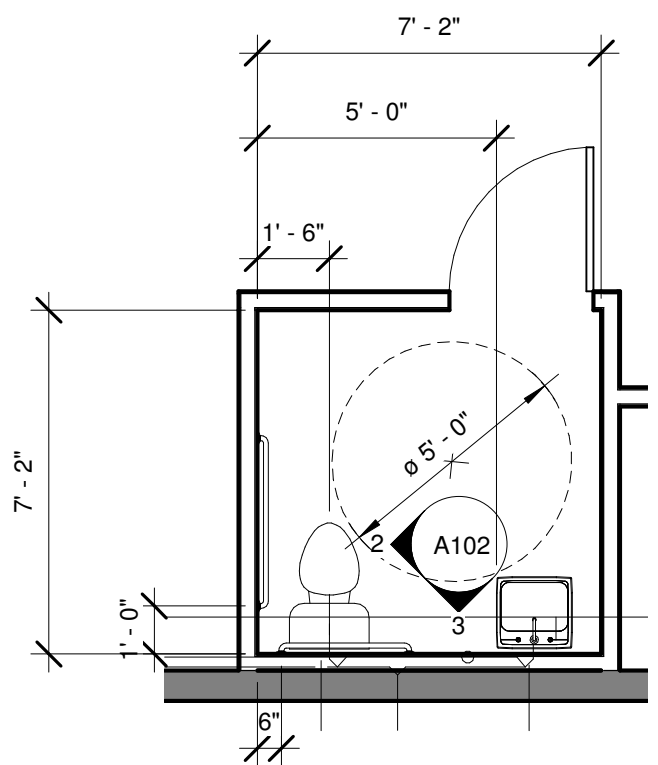
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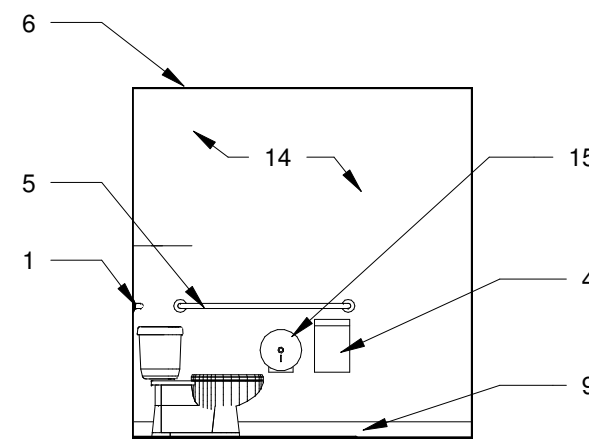
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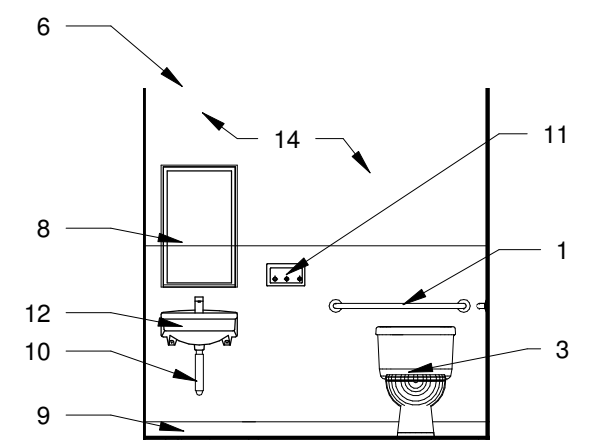
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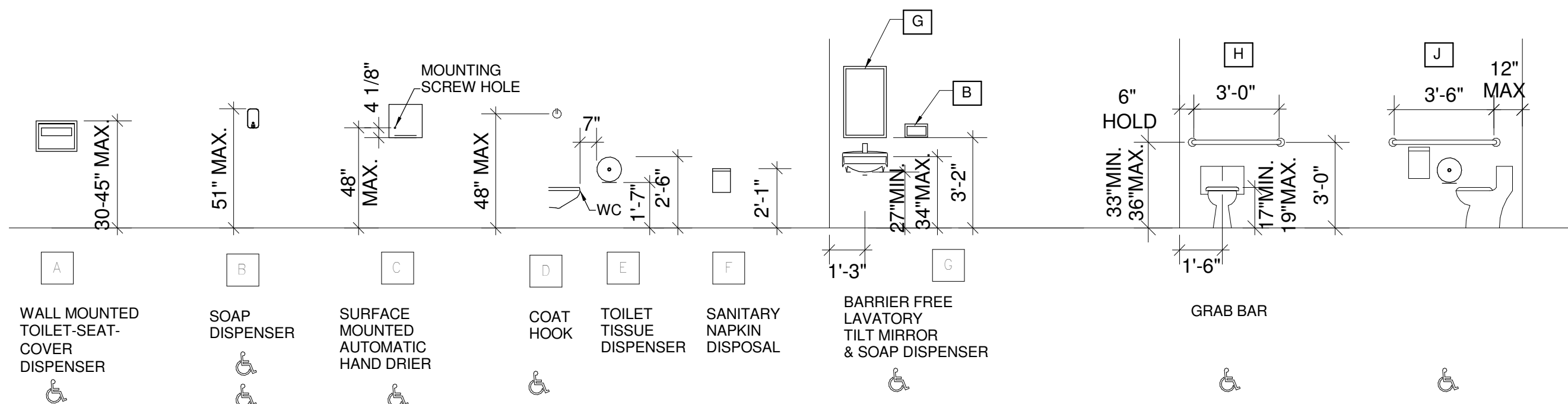
1 ENLARGED RESTROOM PLAN
A101 / SCALE: 1/4" = 1'-0"



2 INTERIOR ELEVATION
A102 / SCALE: 1/4" = 1'-0"



3 INTERIOR ELEVATION
A102 / SCALE: 1/4" = 1'-0"



NOTE: DIMENSIONS SHOWN ARE FROM FINISH FLOOR AND FINISH WALL.

CONTRACTOR TO PROVIDE BLOCKING IN WALL AT ALL TOILET ACCESSORIES.

4 MOUNTING HEIGHTS
SCALE: 12" = 1'-0"

UNIT HEATER							
MARK	LOCATION	ELECTRIC HEATING COIL					NOTES
		CFM	HEATING CAPACITY (KW)	AMPS	VOLTS	PHASE	
EUH-1	--	350	-5.0	24	208	1	1

NOTES:
1. PROVIDE UNIT MANUFACTURERS INTEGRAL THERMOSTAT.
2. PROVIDE UNIT MANUFACTURERS CONTROL TRANSFORMERS.

WATER HEATER SCHEDULE - ELECTRIC							
MARK	LOCATION	STORAGE TANK CAPACITY (GAL)	INPUT	VOLTS	PHASE	AMPS	NOTES
			KW				
WH-1	--	15	4.5	208	1	21.6	

5 EQUIPMENT SCHEDULES
SCALE: 12" = 1'-0"

GENERAL NOTES

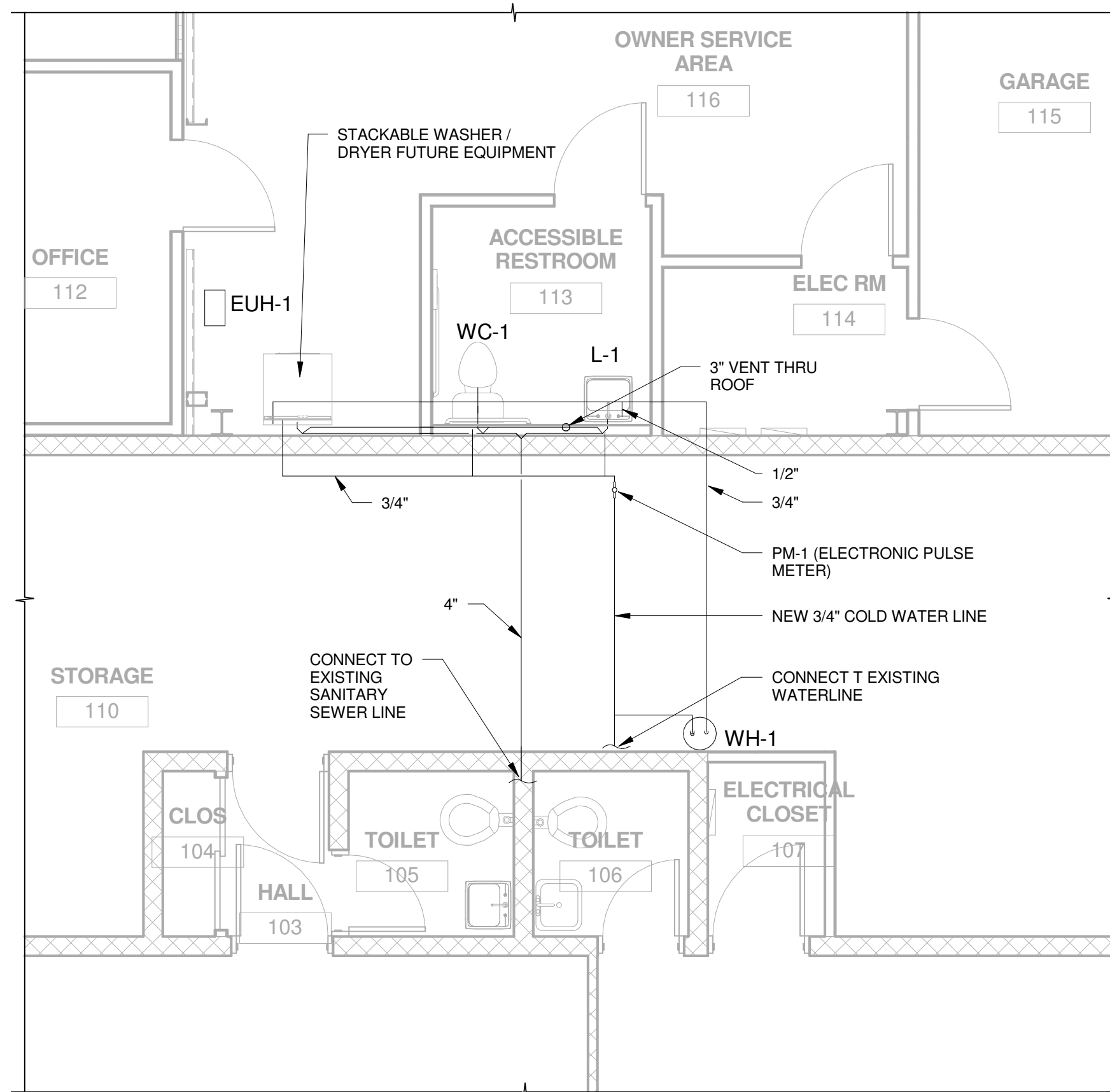
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6 PIPING PLAN
SCALE: 1/4" = 1'-0"

SHEET NOTES

- CONTRACTOR SHALL FURNISH AND INSTALL METAL OR WOOD BLOCKING IN STUD PARTITIONS FOR WALL ATTACHED ITEMS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING: GRAB BARS, VANITY UNIT, TOILET ACCESSORIES, HANDRAIL BRACKETS, WALL CABINETS, WALL MOUNTED FIXTURES, MARKER BOARD, TACK BOARD, ECT.
- SCRIBE GYPSUM BOARD OF WALL AND PARTITION EXTENSIONS TO IRREGULARITIES OF DECK ABOVE. SEAL TIGHTLY AROUND ANY PENETRATIONS.

KEY NOTES

- 36" GRAB BAR @ 3'-0" AFF
- NOT IN USE
- H/C ACCESSIBLE FLOOR MOUNTED WATER CLOSET - RIM HEIGHT 1'-7" AFF MAX
- SANITARY NAPKIN DISPOSAL
- 42" GRAB BAR @ 3'-0" AFF
- PAINTED GYP BOARD CEILING
- SURFACE MOUNTED LIGHTING FIIXTURE - PER OWNER
- MIRROR BOTTOM EDGE 3'-4" AFF MAX
- 4" RUBBER BASE
- INSULATED PROTECTIVE COVERING OVER DRAIN PIPE
- SOAP DISPENSER
- H/C ACCESSIBLE LAVATORY 2'-10" AFF W/ 4" BACKSPLASH
- RECESSED PAPER TOWEL DISPENSER AND WASTE RECEPTACLE NOTE: TOWEL DISPENSER IS 40" AFF
- PAINTED GYP BOARD
- TOILET PAPER DISPENSER - MIN. 1'-7" AFF

TOILET ACCESSORY LEGEND

MARK	DESCRIPTION	MANUFACTURER/MODEL
A	TOILET SEAT COVER DISPENSER	BOBRICK B-5221
B	SOAP DISPENSER	BOBRICK B-5050
C	AUTOMATIC HAND DRIER	BOBRICK B-7120
D	COAT HOOK	BOBRICK B-6827
E	TOILET TISSUE DISPENSER	BOBRICK B-5288
F	SANITARY NAPKIN DISPOSAL	BOBRICK B-5270
G	18" X 30" TILT MIRROR	BOBRICK B-293 1830
H	36" STAINLESS STEEL GRAB BAR	
J	42" STAINLESS STEEL GRAB BAR	

ELECTRICAL NOTES

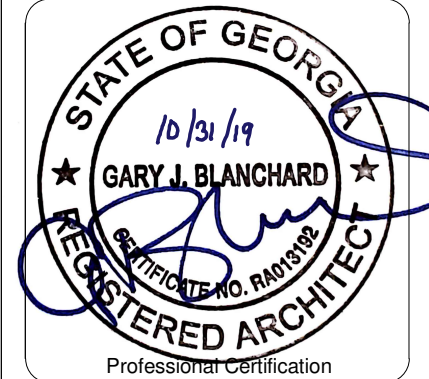
- WET AREAS: ALL RECEPTACLES OVER COUNTERTOP SHALL BE GFI PROTECTED REGARDLESS OF DISTANCE FROM THE SINK.
- BATHROOMS: ALL RECEPTACLES SHALL BE GFI PROTECTED.
- EXTERIOR RECEPTACLES SHALL ALL BE GFI PROTECTED AND SHALL HAVE WEATHERPROOF COVERS.

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DATE	SYMBOL	ISSUED FOR CONSTRUCTION	DESCRIPTION
10/31/19			

DESIGNED BY: GJB	DATE: 10/31/19	SOLICITATION NO.: NONE	CONTRACT NO.: 19109WAL 121	CATEGORY CODE: AUTO REPAIR SHOP 04	PLOT DATE: 10/31/2019 9:34:41 PM
DRAWN BY: PT	CHECKED BY: GJB	SUBMITTED BY: ADSU	FILE NAME: ADSU	PLOT SCALE: AS INDICATED	SIZE: D 14 x 36

ADSU
2365 WALL STREET SE., SUITE 200-06
CONVERS, GEORGIA 30013 P 606.622.445
ARCHITECTURAL DESIGN SERVICES UNLIMITED

AUTOMOTIVE REPAIR SHOP
1494 OLD SALEM RD.
CONVERS, GEORGIA 30013
**RESTROOM PLAN,
PIPING &
SCHEDULES**

SHEET NO.
A102

ISSUE FOR CONSTRUCTION

C

B

A

ISSUED FOR CONSTRUCTION

UL DESIGN - FIRE RESISTANCE

10/31/2019

U419 - BXUV/U419 - UL Product Spec

20. **Framing Members* — Steel Studs** — As an alternate to Item 2 — proprietary channel shaped steel studs, min width as indicated under Item 5, galv steel. Studs to be cut 3/8 to 3/4 in, less in lengths than assembly height. Spaced 24 in, OC max.

RONDO BUILDING SERVICES PTY LTD — Rondo Lipped Wall Stud

2P. **Framing Members* — Steel Studs** — As an alternate to Item 2 — proprietary channel shaped steel studs, min width as indicated under Item 5, min 25 MSG galv steel. Studs to be cut 3/8 to 3/4 in, less in lengths than assembly height. Spaced 24 in, OC max.

OEG BUILDING MATERIALS — OEG Stud

2Q. **Framing Members* — Steel Studs** — Not Shown — In lieu of Item 2 — For use with Item 10, proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max of 24 in, OC, fabricated from min 25 MSG (0.018 in, min, bare metal thickness). Studs cut 3/8 in, to 3/4 in, less in lengths than assembly heights.

CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper X

3. **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.

4. **Batts and Blankets*** — (Required as indicated under Item 5) — Mineral wool batts, friction fitted between studs and runners. Min nom thickness as indicated under Item 5.

See **Batts and Blankets** (BKNV or BZJZ) Categories for names of Classified companies.

4A. **Batts and Blankets*** — (Optional) — 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.

4B. **Batts and Blankets*** — For use with Item 5K. Placed in stud cavities, any min, 3-1/2 in, thick glass fiber insulation bearing the UL Classification Marking as to

productspec.ul.com/document.php?d=BXUV/U419#921

10/31/2019

U419 - BXUV/U419 - UL Product Spec

Surface Burning Characteristics and/or Fire Resistance.

See **Batts and Blankets** (BKNV or BZJZ) Categories for names of Classified companies.

4C. **Fiber, Sprayed*** — (Optional) and as an alternate to Batts and Blankets (Item 4B) where insulation is required - Spray applied granulated mineral fiber material. The fiber is applied with adhesive at a minimum density of 4.0 pcf to completely fill the wall cavity in accordance with the application instructions supplied with the product. See **Fiber, Sprayed** (CCAZ)

AMERICAN ROCKWOOL MANUFACTURING, LLC — Type Rockwool Premium Plus

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. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. The thickness and number of layers for the 1 hr, 2 hr, 3 hr and 4 hr ratings are as follows:

Gypsum Board Protection on Each Side of Wall				
Rating, Hr	Min Stud Depth, in.	No. of Layers & Thkns of Panel	Min Thkns of Insulation (Item 4)	
1	3-1/2	1 layer, 5/8 in, thick	Optional	
1	2-1/2	1 layer, 1/2 in, thick	1-1/2 in.	
1	1-5/8	1 layer, 3/4 in, thick	Optional	
2	1-5/8	2 layers, 1/2 in, thick	Optional	
2	1-5/8	2 layers, 5/8 in, thick	Optional	
2	3-1/2	1 layer, 3/4 in, thick	3 in.	
3	1-5/8	3 layers, 1/2 in, thick	Optional	
3	1-5/8	2 layers, 3/4 in, thick	Optional	
3	1-5/8	3 layers, 5/8 in, thick	Optional	
4	1-5/8	4 layers, 5/8 in, thick	Optional	
4	1-5/8	4 layers, 1/2 in, thick	Optional	
4	2-1/2	2 layers, 3/4 in, thick	2 in.	

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

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

When Item 7B, **Steel Framing Members***, is used, Nonbearing Wall Rating is limited to 1 Hr. Min, stud depth is 3-1/2 in., min, thickness of insulation (Item 4) is 3 in., and two layers of gypsum board panels (1/2 in. or 5/8 in, thick) shall be attached to furring channels as described in Item 6. One layer of gypsum board panels (1/2 in. or 5/8 in, thick) attached to opposite side of stud without furring channels as described in Item 6.

5A. **Gypsum Board*** — (As an alternate to Item 5) — 5/8 in, thick, 24 to 54 in, wide, applied horizontally as the outer layer to one side of the assembly. Secured as described in Item 6.

CGC INC — Type SHX.

UNITED STATES GYPSUM CO — Type FRX-G, SHX.

USG MEXICO S A DE C V — Type SHX.

5B. **Gypsum Board*** — (Not Shown) — As an alternate to Item 5 when used as the base layer on one or both sides of wall when 5/8 in or 3/4 in, thick products are specified. For direct attachment only to steel studs Item 2A, (not to be used with Item 3) — 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 studs and staggered min 1 stud cavity on opposite sides of studs. Gypsum board secured to 20 MSG steel studs Item 2A 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 11) or Lead Discs or Tabs (see Item 12).

RAY-BAR ENGINEERING CORP — Type RB-LBG

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5C. **Gypsum Board*** — (For Use With Item 2B) — Rating Limited to 1 Hour. 5/8 in, thick, 48 in, wide, Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. (Vertical Application) - The gypsum board is to be installed on each side of the studs with 1 in, long Type S coated steel screws spaced 8 in, OC starting 4 in, from the edge of the board at the vertical edges and 12 in, OC starting 6 in, from the edge of the board at the center of each board. Gypsum boards are to be secured to the top and bottom track with screws spaced 8 in, OC starting 4 in, from the board edge. Fasteners shall not penetrate through both the stud and the track at the same time. Vertical joints are to be centered over studs and staggered one stud cavity on opposite sides of studs. (Horizontal Application) - The gypsum board is to be installed on each side of the studs with 1 in, long Type S coated steel screws spaced 8 in, OC starting 4 in, from the edge of the board at the vertical edges and 12 in, OC starting 6 in, from the edge of the board at the center of each board. Gypsum boards are to be secured to the top and bottom track with screws spaced 8 in, OC starting 4 in, from the board edge. Fasteners shall not penetrate through both the stud and the track at the same time. All horizontal joints are to be backed as outlined under section VI of Volume 1 in the Fire Resistive Directory.

CGC INC — Type SCX.

UNITED STATES GYPSUM CO — Type SCX, SGX.

USG BORAL DRYWALL SFZ LLC — Type SCX

USG MEXICO S A DE C V — Type SCX

5D. **Gypsum Board*** — (As an alternate to Item 5) — 5/8 in, thick, 48 in, wide, applied vertically or horizontally. Secured as described in Item 6. For use with Items 1 and 2 only.

CGC INC — Type USGX

UNITED STATES GYPSUM CO — Type USGX

USG BORAL DRYWALL SFZ LLC — Type USGX

USG MEXICO S A DE C V — Type USGX

5E. **Gypsum Board*** — (Not Shown) — (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 1/2 in, or 5/8 in thick products are specified. For direct attachment only to steel studs Item 2A, not to be used with Item 3). Nominal 5/8 in, thick lead backed gypsum panels with beveled, square or tapered

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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 No. 6 by 1-1/4 in, long bugle head fine drill) steel screws spaced 8 in, OC at perimeter and 12 in, OC in the field.

NEW ENGLAND LEAD BURNING CO INC, DBA NELCO — Nelco

5F. **Gypsum Board*** — (As an alternate to Item 5) — For use with Items 1E and 2E and limited to 1 Hour Rating only. Gypsum panels with beveled, square or tapered edges, applied vertically, and fastened to the steel studs with 1 in, long Type S screws spaced 8 in, OC along vertical and bottom edges and 12 in, OC in the field. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Steel stud depth shall be a minimum 3-5/8 in.

UNITED STATES GYPSUM CO — 5/8 in, thick Type SCX, SGX

USG BORAL DRYWALL SFZ LLC — 5/8 in, thick Type SCX, SGX

5G. **Gypsum Board*** — (As an alternate to Item 5) — For use with Items 1E and 2E only. Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally, as specified in the table below and fastened to the steel studs as described in Item 6. 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. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. The thickness and number of layers for the 2 hr, 3 hr and 4 hr ratings are as follows:

Gypsum Board Protection on Each Side of Wall				
Rating, Hr	Min Stud Depth, in. Item 2E	No. of Layers & Thickness of Panel	Min Thkns of Insulation (Item 4)	
2	1-5/8	2 layers, 1/2 in, thick	Optional	
2	1-5/8	2 layers, 5/8 in, thick	Optional	
3	1-5/8	3 layers, 1/2 in, thick	Optional	
3	1-5/8	3 layers, 5/8 in, thick	Optional	
4	1-5/8	4 layers, 5/8 in, thick	Optional	
4	1-5/8	4 layers, 1/2 in, thick	Optional	

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

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

5H. **Gypsum Board*** — (Not Shown) — (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 5/8 or 3/4 in thick products are specified. For direct attachment only to steel studs Item 2A, (not to be used with Item 3) - 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. 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. Gypsum board secured to 20 MSG steel studs Item 2B with 1-1/4 in, long Type S-12 steel screws spaced 8 in, OC at perimeter and 12 in, OC in the field. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 11A) or Lead Discs (see Item 12A).

MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

5I. **Gypsum Board*** — (As an alternate to Item 5) — Nom, 5/8 in, thick gypsum panels with beveled, square or tapered edges installed as described in Item 5. Steel stud minimum depth shall be as indicated in Item 5.

CGC INC — Type ULX

UNITED STATES GYPSUM CO — Type ULX

USG MEXICO S A DE C V — Type ULX

5J. **Gypsum Board*** — (Not Shown) — (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 1/2 in, or 5/8 in thick products are specified. For direct attachment only to steel studs Item 2A, not to be used with Item 3). 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 1-1/4 in, long

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Type S-12 steel screws gypsum panel 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-2011, Grade "C".

RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

5K. **Gypsum Board*** — (Not Shown) — (As an alternate to Item 5) — Nom, 5/8 in, thick gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (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. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) need not be staggered. The number of layers for the 1 hr, 2 hr, 3 hr and 4 hr ratings are as follows:

Gypsum Board Protection on Each Side of Wall				
Rating, Hr	Min Stud Depth, in.	No. of Layers & Thkns of Panel	Min Thkns of Insulation (Item 4B)	
1	3-5/8	1 layer, 5/8 in, thick	3-1/2 in.	
2	1-5/8	2 layers, 5/8 in, thick	Optional	
3	1-5/8	3 layers, 5/8 in, thick	Optional	
4	1-5/8	4 layers, 5/8 in, thick	Optional	

UNITED STATES GYPSUM CO — 5/8 in, thick Type ULIX

6. **Fasteners** — (Not Shown) — For use with Items 2 and 2F - Type S or S-12 steel screws used to attach panels to studs (Item 2) or furring channels (Item 7). **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 8 in, OC along vertical and bottom edges and 12 in, OC in the field when panels are applied 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 in, OC. Second layer- 1-5/8 in, long for 1/2 in, 5/8 in, thick panels or 2-1/4 in, long for 3/4 in, thick panels, spaced 16 in, OC with screws offset 8 in, from first layer. **Three-layer systems:** First layer- 1 in, long for 1/2 in., 5/8 in, thick panels, spaced 24 in, OC. Second layer- 1-5/8 in,

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long for 1/2 in., 5/8 in, thick panels, spaced 24 in, OC. Third layer- 2-1/4 in, long for 1/2 in., 5/8 in, thick panels or 2-5/8 in, long for 5/8 in, thick panels, spaced 12 in, OC. Screws offset min 6 in, from layer below. **Four-layer systems:** First layer- 1 in, long for 1/2 in., 5/8 in, thick panels, spaced 24 in, OC. Second layer- 1-5/8 in, long for 1/2 in., 5/8 in, thick panels, spaced 24 in, OC. Third layer- 2-1/4 in, long for 1/2 in, thick panels or 2-5/8 in, long for 5/8 in, thick panels, spaced 24 in, OC. Fourth layer- 2-5/8 in, long for 1/2 in, thick panels or 3 in, long for 5/8 in, thick panels, spaced 12 in, OC. Screws offset min 6 in, from layer below.

7. **Furring Channels** — (Optional, 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 steel screws. Not for use with Item 5A.

7A. **Framing Members*** — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 7, 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 Item 5A.

b. **Steel Framing Members*** — Used to attach furring channels (Item 7Aa) to studs (Item 2). Clips spaced max. 48 in, OC. RSIC-1 and RSIC-1 (2.75) clips secured to studs with No. 8 x 1-1/2 in, minimum self-drilling, S-12 steel screw through the center grommet. RSIC-V and RSIC-V (2.75) clips secured to studs with No. 8 x 9/16 in, minimum self-drilling, S-12 steel screw through the center hole. Furring channels are friction fitted into 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.

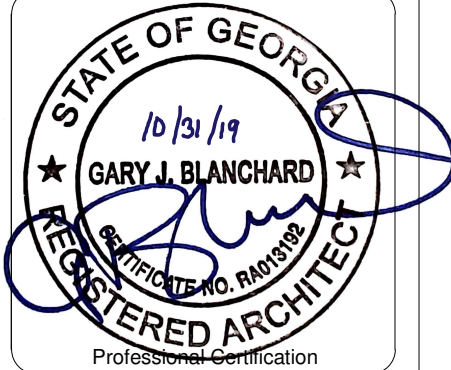
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-V, RSIC-1 (2.75), RSIC-V (2.75).

7B. **Framing Members*** — (Optional, Not Shown) — As an alternate to Item 7, for single or double layer systems, furring channels and Steel Framing Members on only 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. 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 5. Not for use with Item 5A.

b. **Steel Framing Members*** — Used to attach furring channels (Item 7Ba) to one side of studs (Item 2) only. Clips spaced 48 in, OC., and secured to studs with two No. 8 x 2-1/2 in, coarse drywall

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DATE	BY	SYMBOL	DESCRIPTION
10/31/19	GLB		ISSUED FOR CONSTRUCTION

DESIGNED BY: UL	DATE: 10/31/19	SOLUTION NO.: NONE	GLB
DRAWN BY: PT	QIG BY: GLB	CONTRACT NO.: 1901BVAL_121	
SUBMITTED BY: ADSU	FILE NAME: ADSU	CATEGORY CODE: AUTO REPAIR SHOP 04	PLOT DATE: 10/31/2019 3:19 PM
SIZE: D 14 x 36	PLOT SCALE: AS INDICATED		

ADSU
2468 WALL STREET SE., SUITE 200-06
CONVERS, GEORGIA 30013-6632-045
ARCHITECTURAL DESIGN SERVICES UNLIMITED

AUTOMOTIVE REPAIR SHOP
1494 OLD SALEM RD.
CONVERS, GEORGIA 30013

UL DESIGNS

SHEET NO.
A104

ISSUE FOR CONSTRUCTION

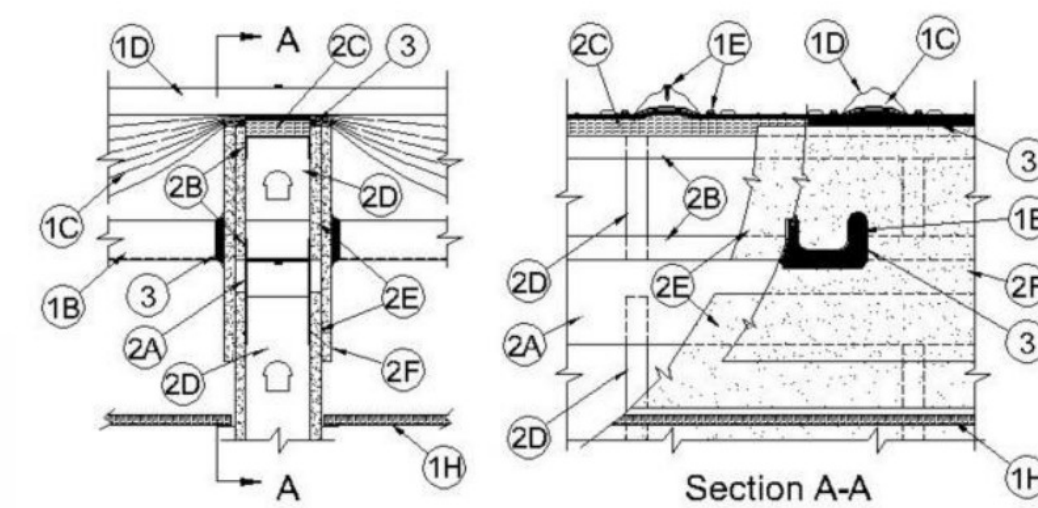
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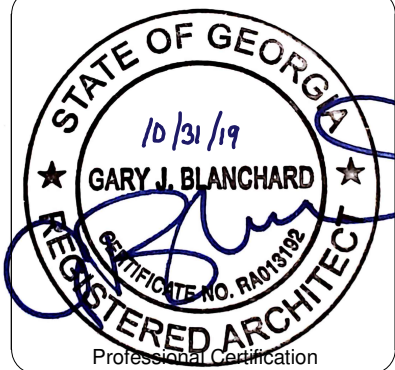
B

A

ISSUED FOR CONSTRUCTION

UL DESIGN - FIRE RESISTANCE

<p>10/31/2019</p> <p>U419 - BXUV/U419 - UL Product Spec</p> <p>screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips. KINETICS NOISE CONTROL INC — Type Isomax</p> <p>7C. Framing Members* — (Not Shown) — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 7, furring channels and Steel Framing Members as described below.</p> <p>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 Item 5A.</p> <p>b. Steel Framing Members* — Used to attach furring channels (Item 7Ca) to studs (Item 2). Clips spaced max. 48 in. OC. GENIECLIPS 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. PLITEQ INC — Type GENIECLIP</p> <p>7D. Steel Framing Members* — (Optional on one or both sides, not shown, for single or double layer systems) — Furring channels and Steel Framing Members as described below.</p> <p>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 6. Not for use with Item 5A.</p> <p>b. Steel Framing Members* — Used to attach furring channels (Item 7Da) to studs. Clips spaced 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 STUDDO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or A237R</p> <p>7E. Steel Framing Members* — (Optional on one or both sides, not shown, for single or double layer systems) — Furring channels and Steel Framing Members as described below.</p> <p>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 7Eb. Ends of adjoining channels overlapped 6 in.</p> <p>productspec.ul.com/document.php?d=BXUV/U419#</p> <p>17/21</p>	<p>10/31/2019</p> <p>U419 - BXUV/U419 - UL Product Spec</p> <p>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 Item 5A and 5E.</p> <p>b. Steel Framing Members* — Used to attach furring channels (Item 7Ea) 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</p> <p>7F. Steel Framing Members* — (Optional on one or both sides, not shown, for single or double layer systems) — Resilient channels and Steel Framing Members as described below.</p> <p>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 Item 5A and 5E.</p> <p>b. Steel Framing Members* — Used to attach resilient channels (Item 7Fa) 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</p> <p>7G. Framing Members* — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 7, furring channels and Steel Framing Members as described below:</p> <p>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 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 Item 5A.</p> <p>b. Steel Framing Members* — Used to attach furring channels (Item 7Ga) to studs (Item 2). Clips spaced max. 48 in. OC. Clips secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center hole. Furring channels are friction fitted into clips. CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip</p> <p>productspec.ul.com/document.php?d=BXUV/U419#</p> <p>18/21</p>	<p>10/31/2019</p> <p>U419 - BXUV/U419 - UL Product Spec</p> <p>8. 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 layer panels. Paper tape and joint compound may be omitted when gypsum panels are supplied with a square edge.</p> <p>9. Siding, Brick or Stucco — (Optional, Not Shown) — Aluminum, vinyl or steel siding, brick veneer or stucco, meeting the requirements of local code agencies, installed over gypsum panels. 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.</p> <p>10. 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</p> <p>11. Lead Batten Strips — (Not Shown, For Use With Item 5B) — Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5B) and optional at remaining stud locations. Required behind vertical joints.</p> <p>11A. Lead Batten Strips — (Not Shown, For Use With Item 5H) — 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 and optional at remaining stud locations.</p> <p>12. Lead Discs or Tabs — (Not Shown, For Use With Item 5B) — Used in lieu of or in addition to the lead batten strips (Item 11) 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 5B) 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".</p> <p>12A. Lead Discs — (Not Shown, for use with Item 5H) — 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".</p> <p>productspec.ul.com/document.php?d=BXUV/U419#</p> <p>19/21</p>	<p>10/31/2019</p> <p>U419 - BXUV/U419 - UL Product Spec</p> <p>13. Lead Batten Strips — (Not Shown, For Use With Item 5E) — 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 5E) and optional at remaining stud locations.</p> <p>14. Lead Tabs — (Not Shown, For Use With Item 5E) — 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 5E) 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.</p> <p>15. Barrier Mesh — (Optional, Not Shown) - Attached to steel studs on one or both sides of the wall using Barrier Mesh Clips spaced at maximum 12 inches on center vertically, using a flat head type screw penetrating through the steel at least 3/8 of an inch. For Steel Studs less than 0.033 inches in thickness, use self-piercing screws. For Steel Studs equal to or greater than 0.033 inches in thickness, use steel drill screws (self-tapping). Gypsum Board (Item 5) to be installed directly over the Barrier Mesh using prescribed screw patterns with lengths increased by a minimum 1/8 in. Barrier Mesh may be installed with the long dimension of the diamond pattern positioned vertically or horizontally. Barrier Mesh joints may occur as butt joints at the framing members and secured using the Barrier Mesh Clips or occur in between framing members as overlapping joints secured using 18 SWG wire ties spaced a maximum 12 in. on center. CLARKDIETRICH BUILDING SYSTEMS — Barrier Mesh, Barrier Mesh Clips</p> <p>* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.</p> <p>Last Updated on 2019-09-13</p> <p>Design/System/Construction/Assembly Usage Disclaimer</p> <ul style="list-style-type: none">• 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 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 <p>productspec.ul.com/document.php?d=BXUV/U419#</p> <p>20/21</p>
<p>10/31/2019</p> <p>U419 - BXUV/U419 - UL Product Spec</p> <p>each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.</p> <ul style="list-style-type: none">• Only products which bear UL's Mark are considered Certified. <p>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.</p> <p>UL permits the reproduction of the material contained in the Online Certification Directory 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 the Online Certifications Directory with permission from UL" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "© 2019 UL LLC".</p> <p>UL and the UL logo are trademarks of UL LLC © 2019 All Rights Reserved.</p> <p>productspec.ul.com/document.php?d=BXUV/U419#</p> <p>21/21</p>	<p>10/31/2019</p> <p>Joint Systems XHBN, XHBN-HW-D-0490 - UL Product Spec</p> <p>UL PRODUCT CATEGORY</p> <p>Assembly Usage Disclaimer</p> <p>XHBN - Joint Systems</p> <p>See General Information for Joint Systems</p> <p>System No. HW-D-0490</p> <p>February 11, 2008</p> <p>Assembly Rating — 1 Hr</p> <p>Nominal Joint Width — 2 in.</p> <p>Class II Movement Capabilities — 100% Compression and Extension</p>  <p>1. Roof-Ceiling Assembly — The fire rated roof-ceiling assembly shall be constructed of the materials and in the manner described in the individual P200 or P500 Series Roof-Ceiling Designs in the UL Roofing Materials and Systems Directory and shall include the following construction features:</p> <p>A. Purlin — (Not Shown) - Min 16 ga coated steel. Max spacing as specified in the individual Roof-Ceiling Design.</p> <p>B. Lateral Bracing — Min 16 ga coated steel strap, channel, angle or other structural shape installed where required for lateral support</p> <p>productspec.ul.com/document.php?d=XHBN-HW-D-0490</p> <p>1/5</p>	<p>10/31/2019</p> <p>Joint Systems XHBN, XHBN-HW-D-0490 - UL Product Spec</p> <p>of studs. Attached to steel purlins on each side of wall assembly with welds or with min No. 14 self-tapping, hex-head, plated steel or stainless steel screws.</p> <p>C. Batts and Blankets* - Insulation — Any faced compressible glass-fiber blanket insulation having a min 6 in. (152 mm) thickness before compression and a min density of 0.6 pcf (9.6 kg/m³). Insulation draped over purlins prior to installation of panel clips (Item 1F) and/or metal roof deck panels (Item 1D). Side edges of the batts shall be butted or overlapped a max of 3 in. (76 mm). See Batts and Blankets (BZJZ) category in the UL Fire Resistance Directory or Batts and Blankets (BKNV) category in the UL Building Materials Directory for names of manufacturers.</p> <p>D. Metal Roof Deck Panels* — Min 26 ga coated steel. Panels continuous over two or more spans. Roof panel end laps, if required, centered over purlins with min 3 in. (76 mm) panel overlap as specified in the individual Roof-Ceiling Design. A line of tube sealant or tape sealant may be used at panel end and side laps. See Metal Roof Deck Panels (TJVP) category in the UL Roofing Materials and Systems Directory for names of manufacturers.</p> <p>E. Fasteners — Fasteners used for panel-to-purlin and panel-to-panel connections to be self-tapping, hex-head, plated steel or stainless steel screws with either an integral or a separate steel washer fitted with a compressible sealing washer. Fastener type, length, pilot hole diam and spacing to be as specified in the individual Roof-Ceiling Design.</p> <p>F. Roof Deck Fasteners* - Panel Clips — (Not Shown) - Panel clips used for panel-to-purlin connections to be secured to purlin through insulation as specified in the individual Roof-Ceiling Design. See Roof Deck Fasteners (TLSX) category in the UL Roofing Materials and Systems Directory for names of manufacturers.</p> <p>G. Thermal Spacer Blocks — (Not Shown) - Expanded polystyrene strips cut to fit between panel clips (Item 1F) as specified in the individual Roof-Ceiling Design. Thermal spacer blocks, when used, are to be installed between insulation (Item 1C) and metal roof deck panels (Item 1D) over purlins.</p> <p>H. Ceiling Membrane — The Steel Framing Members*, Acoustical Material*, Gypsum Board* and other ceiling membrane components shall be as specified in the individual Roof-Ceiling Design.</p> <p>2. Wall Assembly — The 1 h fire-rated gypsum board/steel stud wall assembly shall be constructed of the materials and in the manner specified in the individual U400 or V400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:</p> <p>productspec.ul.com/document.php?d=XHBN-HW-D-0490</p> <p>2/5</p>	<p>10/31/2019</p> <p>Joint Systems XHBN, XHBN-HW-D-0490 - UL Product Spec</p> <p>A. Ceiling Deflection Channel — U-shaped channel formed from min 16 ga steel sized to accommodate steel studs (Item 2D) and provided with 5 in. (127 mm) flanges. Deflection channel installed parallel with and between purlins and secured to lateral bracing (Item 1B) with min No. 14 self-tapping, hex-head, plated steel or stainless steel screws.</p> <p>B. Steel Floor and Ceiling Runners — Floor runner of the wall assembly and the floor and ceiling runners of the cripple wall above the wall assembly shall consist of min 1-1/4 in. (32 mm) deep min 25 ga galv steel channels sized to accommodate steel studs (Item 2D). Floor runner of cripple wall aligned with and screw-attached to top of ceiling deflection channel. Ceiling runner of cripple wall installed to compress insulation (Item 1C) and packing material (Item 2C) to min thickness of 3/8 in. (10 mm) and 1 in. (25 mm), respectively, by wedging lengths of stud (Item 2D) between the runners. Steel studs of cripple wall attached to floor and ceiling runners with steel screws.</p> <p>C. Batts and Blankets* - Packing Material — Unfaced compressible mineral wool batt insulation having a nom 2 in. (51 mm) thickness before compression and a nom density of 4 pcf (64 kg/m³). Strips of nom 2 in. (51 mm) thick batt cut to width of cripple wall ceiling runner and compressed min 50 percent in thickness between cripple wall ceiling runner and insulation (Item 1C). Compression of mineral wool batt packing material to result in compression of insulation (Item 1C) to nominal 3/8 in. (10 mm) thickness. When width of metal roof deck panels (Item 1D) rib exceeds 2 in. (51 mm). See Batts and Blankets (BZJZ) category in the UL Fire Resistance Directory or Batts and Blankets (BKNV) category in the UL Building Materials Directory for names of manufacturers.</p> <p>D. Studs — Steel studs to be min 3-1/2 in. (89 mm) wide. Studs cut max 2 in. (51 mm) less in length than assembly height beneath purlins with bottom nesting in and resting on the floor runner and with top nesting in ceiling deflection channel without attachment. Stud spacing not to exceed 24 in. (610 mm) O.C. Studs of cripple wall cut to length as required to compress insulation (Item 2C) and insulation (Item 1C) to min thicknesses of 1 in. (25 mm) and 3/8 in. (10 mm), respectively. Studs spaced max 24 in. (610 mm) OC.</p> <p>E. Gypsum Board* — Min 5/8 in. (16 mm) thick gypsum board sheets installed on each side of wall. Wall to be constructed as specified in the individual U400 or V400 Series Design in the UL Fire Resistance Directory except that a max 2 in. wide gap shall be maintained between the gypsum board of the wall assembly and the gypsum board of the cripple wall. Top edge of gypsum board of wall assembly to be max 2 in. (51 mm) below top of ceiling deflection channel. Bottom edge of cripple wall gypsum board to be</p> <p>productspec.ul.com/document.php?d=XHBN-HW-D-0490</p> <p>3/5</p>



PROJECT NO.	DATE	BY
	10/31/19	
ISSUED FOR CONSTRUCTION	DESCRIPTION	SYMBOL

DESIGNED BY:	DATE:	SUBMITTAL NO.:	CONTRACT NO.:	FILE NAME:	PLOT DATE:
UL	10/31/19	NONE	1910BVAL 121	ADSU	10/31/2019 03:30 PM
DRAWN BY:	CHECK BY:	SUBMITTED BY:	CATEGORY CODE:	AUTO REPAIR SHOP:	PLOT SCALE:
PT	CLB	ADSU	1910BVAL 121		AS INDICATED
SIZE:	DRAWING NO.:	DATE:	BY:	FILE NAME:	PLOT DATE:
D 14 x 36					

ADSU
ARCHITECTURAL DESIGN SERVICES UNLIMITED

2468 WALL STREET, SUITE 200-06
CONVERS, GEORGIA 30013-7663, USA

AUTOMOTIVE REPAIR SHOP
1494 OLD SALEM RD.
CONVERS, GEORGIA 30013

UL DESIGNS

SHEET NO.
A105

ISSUE FOR CONSTRUCTION

C

B

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ISSUED FOR CONSTRUCTION

UL DESIGN - FIRE RESISTANCE

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flush with top of ceiling deflection channel. Screws securing gypsum board to steel studs of wall assembly to be located 2-1/4 in. to 2-1/2 in. (57 to 64 mm) below flange of ceiling deflection channel. Screws securing gypsum board of cripple wall to be driven into studs and runners of cripple wall. No screws are to be driven into flanges of ceiling deflection channel.

F. Gypsum Board* — Min 5/8 in. (16 mm) thick "rip strip" of gypsum board installed to cover first layer of gypsum board on cripple wall and to lap min 3 in. (76 mm) onto gypsum board of wall assembly on each side of wall. The "rip strip" of gypsum board is to be the same material used for the wall assembly and is to be secured to the studs and runners of the cripple wall. No screws are to be driven into flanges of ceiling deflection channel. Joints of "rip strip" to be offset from joints of gypsum board on wall assembly.

Max separation between top of wall assembly gypsum board and bottom of cripple wall gypsum board (at time of installation of joint system) is 2 in. (51 mm). The joint system is designed to accommodate a max 100 percent compression or extension from its installed width.

3. Fill, Void or Cavity Material* — Caulk — Min 5/8 in. (16 mm) thickness of fill material installed to fill any gap between top of cripple wall gypsum board and insulation (Item 1C) on each side of the wall. Additional caulk installed to fill annular space between lateral bracing and gypsum board "rip strip" (Item 2F) on both sides of wall. Additional nom 1/2 in. (13 mm) diam bead of caulk to be applied around perimeter of lateral brace at its interface with the "rip strip" on each side of the wall.

3M COMPANY 3M FIRE PROTECTION PRODUCTS — CP 25WB+ caulk

* 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 2008-02-11

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 submittal and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance 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

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3M Science. Applied to Life.™

Stack. Seal. Done. No wire mesh required.

3M™ Fire Barrier Blocks, Plugs and Planks help you in key areas of fire protection.

Safety—meets intent of building code

If fire breaks out, the barriers you've installed in openings for wall and floor through penetrations must, without fail, protect against smoke, fire and toxic gases—and stand up to the powerful hose stream test in ASTM E814. Meet the building code with 3M™ Fire Barrier Blocks, Plugs and Planks—secured and tightly sealed with 3M™ Fire Barrier Rated Foam FIP 1-Step.*

Easy to install—no special tools required

You can restore the integrity of the wall with a simple "stack, seal and done" application. You won't waste time installing wire mesh reinforcement because the blocks and planks lock in place. Generous sizes that include a large 39-inch plank help you fill openings quickly. Plus, you can trim the material on the spot—so getting a tight, custom fit won't slow you down.

Plug-and-done installation for small openings

For small circular openings which cables can pass through, choose 3M™ Fire Barrier Plugs. They may be cut to wrap around cable penetrants—or holes can be punched through the plugs to route cable through.

Protect with the best. Call your 3M Fire Protection rep for an onsite demo!

*Refer to the UL directory for the specific UL tested and listed system for your application.

See how the barrier stands tough against hose stream and survives fire. Watch the fire test video at www.3M.com/Firestop

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

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Check out these "Stack. Seal. Done." fire barrier products from 3M ... the trusted name in firestopping.

2" Plug 4" Plug 7.87" Block 39" Plank

Ordering Information

Product	Size	UPC	3M Stock No.	Units/Case
3M™ Fire Barrier Block B258	2.36 in. x 5.12 in. x 7.87 in.	000-76308-07939-3	98-0441-1000-9	12
3M™ Fire Barrier Plank PK39	2.36 in. x 5.12 in. x 39.37 in.	000-76308-08231-7	98-0441-1001-7	3
3M™ Fire Barrier Plug PLG2	2 in.	000-76308-08126-6	98-0441-1002-6	4
3M™ Fire Barrier Plug PLG4	4 in.	000-76308-08203-4	98-0441-1003-4	4
3M™ Fire Barrier Rated Foam FIP 1-Step	12.85 Fluid Ounce (US)	000-0116-54925-0	98-0400-5645-3	6

3M™ Fire Barrier Blocks, Planks and Plugs have been tested to the ASTM E814 test criteria and have been designed to meet the intent of NEC, NFPA and IBC building codes.

Important Notice to User:

Product Use: Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application. **Warranty and Limited Remedy:** 3M warrants that each 3M Fire Protection Product will be free from defects in material and manufacture for 90 days from the date of purchase from 3M's authorized distributor. 3M MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. If a 3M product does not conform to this warranty, the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

Limitation of Liability: Except where prohibited by law, 3M will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted.

Technical Information: The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

CLASSIFIED FILL, VOID OR CAVITY FOR USE IN THROUGH-PENETRATION FIRESTOP SYSTEMS SEE UL FIRE RESISTANCE DIRECTORY 9009

www.3M.com/Firestop

3M Industrial Adhesives and Tapes Division
3M Center, Building 225-35-06
St. Paul, MN 55144-0000
1-800-328-1687
www.3M.com/Firestop

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3M™ Fire Barrier Rated Foam FIP 1-Step
Product Data Sheet

1. Product Description

3M™ Fire Barrier Rated Foam FIP 1-Step is a smoke, sound and firestopping foam for wall and floor penetrations. Premium two-part, castable formulation. Expands up to five times during installation and bonds to most construction substrates including, but not limited to, concrete, metal, wood, plastic and cable jacketing. Dries to a flexible solid. During a fire, product maintains a tight firestop against smoke and flame.

- Re-entenable/repairable
- Supersensitive formulation
- Excellent adhesion
- Paintable with primer
- Quick cure and eliminates the need for mineral wool and caulk

ATTENTION: CODE OFFICIALS

FIP 1-Step

- ✓ Is a Rated Firestop Foam
- ✓ Is UL Listed
- ✓ Meets ASTM E 814
- ✓ Meets the International Building Code for passive fire protection

2. Applications

Typical applications include: blank openings, metal pipe, cables, cable tray, insulated pipe, combination penetrations through concrete floor/wall and gypsum wall board assemblies.

3. Specifications

FIP 1-Step shall be a two-component, ready-to-use, gun-grade, firestopping foam. FIP 1-Step shall be tested to the criteria of ASTM E 814/UL 1479 Standard Test Method for Fire Tests of Penetration Firestop Systems, ASTM E 814/UL 723 Standard Test Method for Surface Burning Characteristics of Building Materials, ASTM E 90 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements, and ASTM E 413 Classification for Rating Sound Insulation. FIP 1-Step shall meet the requirements of the IBC, IRC, IFB, IPC, IMC, NFPA 5000, NEC (NFPA 70), NFPA 101 and NBCC.

4. Storage and Shelf Life

Storage: FIP 1-Step should be stored indoors in dry conditions between 40°F and 85°F (5°C and 30°C). Avoid freeze/thaw exposures of the FIP 1-Step while still in the packaging. If product freezes, then product must be fully thawed and brought to ideal application temperature prior to use (See Section 5).

Shelf Life: FIP 1-Step shelf life is 16 months in original unopened containers from date of packaging when stored above 68°F (20°C) and below 90°F (32°C).

Lot numbering: First to fourth digit = Date of Production (YYMM); Fifth digit = 4 (Production Code); Sixth and Seventh digit = Batch #; (Note: Expiration Date marked on cartridge)

Typically Specified Divisions

Division 7
Section 07 84 00—Fire Protection
Section 07 27 00—Air Barriers

Related Sections

Section 07 86 00—Smoke Seals
Section 07 87 00—Smoke Containment Barriers
Section 21 00 00—Fire Suppression
Section 22 00 00—Plumbing
Section 26 00 00—Electrical

3M

For technical support relating to 3M™ Fire Protection Products and Systems, call 1-800-328-1687
For more information on 3M™ Fire Protection Products, visit www.3M.com/firestop

5. Performance and Typical Physical Properties

Colors Available: Maroon
Application Temperature Range: 50° to 120°F (10° to 49°C)
Surface Burning (ASTM E 84): Flame Spread 10, Smoke Development 50
STC Acoustic Barrier (ASTM E 90 and ASTM E 413): 57 when tested in STC 57 rated wall assembly
Unit Volume: 12.85 fl. oz. Cartridge (380mL)
VOC Less H₂O and Exempt Solvents: <250g/L
Cure: Foam becomes tack-free in about one minute. Full cure depends upon ambient conditions and volume of foam. Typical cure at 75°F (24°C) is approximately 2 minutes.
Air Leakage (UL 1479 Section 6): <1 CFM/Sq Ft
Leak: Meets the intent of LEED® VOC regulations. <250g/L VOC contents (less H₂O and exempt solvents).

6. Installation Techniques

Consult a 3M Authorized Fire Protection Products Distributor or Sales Representative for Applicable drawings and details.

Preparatory Work: The surface of the opening and any penetrating items should be cleaned to allow for the proper adhesion of the 3M™ Fire Barrier Rated Foam FIP 1-Step. Ensure that the surface of the substrates are not wet and are free from dust, debris and frost. Foam can be installed with either the manual or battery powered dispenser.

Installation Details: Install the applicable depth of the FIP 1-Step as detailed within the applicable 3M UL listed system. Please reference FIP 1-Step Installation Guide for further installation details. The FIP 1-Step may be trimmed after installation to be flush with the surface of the substrate. Clean all tools immediately after use with water if needed.

Limitations: Do not apply FIP 1-Step when the cartridge temperature is less than 50°F (10°C), damage may occur to cartridge or dispensing equipment. Do not apply FIP 1-Step to building materials that bleed oil, plasticizers or solvent (e.g. impregnated wood, oil-based sealants, or green or partially-vulcanized rubber). Do not apply FIP 1-Step to wet or frost-coated surfaces or areas that are continuously damp or immersed in water. This product is not acceptable for use with chlorinated polyvinylchloride (CPVC) pipes.

7. Maintenance

No maintenance is expected when installed in accordance with manufacturer's installation guidelines. Once installed, if any section of the FIP 1-Step is damaged, the following procedure will apply: remove and reinstall the damaged section in accordance with the applicable FIP 1-Step UL listed system.

8. Availability

FIP 1-Step is available in 12.85 fl. oz. cartridges. For additional technical and purchasing information regarding this and other 3M™ Fire Protection Products, please call 1-800-328-1687 or visit www.3M.com/firestop.

9. Safe Handling Information

Consult product Material Safety Data Sheet (MSDS) prior to handling and disposal.

Important Notice to User:

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3M Industrial Adhesives and Tapes Division
3M Center, Building 225-35-06
St. Paul, MN 55144-0000 USA
1-800-328-1687
www.3M.com/firestop

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STATE OF GEORGIA
GARY J. BLANCHARD
REGISTERED ARCHITECT
Professional Seal

10/31/19

DATE: 10/31/19
DESIGNED BY: UL
DRAWN BY: PT
CHECKED BY: GJB
SUBMITTED BY: ASJU
FILE NAME: ASJU
SIZE: D 14 x 36

SOLICITATION NO.: NONE
CONTRACT NO.: 1910FWAL 121
CATEGORY CODE: AUTO REPAIR SHOP 04
PLOT DATE: 10/31/2019 6:59:40 PM

SYMBOL: 103119
DATE: 103119
BY: GJB

ISSUED FOR CONSTRUCTION
DESCRIPTION

ADDSU
2365 WALL STREET SE., SUITE 200-06
CONVERS, GEORGIA 30013 P 606.322.1485
ARCHITECTURAL DESIGN SERVICES UNLIMITED

AUTOMOTIVE REPAIR SHOP
1494 OLD SALEM RD.
CONVERS, GEORGIA 30013

UL DESIGNS

SHEET NO.
A106

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