## NEW CONSTRUCTION

32 SCHOOL STREET JEWETT CITY, CONNECTICUT 06351

APRIL 28, 2020

## **GENERAL NOTES**

ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH AIA DOCUMENT A104 WHICH INCLUDES GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION." WHICH IS IN TOTAL TO BE CONSIDERED A PART OF THESE SPECIFICATIONS WITH THE FOLLOWING MODIFICATIONS:

CONTRACTOR SHALL CALL THE UTILITIES UNDERGROUND LOCATION CENTER (CALL BEFORE YOU DIG) FOR FIELD LOCATIONS OF ALL UTILITIES. CONTRACTOR SHALL NOT BEGIN DEMOLITION/REMOVAL OF ANY SUBSURFACE WORK, IF ANY, UNTIL ALL KNOWN UNDERGROUND ACTIVE FACILITIES IN THE VICINITY OF THE PROPOSED WORK HAVE BEEN LOCATED AND MARKED.

IF CHANGED CONDITIONS ARE ENCOUNTERED, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE PROMPTLY OF PREEXISTING SUBSURFACE CONDITIONS DIFFERING FROM THE PLANS AVAILABLE FROM THE OWNER OR PREEXISTING SUBSURFACE CONDITIONS, OR AN UNUSUAL NATURE, DIFFERING MATERIALLY FROM THOSE ORIGINAL ENCOUNTERED AND GENERALLY RECOGNIZED AS INHERENTLY AS PART OF THE WORK OF THIS CONTRACT.

CONTRACTOR IS TO ERECT BARRIERS AND/OR SHORING TO PROTECT PERSONNEL. CONSTRUCTION AND VEGETATION TO REMAIN. COMPLY WITH ALL STATE AND LOCAL

PROTECT FROM HARM ANY TREES, OR OTHER OBJECTS NOT SLATED TO BE REMOVED.

RESTORE ANY IMPROVEMENTS DAMAGED BY THIS WORK TO A CONDITION THAT IS ACCEPTABLE TO THE OWNER. REPAIR ANY DAMAGE TO ADJACENT STRUCTURES. UTILITIES, SITE AND WORK OF THIS CONTRACT TO REMAIN AT NO ADDITIONAL COST TO THE OWNER.

## NO BLASTING IS PERMITTED ON THE SITE.

THE REFUSE RESULTING FROM CLEANING SHALL BE DISPOSED OF BY THE CONTRACTOR IN A MANNER CONSISTENT WITH ALL GOVERNMENT REGULATIONS, IN NO CASE SHALL REFUSE MATERIAL BE LEFT ON THE PROJECT SITE. .MOVED ONTO ADJACENT PROPERTIES, OR DEPOSITED IN ANY STREAM OR BODY OF WATER, WETLAND OR IN AN STREET OR UPON ANY PRIVATE PARTY EXCEPT BY WRITTEN CONSENT OF THE OWNER. MAINTAIN HAULING ROUTES CLEAN AND FREE OF ANY DEBRIS RESULTING FROM THIS PROJECT.

CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS, QUANTITIES AND SIZES. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER/ARCHITECT.

ALL WORK SHALL BE PERFORMED BY WORKMEN SKILLED IN THEIR TRADE IN A NEAT AND CLEAN MANNER. 6. ANY AND ALL REVISIONS MADE BY CONTRACTOR SHALL BE APPROVED BY THE ARCHITECT/OWNER PRIOR TO COMMENCING WITH WORK. REVISIONS MADE WITHOUT SUCH APPROVAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

ALL WORK SHALL CONFORM TO CODE REQUIREMENTS GOVERNING SPECIFIC TRADES WORK FOR THESE TRADES IS TO BE UNDERTAKEN AS DESIGN-BUILD UNLESS O THERWISE CONTRACTED BY THE OWNER.

THESE DRAWINGS DO NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH APPLICABLE CODES AND SPECIFICATIONS.

THE CONTRACTOR SHALL NOTIFY THE OWNERS REPRESENTATIVE IMMEDIATELY IF HE CANNOT COMPLY WITH ALL NOTES, DETAILS, LEGENDS, AND DRAWINGS CALLED FOR ON THIS SHEET AND/OR ALL OTHER DRAWING SHEETS.

DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OR OWNERS REPRESENTATIVE OF ANY DISCREPANCIES BETWEEN DRAWINGS. THESE NOTES, DIMENSIONS, SPECIFICATIONS AND FIELD CONDITIONS BEFORE COMMENCING ANY WORK, AND REQUEST CLARIFICATION.

THE USE OF WORDS "PROVIDE" OR "PROVIDED" IN CONNECTION WITH ANY ITEM SPECIFIED IS INTENDED TO MEAN, UNLESS OTHERWISE NOTED, THAT SUCH ITEMS SHALL BE FURNISHED AND INSTALLED, AND CONNECTED WHERE SO REQUIRED. CONTRACTOR SHALL PERFORM ALL WORK IN COMPLIANCE WITH ANY AND ALL APPLICABLE ACCESSIBILITY REGULATIONS, CITY, STATE, AND FEDERAL BUILDING AND LIFE SAFETY CODES, INCLUDING: THE LATEST VERSIONS OF THE STATE OF CONNECTICUT BUILDING AND LIFE SAFETY CODES AND REGULATIONS OR ORDINANCES AS ADOPTED BY THE TOWN OF GRISWOLD THAT PERTAIN TO THE

CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, INCLUDING TRADE PERMITS THAT PERTAIN TO THE WORK OUTLINED IN THE DRAWINGS.

ALL WORK PERFORMED AND ALL MATERIAL SUPPLIED SHALL BE IN ACCORDANCE WITH ALL RULES. REGULATIONS AND ORDINANCES OF THE VARIOUS PARTIES HAVING JURISDICTION, INCLUDING THE FIRE UNDERWRITERS AND, WHERE APPLICABLE, THE LATEST EDITION OF THE AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING MANUAL, THE NATIONAL ELECTRICAL CODE, THE SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION MANUAL APPLICABLE ALL MATERIALS, ITEMS AND FIXTURES SHALL BE INSTALLED IN A WORKMANLIKE MANNER IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND INDUSTRY

THE CONTRACTOR MUST PROVIDE ALL MATERIALS, LABOR, TOOLS, PLANT SUPPLIES, EQUIPMENT, TRANSPORTATION, CONSTRUCTION OVERSIGHT, TEMPORARY CONSTRUCTION, AND ALL OTHER SERVICES AND FACILITIES NECESSARY TO COMPLETE THE WORK AS DOCUMENTED.

WHEN THE TECHNICAL PROVISIONS PERMIT THE CONTRACTOR TO SELECT OPTIONAL MATERIALS, ITEMS, SYSTEMS OR EQUIPMENT, THE SELECTION OF SUCH OPTIONS IS SUBJECT TO APPROVAL OF THE OWNER/ THE ARCHITECT.

BEFORE ANY OF THE WORK IS STARTED, THE CONTRACTOR MUST CONFER WITH THE OWNER'S REPRESENTATIVE AND AGREE ON A SEQUENCE OF PROCEDURES: MEANS OF ACCESS TO THE PREMISES AND BUILDING. DELIVERY OF MATERIALS AND USE OF APPROACHES.

DIMENSIONS TO NEW PARTITIONS, ARE TAKEN TO FACE OF FRAMING. CONTRACTOR TO PROVIDE EACH TRADE WITH COMPLETE SET OF PLANS. THESE MUST ALWAYS BE USED AS A COMPLETE SET, DO NOT DISTRIBUTE SEPARATE SHEETS. IF GC DOES NOT DISTRIBUTE FULL SET, GC ASSUMES FULL RESPONSIBILITY

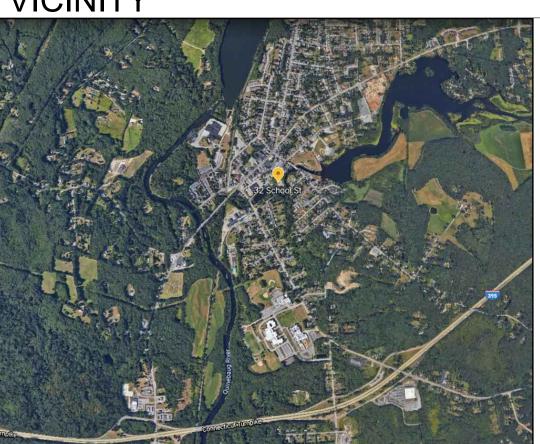
IMMEDIATELY UPON AWARD OF CONTRACT, GENERAL CONTRACTOR SHALL CHECK CURRENT STOCK OF ALL ITEMS/EQUIPMENT REQUIRED IN THE SCOPE OR WORK. CONTRACTOR SHALL PROVIDE TO THE OWNER'S REPRESENTATIVE VERIFICATION OF AVAILABILITY WITHIN FOURTEEN BUSINESS DAYS TO ENSURE A TIMELY INSTALLATION. IF SPECIFIED ITEMS ARE OUT OF STOCK OR DISCONTINUED. THEN THE CONTRACTOR WILL DISCUSS AND RESOLVE WITH THE OWNER.

THE CONTRACTOR AGREES TO GUARANTEE ALL WORK AND EQUIPMENT PROVIDED BY HIM/HER OR HIS/HER SUBCONTRACTORS AGAINST DEFECTIVE MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE. CONTRACTOR IS TO COMPLETE A PRELIMINARY PUNCH LIST CERTIFYING COMPLETION OF WORK AND COMPLIANCE WITH DOCUMENTS.

## LOCATION



## VICINITY



BASEMENT LEVEL CONSTRUCTION PLAN FIRST LEVEL CONSTRUCTION PLAN

ENLARGED PLANS/INT ELEVATIONS **ENLARGED PLANS/INT ELEVATIONS** 22. A-702

> FINISH PLAN AND SCHEDULE REFLECTED CEILING PLAN

STRUCTURAL GENERAL NOTES 25. S-001 26. S-100 FOUNDATION PLAN

FIRST FLOOR FRAMING 27. S-101 **ROOF FRAMING** 28. S-102A

29. S-501 FOUNDATION DETAILS 30. S-502 FRAMING DETAILS

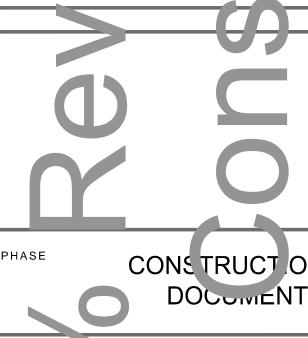
## CHURCH **PROPOSED**

CONSTRUCTION

**QUINEBAUG RIVER** 

32 School Street Jewett City, Connecticut 06351





PLAN KEY LEGEND

DOOR TAG

BUBBLE

SECTIONS

DIMENSIONS:

FACE OF WALL

**NEW WALLS ARE** 

**NEW PARTITION** 

**NEW CASEWORK** 

PARTITION TYPE

ENLARGED FLOOR PLAN

DETAIL TAG AND VERTICAL

EXISTING WALLS ARE

NEW FRAMING U.O.N.

**EXISTING 0ARTITION** 

DIMENSIONED TO EXISTING

DIMENSIONED TO FACE OF

NEW FIRE RATED PARTITION

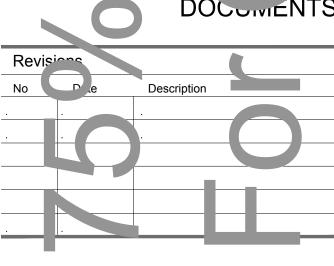
A903

203

A-902

EXISTING AREA WITH LIMITED

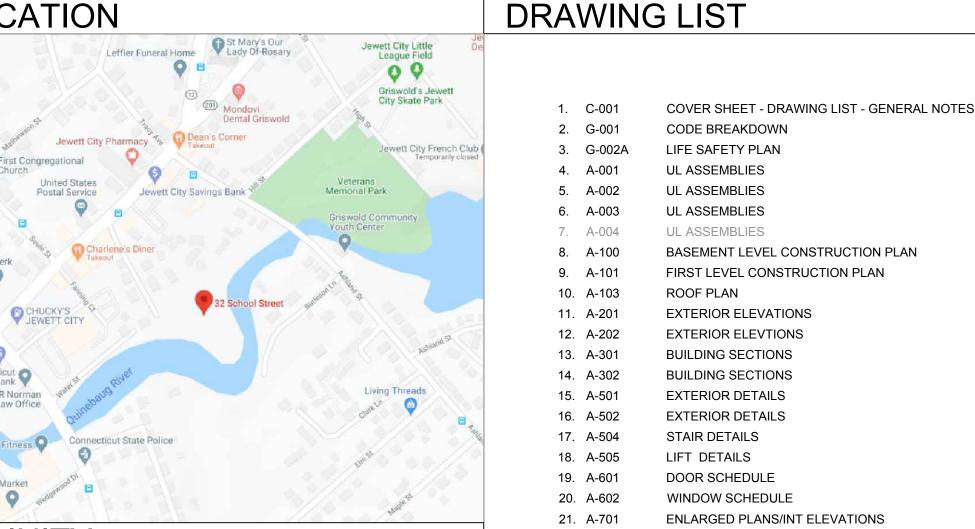
INTERIOR ELEVATION TAG



COVER SHEET

GENERAL NOUZ

APRIL 28, 2020 Issue Date: Scale: As Noted Jewett City - QRC



#### APPLICABLE STANDARDS

2018 CONNECTICUT STATE BUILDING CODE (CSBC):

- 1. INTERNATIONAL BUILDING CODE/2015 (ICC)
- 2. INTERNATIONAL EXISTING BUILDING CODE/2015 (ICC)
- 3. INTERNATIONAL MECHANICAL CODE/2015 (ICC)
- 4. INTERNATIONAL PLUMBING CODE/2015 (ICC)
- 5. NATIONAL ELECTRICAL CODE, NFPA 70/2017 (NEC)
- 6. INTERNATIONAL ENERGY CONSERVATION CODE 2015 (ICC)
- 7. ICC/ANSI A117.1/2009 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES
- 8. 2018 CONNECTICUT AMENDMENT
- 2018 CONNECTICUT STATE FIRE SAFETY CODE (CSFSC):
- 9. [PART I] ADMINISTRATIVE. CONNECTICUT AMENDMENT/2018/STATE FIRE SAFETY CODE. 2018 CSFSC PART I.
- 10. [PART II] GENERAL. CONNECTICUT AMENDMENT/2018/STATE FIRE SAFETY CODE. 2018 CSFSC PART II.
- 11. [PART III] NEW CONSTRUCTION, ALTERATIONS, RENOVATIONS, CHANGES OF
- 12. INTERNATIONAL FIRE CODE/2015 (IFC)
- 13. [PART IV] EXISTING BUILDINGS / OCCUPANCIES:
- 14. NATIONAL FIRE PROTECTION ASSOCIATION. LIFE SAFETY CODE/2015 (NFPA 101) 2018 CT FIRE PREVENTION CODE (CFPC): THE DOCUMENTS AMENDED BY CT AND ADOPTED EFFECTIVE OCTOBER 1, 2018
- 15. NATIONAL FIRE PROTECTION ASSOCIATION. UNIFORM FIRE CODE/2015. (NFPA 1)
- 16. 2018 CONNECTICUT STATE FIRE PREVENTION CODE REGULATIONS OF CT STATE AGENCIES SECTION 29-291A-1A TO 29-191A-10A

NFPA 10. STANDARD FOR PORTABLE FIRE EXTINGUISHERS, 2007 ED. 12. NFPA 24. INSTALLATION OF PRIVATE SERVICE MAINS AND THEIR APPURTENANCES, 2007 EDITION

13. NFPA 72, NATIONAL FIRE ALARM CODE, 2007 EDITION

## **BUILDING PLANNING & DESCRIPTION**

NEW CONSTRUCTION	SHELL BUILDING
LEASE SPACE BUILD-OUT	CHANGE OF OCCUPANCY
SUBSTANTIAL IMPROVEMENT	OTHER:
CII 2 IICE 0 OCCUDANOV	Λ Ω

## CH 3 - USE & OCCUPANCY - A-3

SUBSTANTIAL IMPROVEM		OTHER:
SUBSTANTIAL IMPROVEM	ENT	OTHER:
LEASE SPACE BUILD-OUT		CHANGE OF OCCUPANCY
NEW CONSTRUCTION		SHELL BUILDING

#### CH 4 - SPECIAL DETAILED REQUIREMENTS

#### 410.4 PLATFORM CONSTRUCTION

PERMANENT PLATFORMS SHALL BE CONSTRUCTED OF MATERIALS AS REQUIRED FOR THE TYPE OF CONSTRUCTION OF THE BUILDING IN WHICH THE PERMANENT PLATFORM IS LOCATED PERMANENT PLATFORMS ARE PERMITTED TO BE CONSTRUCTED OF FIRE-RETARDANT-TREATED WOOD FOR TYPES I, II AND IV CONSTRUCTION WHERE THE PLATFORMS ARE NOT MORE THAN 30 INCHES (762 MM) ABOVE THE MAIN FLOOR, AND NOT MORE THAN ONE-THIRD OF THE ROOM FLOOR AREA AND NOT MORE THAN 3,000 SQUARE FEET (279 M2) IN AREA. WHERE THE SPACE BENEATH THE PERMANENT PLATFORM IS USED FOR STORAGE OR ANY PURPOSE OTHER THAN EQUIPMENT, WIRING OR PLUMBING, THE FLOOR ASSEMBLY SHALL BE NOT LESS THAN 1-HOUR FIRE-RESISTANCE-RATED CONSTRUCTION. WHERE THE SPACE BENEATH THE PERMANENT PLATFORM IS USED ONLY FOR EQUIPMENT, WIRING OR PLUMBING, THE UNDERSIDE OF THE PERMANENT PLATFORM NEED NOT BE PROTECTED.

## CH 5 - BLDG HEIGHT & AREA A-3

	REQUIRED	PROVIDED			
TABLE 504.3					
HEIGHT LIMIT (FEET)	60FT	<b>3</b> 5FT			
TABLE 504.4					
HEIGHT LIMIT (STORIES)	1	1			
TABLE 504.4					
AREA LIMIT (/FLOOR)					
FIRST FLOOR	9,180 SF	6,045 SF	9,180 SF INCLUD	ES ALLOWABLE	AREA INCREASE
BASEMENT		5,922 SF			

## 506.2.1 SINGLE OCCUPANCY ONE STORY BULDING

- A<sub>a</sub> = ALLOWABLE AREA PER STORY (IN SQUARE FEET)
- At = TABULAR AREA FACTOR (IN SQUARE FEET) IN ACCORDANCE WITH TABLE 506.2
- NS = TABULAR ALLOWABLE AREA NON-SPRINKLERED T 506.2
- If = AREA INCREASE FACTOR DUE TO FRONTAGE AS CALCULATED IN ACCORDANCE WITH SECTION 506.3

## 506.3 FRONTAGE INCREASE

- I<sub>f</sub> = AREA INCREASE DUE TO FRONTAGE
- BUILDING PERIMETER THAT FRONTS ON A PUBLIC WAY OR OPEN SPACE
- HAVING 20 FEET OPEN MINIMUM WIDTH
- P = PERIMETER OF THE ENTIRE BUILDING (IN FEET) WIDTH OF PUBLIC WAY OR OPEN SPACE (IN FEET) IN ACCORDANCE WITH W = SECTION 506.2.1

В	UILDI	NG TYP	ΕA	
	F P	-0.25	<u>W</u> 30	
I <sub>f</sub> =	300 384	-0.25	30 30	= 53%

I = 6,000 S.F. x 53% = 3,180 S.F. AREA INCREASE

## CH 6 - TYPES OF CONSTRUCTION

SHOW DETAILS OF FIRE WALLS OR FIRE BARRIERS MEETING HORIZONTAL WALLS AND ROOF DECKS (SEE SECTION 706.5, 706.6 & 707.5)

FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS

TYPE VB	HOURS REQUIRED	HOURS PROVIDED	UL OR IBC STANDARD USED
STRUCTURAL FRAME	0	0	
EXTERIOR BEARING WALLS	0	0	
EXTERIOR NON-BEARING WALLS	0	0	
INTERIOR BEARING WALLS	0	0	
INTERIOR NON-BEARING WALLS	0	0	
FLOOR CONSTRUCTION	0	0	
FLOOR CONSTRUCTION (HORIZONTAL FIRE	BARRIER)		
ROOF CONSTRUCTION	0	0	

FIRE RESISTANCE RATING REQUIREMENTS SEPARATION DISTANCES (TABLE 602)				
FIRE SEPARATION DISTANCE	TYPE OF CONSTRUCTION	GROUP H	GROUP F-1/M S-1	GROUP A/B/E/F-2 R/S-2/U
X < 5 FEET	ALL	3	2	1
5 FEET< X < 10 FEET	IA	3	2	1
STEET X TOTEET	OTHERS	2	1	1
	IA, IB	2	1	1
10 FEET ≤ X < 30 FEET	IIIB, VB	1	0	0
	OTHERS	1	1	1

0

0

0

## **CH7-FIRE & SMOKE PROTECTION**

ALL

X > 30 FEET

SECTION 704 FIRE-RESISTANCE RATING OF STRUCTURAL MEMBERS

704.1 REQUIREMENTS THE FIRE-RESISTANCE RATINGS OF STRUCTURAL MEMBERS AND ASSEMBLIES SHALL COMPLY WITH THIS SECTION AND THE REQUIREMENTS FOR THE TYPE OF CONSTRUCTION AS SPECIFIED IN TABLE 601. THE FIRE-RESISTANCE RATINGS SHALL BE NOT LESS THAN THE RATINGS REQUIRED FOR THE FIRE-RESISTANCE-RATED ASSEMBLIES SUPPORTED BY THE

STRUCTURAL MEMBERS. EXCEPTION: FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS AND HORIZONTAL ASSEMBLIES AS PROVIDED IN SECTIONS 707.5, 708.4, 709.4 AND 711.2, RESPECTIVELY. SHOW DETAILS OF FIRE WALLS OR FIRE BARRIERS MEETING HORIZONTAL WALLS AND ROOF DECKS (SEE SECTION 706.5, 706.6 & 707.5 IBC 2012)

MINIMUM DISTANCE OF PROJECTION (TABLE 705.2)				
FIRE SEPARATION MINIMUM DISTANCE FROM LINE USED TO DETERMIN FSD				
0 FEET TO 2 FEET PROJECTIONS NOT PERMITTED				
GREATER THAN 2 FEET TO 3 FEET	24 INCHES			
GREATER THAN 3 FEET TO LESS THAN 30 FEET	24 INCHES PLUS 8 INCHES FOR EVERY FOOT OF FSD BEYOND 3 FEET OR FRACTION THEREOF			
30 FEET OR GREATER 20 FEET				

705.2.2 TYPE III, IV OR V CONSTRUCTION. PROJECTIONS FROM WALLS OF TYPE III, IV OR V CONSTRUCTION SHALL BE OF ANYAPPROVED MATERIAL

MAXIMUM AREA OF EXTERIOR WALL OPENINGS BASED ON FIRE	
SEPARATION OF DISTANCE AND DEGREE OF OPENING (TABLE 705.8)	)

FIRE SEPARATION DISTANCE (FEET)	DEGREE OF OPENING PROTECTION	ALLOWABLE AREA
30 FEET OR GREATER	UNPROTECTED, NONSPRINKLERED (UP, NS) UNPROTECTED, SPRINKLERED (UP, S) PROTECTED	NO LIMIT NO LIMIT NO LIMIT

BUILDING ELEMENTS	HOURS	HOURS	UL OR IBC
	REQUIRED	PROVIDED	STANDARD USED
FIRE WALL <i>(T 706.4)</i>	2	2	
	•		•

A. IN TYPE II OR V CONSTRUCTION, WALLS SHALL BE PERMITTED TO HAVE A 2-HOUR FIRE-RESISTANCE RATING

706.5 HORIZONTAL CONTINUITY. FIRE WALLS SHALL BE CONTINUOUS FROM EXTERIOR WALL TO EXTERIOR WALL AND SHALL EXTEND NOT LESS THAN 18 INCHES (457 MM) BEYOND THE EXTERIOR SURFACE OF EXTERIOR WALLS.

EXCEPTIONS: 3. FIRE WALLS SHALL BE PERMITTED TO TERMINATE AT THE INTERIOR SURFACE OF ON COMBUSTIBLE EXTERIOR SHEATHING WHERE THE BUILDING ON EACH SIDE OF THE FIRE WALL IS PROTECTED BY AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2.

706.6 VERTICAL CONTINUITY. FIRE WALLS SHALL EXTEND FROM THE FOUNDATION TO A TERMINATION POINT NOT LESS THAN 30 INCHES (762 MM) ABOVE BOTH ADJACENT ROOFS. **EXCEPTIONS:** 

4. IN BUILDINGS OF TYPE III, IV AND V CONSTRUCTION, WALLS SHALL BE PERMITTED TO TERMINATE AT THE UNDERSIDE OF COMBUSTIBLE ROOF SHEATHING OR DECKS, PROVIDED:

4.1. THERE ARE NO OPENINGS IN THE ROOF WITHIN 4 FEET (1220 MM) OF THE FIRE WALL, 4.2. THE ROOF IS COVERED WITH A MINIMUM CLASS B ROOF COVERING, AND 4.3. THE ROOF SHEATHING OR DECK IS CONSTRUCTED OF FIRE-RETARDANT-TREATED WOOD FOR A DISTANCE OF 4 FEET (1220 MM) ON BOTH SIDES OF THE WALL OR THE ROOF IS PROTECTED WITH 5/8-INCH (15.9 MM) TYPE X GYPSUM BOARD DIRECTLY BENEATH THE UNDERSIDE OF THE ROOF

SHEATHING OR DECK, SUPPORTED BY NOT LESS THAN 2-INCH (51 MM) NOMINAL LEDGERS ATTACHED TO THE SIDES OF THE ROOF FRAMING MEMBERS FOR A DISTANCE OF NOT LESS THAN 4 FEET (1220 MM) ON BOTH SIDES OF THE FIRE WALL.

## FIRE RESISTANCE RATINGS FOR FIRE BARRIERS (TABLE 707.3.10)

REQUIRED PROVIDED STANDARD USED

OCCUPANCY GROUP	FIRE RESISTANCE RATING (HOURS)		
H-1, H-2	4		
F-1, H-3, S-1	3		
A, B, E, F-2, H-4, H-5, I, M, R, S-2	2		
U	1		
BUILDING ELEMENTS	HOURS HOURS UL OR IBC		

FIRE BARRIER (SECTION 708.3 EXCEPT 2)

#### **SECTION 711 HORIZONTAL ASSEMBLIES**

711.2.3 SUPPORTING CONSTRUCTION. THE SUPPORTING CONSTRUCTION SHALL BE PROTECTED TO AFFORD THE REQUIRED FIRERESISTANCE RATING OF THE HORIZONTAL ASSEMBLY SUPPORTED

EXCEPTION: IN BUILDINGS OF TYPE IIB, IIIB OR VB CONSTRUCTION, THE CONSTRUCTION SUPPORTING THE HORIZONTAL ASSEMBLY IS NOT REQUIRED TO BE FIRE-RESISTANCE RATED AT THE FOLLOWING:

- 1. HORIZONTAL ASSEMBLIES AT THE SEPARATIONS OF INCIDENTAL USES AS SPECIFIED BY TABLE 509 PROVIDED THE REQUIRED FIRE-RESISTANCE RATING DOES NOT EXCEED 1
- 2. HORIZONTAL ASSEMBLIES AT THE SEPARATIONS OF DWELLING UNITS AND SLEEPING UNITS AS REQUIRED BY SECTION 420.3.

711.2.4.2 SEPARATING FIRE AREAS. WHERE THE HORIZONTAL ASSEMBLY SEPARATES A SINGLE OCCUPANCY INTO DIFFERENT FIRE AREAS, THE ASSEMBLY SHALL HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN THAT REQUIRED BY SECTION 707.3.10. 711.2.4.3 DWELLING UNITS AND SLEEPING UNITS. HORIZONTAL ASSEMBLIES SERVING AS

**DWELLING OR SLEEPING UNIT SEPARATIONS** IN ACCORDANCE WITH SECTION 420.3 SHALL BE NOT LESS THAN 1-HOUR

FIRE-RESISTANCE-RATED CONSTRUCTION. **EXCEPTION:** HORIZONTAL ASSEMBLIES SEPARATING DWELLING UNITS AND SLEEPING UNITS SHALL BE NOT LESS THAN 1/2- HOUR FIRE-RESISTANCE-RATED CONSTRUCTION IN A BUILDING OF TYPE IIB, IIIB AND VB CONSTRUCTION, WHERE THE BUILDING IS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION

#### **SECTION 714 PENETRATIONS**

714.4.2 MEMBRANE PROTECTION. MEMBRANES THAT ARE PART OF A HORIZONTAL ASSEMBLY SHALL COMPLY WITH SECTION 714.4.1.1 OR 714.4.1.2. WHERE FLOOR/CEILING ASSEMBLIES ARE REQUIRED TO HAVE A FIRE-RESISTANCE RATING.RECESSED FIXTURES SHALL BE INSTALLED SUCH THAT THE REQUIRED FIRE RESISTANCE WILL NOT BE REDUCED. **EXCEPTIONS:** 

- 1. MEMBRANE PENETRATIONS BY STEEL, FERROUS OR COPPER CONDUITS, PIPES, TUBES OR VENTS, OR CONCRETE OR MASONRY ITEMS WHERE THE ANNULAR SPACE IS PROTECTED EITHER IN ACCORDANCE WITH SECTION 714.4.1 OR TO PREVENT THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION. THE AGGREGATE AREA OF THE OPENINGS THROUGH THE MEMBRANE SHALL NOT EXCEED 100 SQUARE INCHES (64 500 MM2) IN ANY 100 SQUARE FEET (9.3 M2) OF CEILING AREA IN ASSEMBLIES TESTED
- WITHOUT PENETRATIONS. 2. CEILING MEMBRANE PENETRATIONS OF MAXIMUM 2-HOUR HORIZONTAL ASSEMBLIES BY STEEL ELECTRICAL BOXES THAT DO NOT EXCEED 16 SQUARE INCHES (10 323 MM2) IN AREA, PROVIDED THE AGGREGATE AREA OF SUCH PENETRATIONS DOES NOT EXCEED 100 SQUARE INCHES (44 500 MM2) IN ANY 100 SQUARE FEET (9.29 M2) OF CEILING AREA, AND THE ANNULAR SPACEBETWEEN THE CEILING MEMBRANE AND THE BOX DOESNOT EXCEED 1/8 INCH (3.2 MM).
- 3. MEMBRANE PENETRATIONS BY ELECTRICAL BOXES OF ANY SIZE OR TYPE, THAT HAVE BEEN LISTED AS PART OF AN OPENING PROTECTIVE MATERIAL SYSTEM FOR USE IN HORIZONTAL ASSEMBLIES AND ARE INSTALLED IN ACCORDANCE WITH THE INSTRUCTIONS INCLUDED IN THE LISTING.
- 4. MEMBRANE PENETRATIONS BY LISTED ELECTRICAL BOXES OF ANY MATERIAL, PROVIDED SUCH BOXES HAVE BEEN TESTED FOR USE IN FIRE-RESISTANCE-RATED ASSEMBLIES AND ARE INSTALLED IN ACCORDANCE WITH THE INSTRUCTIONS INCLUDED IN THE LISTING. THE ANNULAR SPACEBETWEEN THE CEILING MEMBRANE AND THE BOX SHALL NOT EXCEED 1/8 INCH (3.2 MM) UNLESS LISTED OTHERWISE
- 5. THE ANNULAR SPACE CREATED BY THE PENETRATION OF A FIRE SPRINKLER, PROVIDED IT IS COVERED BY A METAL ESCUTCHEON PLATE.
- 6. NONCOMBUSTIBLE ITEMS THAT ARE CAST INTO CONCRETE BUILDING ELEMENTS AND THAT DO NOT PENETRATE BOTH TOP AND BOTTOM SURFACES OF THE ELEMENT.
- 7. THE CEILING MEMBRANE OF 1- AND 2-HOUR FIRE-RESISTANCE-RATED HORIZONTAL ASSEMBLIES IS PERMITTED TOBE INTERRUPTED WITH THE DOUBLE WOOD TOP PLATE OF A WALL ASSEMBLY THAT IS SHEATHED WITH TYPE X GYPSUM WALLBOARD, PROVIDED THAT ALL PENETRATING ITEMS THROUGH THE DOUBLE TOP PLATES ARE PROTECTEDIN ACCORDANCE WITH SECTION 714.4.1.1 OR 714.4.1.2 AND THE CEILING MEMBRANE IS TIGHT TO THE TOP PLATES.

#### **SECTION 718 - CONCEALED SPACES**

718.1 GENERAL. FIREBLOCKING AND DRAFTSTOPPING SHALL BE INSTALLED IN COMBUSTIBLE CONCEALED LOCATIONS IN ACCORDANCEWITH THIS SECTION. FIREBLOCKING SHALL COMPLY WITH SECTION 718.2. DRAFTSTOPPING IN FLOOR/CEILING SPACES AND ATTIC SPACES SHALL COMPLY WITH SECTIONS 718.3 AND 718.4, RESPECTIVELY. THE PERMITTED USE OF COMBUSTIBLE MATERIALS IN CONCEALEDSPACES OF BUILDINGS OF

TYPE I OR II CONSTRUCTION SHALL BE LIMITED TO THE APPLICATIONS INDICATED IN SECTION 718.5.

718.2.3 CONNECTIONS BETWEEN HORIZONTAL AND VERTICAL SPACES. FIREBLOCKING SHALL BE PROVIDED AT INTERCONNECTIONS BETWEEN CONCEALED VERTICAL STUD WALL OR PARTITION SPACESAND CONCEALED HORIZONTAL SPACES CREATED BY AN ASSEMBLY OF FLOOR JOISTS OR TRUSSES, AND BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILINGS, COVE CEILINGS AND SIMILAR LOCATIONS

718.3 DRAFTSTOPPING IN FLOORS. IN COMBUSTIBLE CONSTRUCTION, DRAFTSTOPPING SHALL BE INSTALLED TO SUBDIVIDE FLOOR/CEILING ASSEMBLIES IN THE LOCATIONS PRESCRIBED IN SECTIONS 718.3.2 THROUGH 718.3.3.

718.3.1 DRAFTSTOPPING MATERIALS. DRAFTSTOPPING MATERIALS SHALL BE NOT LESS THAN 1/2-INCH (12.7 MM) GYPSUM BOARD, 3/8- INCH (9.5 MM) WOOD STRUCTURAL PANEL, 3/8-INCH (9.5 MM) PARTICLEBOARD, 1-INCH (25-MM) NOMINAL LUMBER, CEMENT FIBERBOARD, BATTS OR BLANKETS OF MINERAL WOOL OR GLASS FIBER, OR OTHER APPROVED MATERIALS ADEQUATELY SUPPORTED. THE INTEGRITY OF DRAFTSTOPS SHALL BE MAINTAINED.

718.3.2 GROUPS R-1, R-2, R-3 AND R-4. DRAFTSTOPPING SHALL BE PROVIDED IN FLOOR/CEILING SPACES IN GROUP R-1 BUILDINGS, IN GROUP R-2 BUILDINGS WITH THREE OR MORE DWELLING UNITS, IN GROUP R-3 BUILDINGS WITH TWO DWELLING UNITS AND IN GROUP R-4 BUILDINGS. DRAFTSTOPPING SHALL BE LOCATED ABOVE AND IN LINE WITH THE DWELLING UNIT AND SLEEPING UNIT SEPARATIONS.

## **EXCEPTIONS:**

- 1. DRAFTSTOPPING IS NOT REQUIRED IN BUILDINGS EQUIPPED THROUGHOUT WITH AN
- AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1.
- 2. DRAFTSTOPPING IS NOT REQUIRED IN BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.2, PROVIDED THAT AUTOMATIC SPRINKLERS ARE INSTALLED IN THE COMBUSTIBLE CONCEALED SPACES WHERE THE DRAFTSTOPPING IS BEING OMITTED.

## CH 8 - INTERIOR FINISHES

FIRE RESISTANCE RATING REQUIREMENTS SEPARATION DISTANCES (TABLE 602)					
OCCUPANCY GROUP	EXIT ENCLOSURES AND EXIT PASSAGEWAYS	CORRIDORS	ROOMS AND ENCLOSED SPACES		
R-2	С	С	С		
CLASS C: = FLAME SPREAD INDEX 76-200; SMOKE DEVELOPMENT INDEX 0-450					

## CH 9 - FIRE PROTECTION

ALL FIRE PROTECTION PLANS SHALL BE SUBMITTED FOR REVIEW AFTER BUILDING PERMIT HAS BEEN ISSUED (I.E. UNDERGROUND FIRE LINE, SPRINKLER SYSTEM, FIRE ALARM SYSTEM, STANDPIPE, AND FIRE PUMP ROOM)

TO BE PART OF A DEFERRED SUBMITTAL SPRINKLER HEAD PROVIDED: SYSTEM PROVIDED: NFPA 13 STANDARD NFPA 13R ELO NFPA 13D ESFR OTHER: \_\_\_\_\_ QUICK RESPONSE

STANDPIPE SYSTEM & HOSE CONNECTIONS (SECTION 905 IBC 2015) (I.E. IN STAIRWAYS, STAGES, MALLS

PROVIDED AS NOTED ON: \_\_\_\_\_, TYPE OF SYSTEM PROVIDED: \_\_\_\_ (CLASS I, II OR III) NOT REQUIRED PER SECTION 905 PORTABLE FIRE EXTINGUISHERS

PROVIDED AS NOTED ON: , NUMBER PROVIDED: (HIGHLIGHT ON PLANS) FIRE ALARM & DETECTION SYSTEMS (SECTION 907 IBC 2015) AUTOMATIC WITH SMOKE COVERAGE

**ELEVATOR RECALL - SUPERVISORY** COMPLYING WITH HC AMENDMENTS - 907.2 MANUAL WITH NOTIFICATION; 907.2.1 OTHER: OCCUPANT NOTIFICATION PER 907.5 EMERGENCY VOICE EVACUATION NOT REQUIRED PER SECTION 907

AUTOMATIC SMOKE DETECTION (SECTION 907.2.13.1.1 & 907.2.13.1.2 IBC 2015)

NO HVAC UNITS OVER 2,000 CFM FIRE/SMOKE DAMPERS IN THE BUILDING SHOWN ON: \_\_\_\_\_ NO FIRE/SMOKE DAMPERS IN THE BUILDING

SMOKE CONTROL SYSTEMS (SECTION 909 IBC 2015)(I.E. FOR HIGH RISE, ATRIUMS OR STAIRWAY PRESSURIZATION)

PROVIDED AS NOTED ON: \_\_\_\_\_ NOT REQUIRED PER SECTION 909

SMOKE & HEAT VENTILATION (SECTION 910 IBC 2015)

CALCULATIONS PROVIDED AS NOTED ON: NOT REQUIRED PER SECTION 910

#### CH 10 - MEANS OF EGRESS

	off to ME, the of Eorteso		
ΞΧ	IT REQUIREMENTS		
	SINGLE EGRESS ALLOWED (TABLES 1006.3.1/1006.3.2):	YES	NO
	COMMON PATH OF TRAVEL (TABLE 1006.3.2(2):	ALLOWED: 75 FT.	PROVIDED 0 FT.
	CORRIDOR MEANS OF EGRESS ILLUMINATION (1008):	YES	NO
	STAIRWAYS (SECTION 1009):		
	MINIMUM STAIR WIDTH (SECTION 1009.4):	REQUIRED 48 IN.	PROVIDED 48 IN.
	MAXIMUM RISER HEIGHT (SECTION 1011.5.2):	REQUIRED NOT MORE	THAN 7 INCHES
	MINIMUM TREAD DEPTH (SECTION 1011.5.2):	REQUIRED NOT LESS	THAN 11 INCHES
	ACCESS TO ROOF REQUIRED (SECTION 1011.2):	YES	NO
	HANDRAIL HEIGHT (SECTION 1014.2):	REQUIRED 34 INCHES	TO 38 INCHES
	GUARDRAIL HEIGHT (SECTION 1015.2):	REQUIRED 42 INCHES	3
	WINDOW OPEN'G CONTROL (SECTION 1015.8.1):	YES	NO
	SMOKE BARRIER REQUIRED (SECTION 407.5):	YES	NO
	EXIT ACCESS TRAVEL DISTANCE (T1017.2)	REQUIRED: 200 FT.	PROVIDED:
	CORRIDOR FIRE RESISTANCE RATING (T1020.1)	REQUIRED: 1 HOURS	PROVIDED: 1 HOUR
	CORRIDOR WIDTH (T1020.2)	REQUIRED: 42 INCHES	PROVIDED: 60 INCHES
	DEAD-END CORRIDORS (SECTION 1020.4):	ALLOWED: 20 FT.	PROVIDED 0 FT.

## CH 11 - ACCESSIBILITY

1104.4 MULTILEVEL BUILDINGS AND FACILITIES

AT LEAST ONE ACCESSIBLE ROUTE SHALL CONNECT EACH ACCESSIBLE STORY AND MEZZANINE IN **MULTILEVEL BUILDINGS AND FACILITIES.** 

ALLOWED: 20 FT. PROVIDED 0 FT.

PROVIDED: 88 UNITS

PROVIDED: 32 UNITS

STATE OF CONNECTICUT/ /DIVISION OF CONSTRUCTION SERVICES/ OFFICE OF THE STATE BUILDING INSPECTOR APPROVED MODIFCATION REQUEST (L-08-20) TO ALLOW THE INSTALLATION OF A LIMITED USE, LIMTED ACCESS LULA

TOTAL NUMBER OF UNITS 100

TOTAL NUMBER OF TWO BEDROOM TOTAL NUMBER OF THREE BEDROOM

## CH 17 - STRUC TESTS & SPECIAL INSPECTIONS

CONTINUOUS	PERIODIC	SECTION	
		1705.3	CONCRETE CONSTRUCTION
	х	T1705.3	INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS AND PLACEMENT.
	Х	T1705.3	2. INSPECTION OF REINFORCING STEEL WELDING.
Х		T1705.3	3. INSPECTION OF BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT.
	х	T1705.3	4. INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE.
	х	T1705.3	5. VERIFY USE OF REQUIRED DESIGN MIX.
X		T1705.3	SAMPLING FRESH CONCRETE: PERFORM SLUMP, UNIT WEIGHT, AIR CONTENT, TEMPERATURE AND FABRICATE STRENGTH TEST SPECIMENS
X		T1705.3	7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.
	х	T1705.3	INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE     AND TECHNIQUES.
	х	T1705.3	9. INSPECTION OF FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF MEMBERS.
	Х	T1705.6	SOILS
X X X			<ol> <li>SUBGRADE INSPECTION</li> <li>PROPER DEPTH</li> <li>CLASSIFICATION AND TESTING OF COMPACTED MATERIALS</li> <li>EVALUATION OF IN-PLACE DENSITY</li> </ol>

## **QUINEBAUG RIVER CHURCH**

## **PROPOSED** CONSTRUCTION

32 School Street Jewett City, Connecticut 06351



(860) 460-6188 p

kathy.kmlarchitects@gmail.com e

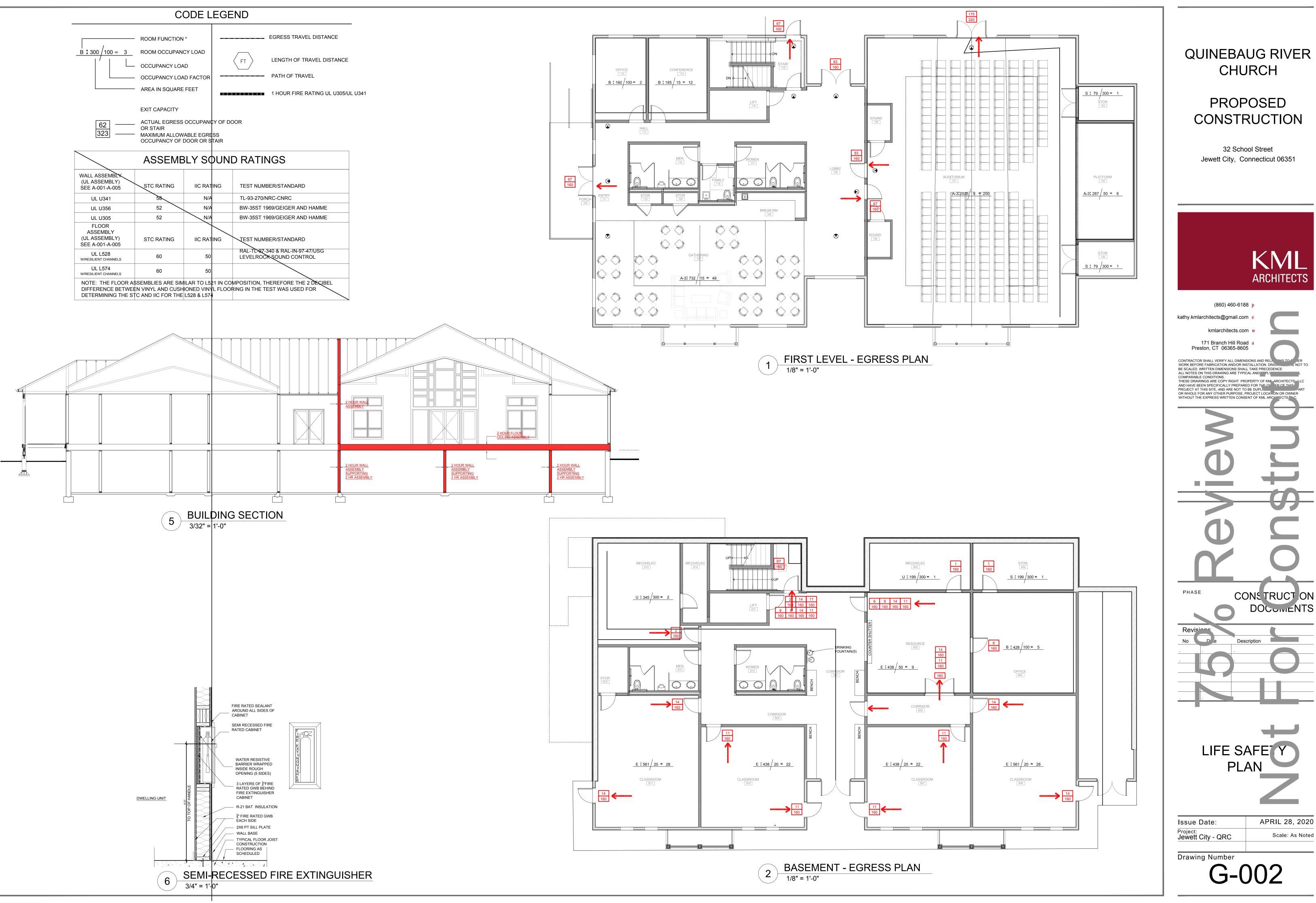
kmlarchitects.com w 171 Branch Hill Road a

Preston, CT 06365-8605 CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND RE WORK BEFORE FABRICATION AND/OR INSTALLATION. DRAW BE SCALED. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE ALL NOTES ON THIS DRAWING ARE TYPICAL AND PLY COMPARABLE CONDITIONS.
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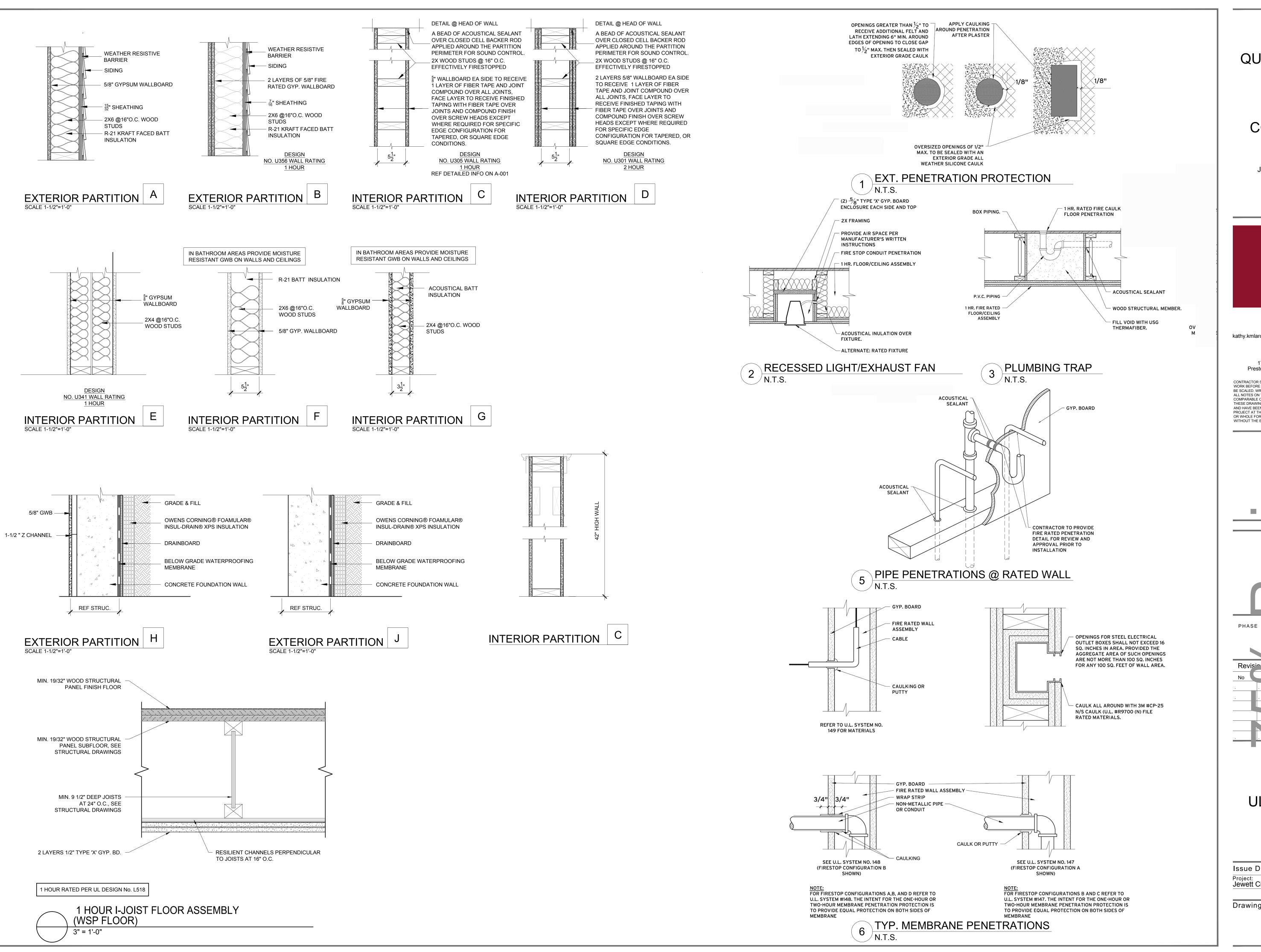
BREAKDOVVI

APRIL 28, 2020 Issue Date: Scale: As Noted Jewett City - QRC





CONSTRUCT ON DOCUMENTS



PROPOSED CONSTRUCTION

32 School Street
Jewett City, Connecticut 06351



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COMPARABLE CONTITIONS.

THESE DRAWINGS ARE COPY RIGHT PROPERTY OF KMI ARCHITECTS AND HAVE BEEN SPECIFICALLY PREPARED FOR THE OVER OF THIS PROJECT AT THIS SITE, AND ARE NOT TO BE DUPLI OR WHOLE FOR ANY OTHER PURPOSE, PROJECT LOCA...ON OR OWNER WITHOUT THE EXPRESS WRITTEN CONSENT OF KML ARCHITECTS C.

CONSTRUCTION DOCUMENTS

Revisions

lo Die Description

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UL ASSEMBLIES

Issue Date:
Project:
Jewett City - QRC

APRIL 28, 2020

QRC Scale: As Noted

Drawing Number

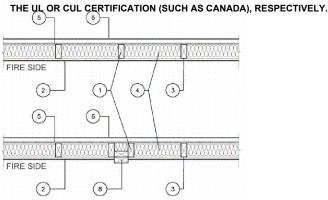
BEARING WALL RATING - 1 HR RATING EXPOSED TO FIRE ON INTERIOR FACE

ONLY BEARING WALL RATING -- 1 HR RATING EXPOSED TO FIRE ON EXTERIOR FACE (SEE ITEM 6E)

FINISH RATING -- 23 MIN OR 25 MIN (SEE ITEM 2C)

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



PLATES. STUDS LATERALLY-BRACED BY WOOD STRUCTURAL PANEL SHEATHING (ITEM 5). WHEN MINERAL AND FIBER BOARDS\* (ITEM 5A) ARE CONSIDERED AS BRACING FOR THE STUDS, THE LOAD IS RESTRICTED TO 76% OF ALLOWABLE AXIAL LOAD. WALLS EFFECTIVELY FIRE STOPPED AT TOP AND BOTTOM OF WALL. 2 GYPSUM ROARD\* -- ANY 5/8 IN THICK UIL CLASSIFIED GYPSUM ROARD THAT IS FLIGIBLE FOR USE IN DESIGN NOS. L501, G512 OR U305. NOM 5/8 IN. THICK, 4 FT WIDE, APPLIED VERTICALLY AND NAILED TO STUDS AND BEARING PLATES 7 IN. OC WITH 6D CEMENT-COATED NAILS, 1-7/8 IN. LONG WITH 1/4 IN. DIAM

WOOD STUDS -- NOM 2 BY 4 IN, SPACED 16 IN, OC WITH TWO 2 BY 4 IN, TOP AND ONE 2 BY 4 IN, BOTTOM

WHEN ITEM 7, 7B, 7C, 7D OR 7E **STEEL FRAMING MEMBERS\***, IS USED. GYPSUM PANELS ATTACHED TO FURRING CHANNELS WITH 1 IN. LONG TYPE S BUGLE-HEAD STEEL SCREWS SPACED 12 IN. OC.

WHEN ITEM 7A 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.

ACADIA DRYWALL SUPPLIES LTD (VIEW CLASSIFICATION) -- CKNX.R25370 AMERICAN GYPSUM CO (VIEW CLASSIFICATION) -- CKNX.R14196

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO (VIEW CLASSIFICATION) -- CKNX.R19374 CERTAINTEED GYPSUM INC (VIEW CLASSIFICATION) -- CKNX.R3660 CGC INC (VIEW CLASSIFICATION) -- CKNX.R19751

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C (VIEW CLASSIFICATION) -- CKNX.R18482

GEORGIA-PACIFIC GYPSUM L L C (VIEW CLASSIFICATION) -- CKNX.R2717 LOADMASTER SYSTEMS INC (VIEW CLASSIFICATION) -- CKNX.R11809

NATIONAL GYPSUM CO (VIEW CLASSIFICATION) -- CKNX.R3501 PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM (VIEW CLASSIFICATION) -- CKNX.R7094

PANEL REY S A (VIEW CLASSIFICATION) -- CKNX.R21796 SIAM GYPSUM INDUSTRY (SARABURI) CO LTD (VIEW CLASSIFICATION) -- CKNX.R19262

THAI GYPSUM PRODUCTS PCL (VIEW CLASSIFICATION) -- CKNX.R27517

UNITED STATES GYPSUM CO (VIEW CLASSIFICATION) -- CKNX.R1319 USG BORAL DRYWALL SFZ LLC (VIEW CLASSIFICATION) -- CKNX.R38438

USG MEXICO S A DE C V (VIEW CLASSIFICATION) -- CKNX.R16089

2A. GYPSUM BOARD\* -- (AS AN ALTERNATE TO ITEM 2, NOT SHOWN) -- ANY 5/8 IN. THICK 4 FT WIDE GYPSUM PANELS THAT ARE ELIGIBLE FOR USE IN DESIGN NOS. L501, G512 OR U305, SUPPLIED BY THE CLASSIFIED COMPANIES LISTED BELOW SHOWN IN

THE GYPSUM BOARD\* (CKNX) CATEGORY. APPLIED VERTICALLY AND ATTACHED TO STUDS AND BEARING PLATES WITH 1-1/4 IN. LONG TYPE W COARSE THREAD GYPSUM PANEL STEEL SCREWS SPACED A MAX 8 IN. OC, WITH LAST SCREW 1 IN. FROM EDGE OF BOARD.

## UNITED STATES GYPSUM CO USG BORAL DRYWALL SFZ LLC

USG MEXICO S A DE C V

R GYPSIIM BOARD\* -- (AS AN ALTERNATE TO ITEM 2 NOT SHOWN) -- 5/8 IN THICK 4 ET WIDE GYPSIIM PANELS APPLIED VERTICALLY AND ATTACHED TO STUDS AND BEARING PLATES WITH 1-1/4 IN. LONG TYPE W COARSE THREAD GYPSUM PANEL STEEL SCREWS SPACED A MAX 8 IN. OC, WITH LAST SCREW 1 IN. FROM EDGE OF BOARD. ACADIA DRYWALL SUPPLIES LTD -- TYPE X, 5/8 TYPE X, TYPE BLUEGLASS EXTERIOR SHEATHING

AMERICAN GYPSUM CO -- TYPES AGX-1, M-GLASS, AG-C, LIGHTROC

IN.AND 4 IN. FROM EDGES OF BOARD, FINISH RATING IS 25 MIN.

CERTAINTEED GYPSUM INC -- TYPE C, TYPE X-2, TYPE X, TYPE X-1, EASI-LITE TYPE X-2 GEORGIA-PACIFIC GYPSUM L L C -- TYPES X, VENEER PLASTER BASE-TYPE X, WATER RATED-TYPE X, SHEATHING TYPE-X, SOFFIT-TYPE X, TYPE X COMFORTGUARD SOUND DEADENING GYPSUM BOARD.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM -- TYPES PG-11, PGS-WRS. THAI GYPSUM PRODUCTS PCL -- TYPE C OR TYPE X

2C. GYPSUM BOARD\* -- (AS AN ALTERNATE TO ITEM 2. NOT SHOWN) -- FOR USE WITH ITEM 5A ONLY - 5/8 IN. THICK 4 FT WIDE GYPSUM PANELS APPLIED HORIZONTALLY AND ATTACHED TO STUDS AND BEARING PLATES WITH 1-1/4 IN. LONG TYPE W COARSE THREAD GYPSUM PANEL STEEL SCREWS SPACED A MAX 8 IN. OC, WITH LAST SCREWS 1

ACADIA DRYWALL SUPPLIES LTD -- 5/8 TYPE X, TYPE BLUEGLASS EXTERIOR SHEATHING GEORGIA-PACIFIC GYPSUM L L C -- TYPE X, VENEER PLASTER BASE-TYPE X, WATER RATED-TYPE X, SHEATHING

TYPE-X. SOFFIT-TYPE X PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM -- TYPES PG-11, PGS-WRS

2D. GYPSUM BOARD\* -- (AS AN ALTERNATE TO ITEM 2) -- NOT TO BE USED WITH ITEM 7. 5/8 IN. THICK, 4 FT. WIDE, PAPER SURFACED. APPLIED VERTICALLY ONLY AND FASTENED TO THE STUDS AND PLATES WITH 6D CEMENT COATED NAILS 1-7/8 IN. LONG. 0.0915 IN. SHANK DIAM AND 1/4 IN. DIAM HEADS, 7 IN. OC. NATIONAL GYPSUM CO -- SOUNDBREAK XP TYPE X GYPSUM BOARD

2E GYPSUM BOARD\* -- (AS AN ALTERNATE TO ITEMS 2 THROUGH 2D) -- NOMINAL 5/8 IN. THICK, 4 FT WIDE PANELS, SECURED AS DESCRIBED IN ITEM 2.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM -- TYPE QUIETROCK ES 2F. GYPSUM BOARD\* -- (AS AN ALTERNATE TO ITEM 2) -- NOT TO BE USED WITH ITEM 7. 5/8 IN. THICK, 4 FT. WIDE,

PAPER SURFACED, APPLIED VERTICALLY OR HORIZONTALLY AND FASTENED TO THE STUDS AND PLATES WITH 1-1/4 IN. LONG TYPE W COARSE THREAD GYPSUM PANEL STEEL SCREWS SPACED A MAX 8 IN. OC, WITH LAST SCREW 1 IN. FROM EDGE OF BOARD. **CERTAINTEED GYPSUM INC --** TYPE SILENTFX

2G. WALL AND PARTITION FACINGS AND ACCESSORIES\* -- (AS AN ALTERNATE TO ITEMS 2 THROUGH 2F) -- NOMINAL 5/8 IN. THICK, 4 FT WIDE PANELS, SECURED AS DESCRIBED IN ITEM 2.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM -- TYPE QUIETROCK 527. 2H. GYPSUM BOARD\* -- (AS AN ALTERNATE TO ITEM 2) -- 5/8 IN. THICK GYPSUM PANELS, WITH BEVELED, SQUARE, OR

APERED 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

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C -- TYPE LGFC6A (FINISH RATING 21 MIN), TYPE LGFC2A, TYPE LGFC-C/A, TYPE LGFC-WD, TYPE LGLLX

2I. GYPSUM BOARD\* -- (AS AN ALTERNATE TO ITEM 2) -- 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 MAX 8 IN. OC, WITH LAST SCREW 1 IN. FROM EDGE OF BOARD. WHEN USED IN WIDTHS OF OTHER THAN 48 IN., GYPSUM BOARDS ARE TO BE

INSTALLED HORIZONTALLY. AMERICAN GYPSUM CO -- TYPES AGX-1 (FINISH RATING 25 MIN.), M-GLASS (FINISH RATING 25 MIN.), AG-C (FINISH RATING 25 MIN.), LIGHTROC (FINISH RATING 25 MIN.)

NATIONAL GYPSUM CO -- TYPE FSK, TYPE FSK-G, TYPE FSW, TYPE FSW-3, TYPE FSW-5, TYPE FSW-G, TYPE FSK-C. TYPE FSW-C, TYPE FSMR-C, TYPE FSW-6, TYPE FSL

2J. GYPSUM BOARD\* -- (AS AN ALTERNATE TO ITEM 2) - 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 STEEL SCREWS SPACED A MAX 8 IN. OC WITH THE LAST SCREW 1 IN. FROM EDGE OF BOARD. WHEN USED IN WIDTHS OTHER THAN 48 IN., GYPSUM BOARDS ARE TO BE INSTALLED

CERTAINTEED GYPSUM INC -- TYPE C, TYPE X-2, TYPE X OR TYPE X-1(FINISH RATING 26 MIN), EASI-LITE TYPE X (FINISH RATING 24 MIN), EASI-LITE TYPE X-2, TYPE EGRG OR GLASROC OR GLASROC SHEATHING (FINISH RATING 23

3. JOINTS AND FASTENER HEADS -- (NOT SHOWN) -- GYPSUM BOARD JOINTS COVERED WITH TAPE AND JOINT COMPOUND. FASTENER HEADS COVERED WITH JOINT COMPOUND.

4.BATTS AND BLANKETS\* -- MINERAL FIBER OR GLASS FIBER INSULATION, 3-1/2 IN. THICK, PRESSURE FIT TO FILL WALL CAVITIES BETWEEN STUDS AND PLATES. MINERAL FIBER INSULATION TO BE UNFACED AND TO HAVE A MIN DENSITY OF 3 PCF. GLASS FIBER INSULATION TO BE FACED WITH ALUMINUM FOIL OR KRAFT PAPER AND TO HAVE A MIN DENSITY OF 0.9 PCF (MIN R-13 THERMAL INSULATION RATING).

SEE BATTS AND BLANKETS\* (BKNV) CATEGORY IN THE BUILDING MATERIALS DIRECTORY AND BATTS AND BLANKETS\* (BZJZ) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF CLASSIFIED COMPANIES.

4A. FIBER. SPRAYED\* -- AS AN ALTERNATE TO BATTS AND BLANKETS (ITEM 4) -- 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/FT 3. ALTERNATE APPLICATION METHOD: THE FIBER IS APPLIED WITHOUT WATER OR ADHESIVE AT A NOMINAL DRY DENSITY OF 3.5 LB/FT 3, IN ACCORDANCE WITH THE APPLICATION INSTRUCTIONS SUPPLIED WITH THE PRODUCT.

ILS GREENEIRER L. C -- INS735 & INS745 FOR LISE WITH WET OR DRY APPLICATION. INS5101 D. INS5151 D. INS5411 D. INS735, INS745, INS765LD, AND INS770LD ARE TO BE USED FOR DRY APPLICATION ONLY.

4B. FIBER, SPRAYED\* -- AS AN ALTERNATE TO ITEM 4 AND 4A -- SPRAY APPLIED CELLULOSE MATERIAL. THE FIBER IS APPLIED WITH WATER TO COMPLETELY FILL THE ENCLOSED CAVITY IN ACCORDANCE WITH THE APPLICATION INSTRUCTIONS SUPPLIED WITH THE PRODUCT. NOMINAL DRY DENSITY OF 4.58 LB/FT  $\,\,$  3 NU-WOOL CO INC -- CELLULOSE INSULATION

4C. FIBER, SPRAYED\* -- AS AN ALTERNATE TO BATTS AND BLANKETS (ITEM 4) -- SPRAY APPLIED CELLULOSE FIBER. THE FIBER IS APPLIED WITH WATER TO COMPLETELY FILL THE ENCLOSED CAVITY IN ACCORDANCE WITH THE APPLICATION INSTRUCTIONS SUPPLIED WITH THE PRODUCT. THE MINIMUM DRY DENSITY SHALL BE 4.30 LBS/FT 3. INTERNATIONAL CELLULOSE CORP -- CELBAR-RL

4D. FIBER, SPRAYED\* -- AS AN ALTERNATE TO BATTS AND BLANKETS (ITEM 4) -- 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

5. WOOD STRUCTURAL PANEL SHEATHING -- MIN 7/16 IN. THICK, 4 FT WIDE WOOD STRUCTURAL PANELS, MIN GRADE "C-D" OR "SHEATHING". INSTALLED WITH LONG DIMENSION OF SHEET (STRENGTH AXIS) OR FACE GRAIN OF PLYWOOD PARALLEL WITH OR PERPENDICULAR TO STUDS. VERTICAL JOINTS CENTERED ON STUDS, HORIZONTAL JOINTS BACKED WITH NOM 2 BY 4 IN, WOOD BLOCKING, ATTACHED TO STUDS ON EXTERIOR SIDE OF WALL WITH 6D CEMENT COATED BOX NAILS SPACED 6 IN. OC AT PERIMETER OF PANELS AND 12 IN. OC ALONG INTERIOR STUDS.

5A. MINERAL AND FIBER BOARDS\* -- AS AN ALTERNATE TO ITEM 5 - MIN 1/2 IN. THICK, 4 FT WIDE SHEATHING, INSTALLED VERTICALLY TO STUDS VERTICAL JOINTS CENTERED ON STUDS HORIZONTAL JOINTS BACKED WITH NOM 2 BY 4 IN, WOOD BLOCKING, ATTACHED TO STUDS ON EXTERIOR SIDE OF WALL WITH 1-1/2 IN, LONG GAI VANIZED ROOFING NAILS SPACED 6 IN OC AT PERIMETER OF PANELS AND 12 IN OC ALONG INTERIOR STUDS AS AN OPTION A WEATHER RESISTIVE BARRIER MAY BE APPLIED OVER THE MINERAL AND FIBER BOARDS.

6. EXTERIOR FACINGS -- INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. ONE OF THE FOLLOWING EXTERIOR FACINGS IS TO BE APPLIED OVER THE SHEATHING: A. VINYL SIDING -- MOLDED PLASTIC\* -- CONTOURED RIGID VINYL SIDING HAVING A FLAME SPREAD

VALUE OF 20 OR LESS. SEE MOLDED PLASTIC (BTAT) CATEGORY IN THE BUILDING MATERIALS

DIRECTORY FOR NAMES OF MANUFACTURERS

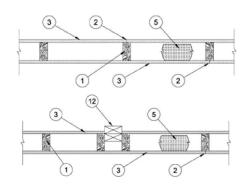
## DESIGN NO.

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)

AUGUST 21, 2018

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

\* INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS



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

3. 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 6E, STEEL FRAMING MEMBERS\*

WHEN ITEMS 6, 6B, 6C, 6D, OR 6E, 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 ACADIA DRYWALL SUPPLIES LTD -- 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

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.)

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO -- TYPE DBX-1 (FINISH RATING 24 MIN) CERTAINTEED GYPSUM INC -- TYPE 1, TYPE SF3 (FINISH RATING 20 MIN) OR FRPC: TYPE C. TYPE X-2, 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 SHX (FINISH RATING 24 MIN), TYPE ULX (FINISH RATING 22 MIN), TYPE WRC (FINISH RATING 24 MIN), TYPE WRX (FINISH RATING 24 MIN) CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C -- 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 (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).

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.), OR TYPE PG-C PANEL REY S A -- TYPE GREX, PRX, PRC, PRC2; TYPES RHX, MDX, ETX (FINISH RATING 22 MIN)

THAI GYPSUM PRODUCTS PCL -- TYPE C, TYPE X (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)

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD -- TYPE EX-1 (FINISH RATING 26 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 O FRAMING WITH 1-1/4 IN. LONG TYPE W COARSE THREAD GYPSUM PANEL STEEL 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 ARE TO BE INSTALLED HORIZONTALLY.

AMERICAN GYPSUM CO -- TYPES AGX-1 (FINISH RATING 25 MIN.), M-GLASS (FINISH RATING 25 MIN.), AG-C (FINISH RATING 25 MIN.), LIGHTTROC (FINISH RATING 25 MIN.)

CERTAINTEED GYPSUM INC -- TYPE C, TYPE X-2, TYPE X OR TYPE X-1 (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 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)

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 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)

3B. 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.

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 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.

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" RAY-BAR ENGINEERING CORP -- TYPE RB-LBG (FINISH RATING 24 MIN)

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

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 1-7/8 IN. LONG. 0.0915 IN. SHANK DIAM AND 15/64 IN DIAM HEADS IN ILL S SHALL BE PLACED 1 INCH AND 3 INCH FROM HORIZONTAL JOINTS AND 7 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.)

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 L L C -- TYPE X COMFORTGUARD SOUND DEADENING GYPSUM BOARD (FINISH

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 HEADS. NATIONAL GYPSUM CO -- SOUNDBREAK XP TYPE X GYPSUM BOARD

3I. 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) 3L. GYPSUM BOARD\* -- (AS AN ALTERNATE TO ITEM 3) -- 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 2 IN. WIDE, MAX 10 FT LONG WITH A MAX THICKNESS OF 0.140 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 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 FACE LAYER. 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 WHEN APPLIED AS THE BASE LAYER. WHEN APPLIED AS THE FACE LAYER SCREW LENGTH TO BE INCREASED TO 2-1/2 IN I FAD BATTEN STRIPS REQUIRED BEHIND VERTICAL JOINTS OF LEAD BACKED. GYPSUM WALLBOARD AND OPTIONAL AT REMAINING STUD LOCATIONS. LEAD BATTEN STRIPS. MIN 2 IN. WIDE. MAX 8 FT LONG WITH A MAX THICKNESS OF 0.14 IN. PLACED ON THE FACE OF STUDS AND ATTACHED TO THE STUD WITH CONSTRUCTION ADHESIVE AND TWO 1 IN. LONG TYPE S-12 PAN HEAD STEEL SCREWS. ONE AT THE TOP OF THE STRIP AND ONE AT THE BOTTOM OF THE STRIP, LEAD DISCS, NOMINAL 3/8 IN, DIAM BY MAX 0.085 IN. THICK, COMPRESSION FITTED OR ADHERED OVER THE SCREW HEADS, LEAD BATTEN STRIPS AND DISCS TO HAVE A PURITY OF 99.9% MEETING THE FEDERAL SPECIFICATION QQ-L-201F, GRADE "C", FASTENERS FOR FACE LAYER GYPSUM PANELS (ITEMS 4, 4A OR 4B) WHEN INSTALLED OVER LEAD BACKED BOARD TO BE MIN 2-1/2 IN. TYPE S-12 BUGLE HEAD STEEL SCREWS SPACED AS DESCRIBED IN ITEM 4. RADIATION PROTECTION PRODUCTS INC -- TYPE RPP - LEAD LINED DRYWALL

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

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).

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 DRYWALL NAILS SPACED 8 IN. OC STARTING WITH A 4" STAGGER.

NATIONAL GYPSUM CO -- TYPE FSW (FINISH RATING 25 MIN)

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 CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C -- TYPE LGFC6A (FINISH RATING 21 MIN), TYPE LGFC2A, TYPE LGFC-C/A, TYPE LGFC-WD, TYPE LGLLX

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.

3S. 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

1. STEEL CORNER FASTENERS -- (OPTIONAL) -- FOR USE AT WALL CORNERS. CHANNEL SHAPED, 2 IN. LONG BY 1 IN. HIGH ON THE BACK SIDE WITH 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

2. 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

OWENS CORNING HT INC, DIV OF OWENS CORNING -- CORNING FIBERGLAS CORP ROCK WOOL MANUFACTURING CO -- DELTA BOARD ROCKWOOL -- ACOUSTICAL FIRE BATTS THERMAFIRER INC -- TYPE SAFE SAFE FE

KNAUF INSULATION LLC

MANSON INSULATION INC

4. STEEL CORNER FASTENERS — (OPTIONAL) — FOR USE AT WALL CORNERS. CHANNEL SHAPED, 2 IN. LONG BY 1 IN. HIGH ON THE BACK SIDE WITH 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

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

POUNDS PER CUBIC FT.

THERMAFIBER INC — TYPE SAFB, SAFB FF

THERMAFIBER INC -- TYPE SAFB, SAFB FF

INTERNATIONAL CELLULOSE CORP -- CELBAR-RL

KINETICS NOISE CONTROL INC -- TYPE ISOMAX

REGUPOL AMERICA -- TYPE SONUSCLIP

OWENS CORNING HT INC. DIV OF OWENS CORNING — CORNING FIBERGLAS CORP ROCK WOOL MANUFACTURING CO — DELTA BOARD **ROCKWOOL — ACOUSTICAL FIRE BATTS** 

54 FIRER 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/FT3, IN ACCORDANCE WITH THE APPLICATION INSTRUCTIONS SUPPLIED WITH THE

PRODUCT. WHEN ITEM 6B IS USED, FIBER, SPRAYED SHALL BE INS735, INS745, INS765LD OR INS770LD.

U S GREENFIBER L L C -- INS735 & INS745 FOR USE WITH WET OR DRY APPLICATION. INS510LD, INS515LD,

INS541LD, INS735, INS745, INS765LD, AND INS770LD ARE TO BE USED FOR DRY APPLICATION ONLY 5B. FIBER. SPRAYED\* -- (NOT SHOWN - NOT FOR USE WITH ITEM 6) -- AS AN ALTERNATE TO BATTS AND BLANKETS (ITEM 5) AND ITEM 5A - SPRAY APPLIED CELLULOSE INSULATION MATERIAL. THE FIBER IS APPLIED WITH WATER TO INTERIOR SURFACES IN ACCORDANCE WITH THE APPLICATION INSTRUCTIONS SUPPLIED WITH THE PRODUCT. APPLIED TO COMPLETELY FILL THE ENCLOSED CAVITY. MINIMUM DRY DENSITY OF 4.3

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.

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

ACCORDANCE WITH THE APPLICATION INSTRUCTIONS SUPPLIED WITH THE PRODUCT. SEE FIBER, SPRAYED

AMERICAN ROCKWOOL MANUFACTURING, LLC -- TYPE ROCKWOOL PREMIUM PLUS

SUPPLIED WITH THE PRODUCT. THE MINIMUM DRY DENSITY SHALL BE 4.30 LBS/FT3.

ADHESIVE, AT A MINIMUM DENSITY OF 4.0 PCF, TO COMPLETELY FILL THE ENCLOSED CAVITY IN

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

5H. FOAMED PLASTIC\* -- (OPTIONAL -FOR USE WITH ITEM 3R) -- SPRAY APPLIED, FOAMED PLASTIC INSULATION, AT ANY THICKNESS FROM PARTIAL FILL TO COMPLETELY FILLING STUD CAVITY. SES FOAM INC -- SES 2 LB. SPRAY FOAM AND SUCRASEAL 0.5 LB. SPRAY FOAM.

1. 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, 2-9/16 IN, OR 2-23/32 IN, WIDE BY 7/8 IN. DEEP, SPACED 24 IN OC PERPENDICULAR TO STUDS CHANNELS SECURED TO STUDS AS DESCRIBED IN ITEM B. ENDS OF ADJOINING CHANNELS ARE OVERLAPPED 6 IN. AND TIED TOGETHER WITH DOUBLE STRAND OF

NO. 18 SWG GALV STEEL WIRE NEAR EACH END OF OVERLAP, AS AN ALTERNATE, ENDS OF ADJOINING CHANNELS MAY BE OVERLAPPED 6 IN AND SECURED TOGETHER WITH TWO SELF-TAPPING #6 FRAMING SCREWS, MIN, 7/16 IN, LONG AT THE MIDPOINT OF THE OVERLAP, WITH ONE SCREW ON 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 6A) TO STUDS. CLIPS SPACED 48 IN. OC. RSIC-1 AND RSIC-1 (2.75) CLIPS SECURED TO STUDS WITH NO. 8 X 2-1/2 IN. COARSE DRYWALL SCREW THROUGH THE CENTER GROMMET. RSIC-V AND RSIC-V (2.75) 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. 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)

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 EAC H 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 CUPS 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.

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 6BA) 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 TWISTED STEEL WIRE. GYPSUM BOARD ATTACHED TO FURRING CHANNELS AS DESCRIBED IN ITEM 3. 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.

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

CENTER HOLE. RESILIENT CHANNELS ARE SECURED TO CLIPS WITH ONE NO. 10 X 1/2 IN. PAN-HEAD SELF-KEENE BUILDING PRODUCTS CO INC - TYPE RC+ ASSURANCE CLIP 2. 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.

(ITEM 6A), NOT EVALUATED AS ALTERNATIVES FOR OBTAINING STC RATING.

SPACED 48 IN. OC., AND SECURED TO STUDS WITH NO. 8 X 2-1/2 IN. COARSE DRYWALL SCREW THROUGH THE

3. CAULKING AND SEALANTS -- (NOT SHOWN, OPTIONAL) -- A BEAD OF ACOUSTICAL SEALANT APPLIED AROUND THE PARTITION PERIMETER FOR SOUND CONTROL. 4. 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

5. 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 OR-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

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM -- TYPE QUIETROCK QR-500 AND QR-510

6. 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

7. 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.

8 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.

9. 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

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 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 IN. OC IN FIELD OF BOARD ALONG INTERMEDIATE FRAMING. NOT EVALUATED OR INTENDED AS A SUBSTITUTE FOR THE REQUIRED LAYER(S) OF UL CLASSIFIED GYPSUM BOARD. **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

14C. BATTS AND BLANKETS\* -- (AS AN ALTERNATE TO ITEM 14B, FOR USE WITH ITEM 14A), 3 IN. THICK MINERAL WOOL BATTS, PLACED TO FILL INTERIOR OF WALL, ATTACHED TO THE 3-1/2 IN. FACE OF THE STUDS WITH STAPLES PLACED 24 IN. OC THERMAFIBER INC -- TYPE SAFB, SAFB FF

14D. ADHESIVE -- (FOR USE WITH ITEM 14A) -- CONSTRUCTION GRADE ADHESIVE APPLIED IN VERTICAL, SERPENTINE, NOMINAL 3/8 IN. WIDE 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 FRPC, TYPE C, TYPE X-2 CGC INC -- TYPES C, IP-X2, IPC-AR CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C -- TYPE LGFC-C/A GEORGIA-PACIFIC GYPSUM L L C -- TYPES 5, DAPC, TG-C NATIONAL GYPSUM CO -- TYPES FSK-C. FSW-C PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM -- TYPE PG-C PANEL REY S A -- TYPE PRC 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

\* INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

**QUINEBAUG RIVER** 

**PROPOSED** CONSTRUCTION

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Preston, CT 06365-8605 CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND REL WORK BEFORE FABRICATION AND/OR INSTALLATION. DRAW. BE SCALED. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE ALL NOTES ON THIS DRAWING ARE TYPICAL AND PLY

COMPARABLE CONDITIONS.
THESE DRAWINGS ARE COPY RIGHT PROPERTY OF KM ARCHITECTS LU AND HAVE BEEN SPECIFICALLY PREPARED FOR THE OVER OF THIS PROJECT AT THIS SITE, AND ARE NOT TO BE DUPLI OR WHOLE FOR ANY OTHER PURPOSE, PROJECT LOCA...ON OR OWNER WITHOUT THE EXPRESS WRITTEN CONSENT OF KML ARCHITE



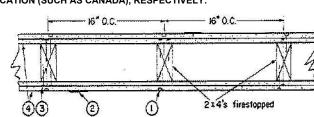


APRIL 28, 2020 Issue Date: Scale: As Noted Jewett City - QRC

BEARING WALL RATING - 2 HR. FINISH RATING — 66 MIN

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



NAILHEADS — EXPOSED OR COVERED WITH JOINT COMPOUND

2. JOINTS — EXPOSED 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.

3. NAILS — 6D CEMENT COATED NAILS 1-7/8 IN. LONG, 0.0915 IN. SHANK DIAM, 1/4 IN. DIAM HEADS, AND 8D CEMENT COATED NAILS 2-3/8 IN. LONG, 0.113 IN. SHANK DIAM, 9/32 IN. DIAM HEADS. 4. **GYPSUM BOARD**\* — 5/8 IN. THICK, TWO LAYERS APPLIED EITHER HORIZONTALLY OR VERTICALLY. INNER LAYER

ATTACHED TO STUDS WITH THE 1-7/8 IN. NAILS SPACED 6 IN. OC. OUTER LAYER ATTACHED TO STUDS OVER INNER LAYER WITH THE 2-3/8 IN. LONG NAILS SPACED 8 IN. OC. VERTICAL JOINTS LOCATED OVER STUDS. ALL JOINTS IN FACE LAYERS STAGGERED WITH JOINTS IN BASE LAYERS. JOINTS OF EACH BASE LAYER OFFSET WITH JOINTS OF BASE LAYER ON OPPOSITE SIDE.

WHEN USED IN WIDTHS OTHER THAN 48 IN., GYPSUM BOARD TO BE INSTALLED HORIZONTALLY.

WHEN STEEL FRAMING MEMBERS\* (ITEM 6, 6A, 6B, OR 6C) ARE USED, BASE LAYER ATTACHED TO FURRING CHANNELS WITH 1 IN. LONG TYPE S BUGLE-HEAD STEEL SCREWS SPACED MAX 24 IN. OC: FACE LAYER ATTACHED WITH 1-5/8 IN. LONG TYPE S BUGLE-HEAD STEEL SCREWS SPACED MAX 12 IN. OC. **AMERICAN GYPSUM CO** — TYPES AGX-1, M-GLASS, AG-C, AGX-11, LIGHTROC

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO — TYPE DBX-1

CABOT MANUFACTURING ULC — TYPE X, 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

CERTAINTEED GYPSUM INC — TYPES EGRG, GLASROC, GLASROC-2, TYPE C, TYPE X, TYPE X-1 CGC INC — TYPES AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULIX, ULX, USGX, WRC, WRX  $\textbf{CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C} \\ \hspace{0.1cm} - \texttt{TYPES LGFC2A, LGFC6A, LGFC-C/A, LGFC-WD,} \\$ 

GEORGIA-PACIFIC GYPSUM L L C — TYPES 5, 6, 9, C, DAP, DD, DA, DAPC, DGG, DS, GPFS6, LS, TG-C, TYPE X, VENEER PLASTER BASE-TYPE X, WATER RATED-TYPE X, SHEATHING TYPE-X, SOFFIT-TYPE X, GREENGLASS TYPE X, TYPE LWX, VENEER PLASTER BASE-TYPE LWX, WATER RATED-TYPE LWX, SHEATHING TYPE-LWX, SOFFIT-TYPE LWX, TYPE DGLW, WATER RATED-TYPE DGLW, SHEATHING TYPE- DGLW, SOFFIT-TYPE DGLW, TYPE LW2X, VENEER PLASTER BASE - TYPE LW2X, WATER RATED - TYPE LW2X, SHEATHING - TYPE LW2X, SOFFIT - TYPE LW2X, TYPE DGL2W, WATER RATED - TYPE DGL2W, SHEATHING - TYPE DGL2W

NATIONAL GYPSUM CO — TYPES EXP-C, FSK, FSK-C, FSK-G, FSW, FSW-3, FSW-5, FSW-6, FSW-6, FSW-C, FSW-G,

NATIONAL GYPSUM CO — RIYADH, SAUDI ARABIA — TYPE FR, OR WR.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — TYPES C, PG-2, PG-3, PG-3W, PG-4, PG-5, PG-5W, PG-5WS, PG-9, PG-11, PG-C OR PGS-WRS

PANEL REY S A — TYPES PRC, PRC2, PRX, RHX, MDX, ETX, GREX, GRIX SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — TYPE EX-1

THAI GYPSUM PRODUCTS PCL — TYPE C OR TYPE X

UNITED STATES GYPSUM CO — TYPES AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULIX, ULX, USGX,

USG BORAL DRYWALL SFZ LLC — TYPES C, SCX, USGX USG MEXICO S A DE C V — TYPES AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

4A. GYPSUM BOARD\* — (AS AN ALTERNATE TO ITEM 4) — NOM 3/4 IN. THICK, INSTALLED AS DESCRIBED IN ITEM 4.

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

4B. GYPSUM BOARD \* — (AS AN ALTERNATE TO ITEMS 4 AND 4A) — 5/8 IN. THICK, 2 FT WIDE, TONGUE AND GROOVE EDGE APPLIED HORIZONTALLY AS THE OUTER LAYER TO ONE SIDE OF THE ASSEMBLY. SECURED AS DESCRIBED IN

ITEM 4 JOINT COVERING (ITEM 2) NOT REQUIRED CGC INC — TYPE SHX

UNITED STATES GYPSUM CO — TYPE SHX USG MEXICO S A DE C V — TYPE SHX

4C. GYPSUM BOARD\* — (AS AN ALTERNATE TO ITEMS 4, 4A OR 4B — NOT SHOWN) — FOR DIRECT APPLICATION TO STUDS ONLY- FOR USE ON ONE OR BOTH SIDES OF THE WALL AS THE BASE LAYER OR ONE OR BOTH SIDES OF THE WALL AS THE FACE LAYER, NOM 5/8 IN THICK LEAD BACKED GYPSLIM PANELS WITH BEVELED, SOLIARE 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 THREA GYPSUM PANEL STEEL SCREWS SPACED 8 IN. OC AT PERIMETER AND IN THE FIELD WHEN APPLIED AS THE BASE

LAYER, 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 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. F4J.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". FASTENERS FOR FACE LAYER GYPSUM PANELS (ITEMS 4, 4A OR 4B) WHEN INSTALLED OVER LEAD BACKED BOARD TO BE MIN 2-1/2 IN. TYPE S-12 BUGLE HEAD STEEL SCREWS SPACED AS

**RAY-BAR ENGINEERING CORP** — TYPE RB-LBG.

4D. GYPSUM BOARD\* — AS AN ALTERNATE TO ITEM 4 — 5/8 IN. THICK APPLIED EITHER HORIZONTALLY OR VERTICALLY, INNER LAYERS 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 SCREW 1 IN. FROM EDGE OF BOARD, OUTER LAYERS FASTENED TO FRAMING WITH 1-7/8 IN. LONG TYPE W COARSE THREAD GYPSUM PANEL STEEL SCREWS SPACED A MAX 8 IN. OC, WITH LAST SCREW 1 IN. FROM EDGE OF BOARD. WHEN USED IN WIDTHS OTHER THAN 48 IN., GYPSUM BOARD TO BE INSTALLED HORIZONTALLY. ALL JOINTS IN FACE LAYERS STAGGERED WITH JOINTS IN BASE LAYERS. JOINTS OF EACH BASE LAYER OFFSET WITH JOINTS OF BASE LAYER ON OPPOSITE SIDE. AMERICAN GYPSUM CO — TYPES AGX-1, M-GLASS, AG-C, LIGHTROC

4E. **GYPSUM BOARD\*** — (AS AN ALTERNATE TO ITEMS 4 THROUGH 4D) — 5/8 IN. THICK, 4 FT. WIDE, PAPER SURFACED APPLIED VERTICALLY AND SECURED AS DESCRIBED IN ITEM 4.

GEORGIA-PACIFIC GYPSUM L L C — TYPE X COMFORTGUARD SOUND DEADENING GYPSUM BOARD

4F. GYPSUM BOARD\* — (AS AN ALTERNATE TO ITEM 4) — NOT TO BE USED WITH ITEM 6, 6A, 6B OR 6C. 5/8 IN. THICK, 4 FT. WIDE, PAPER SURFACED, APPLIED VERTICALLY AND SECURED AS DESCRIBED IN ITEM 4. NATIONAL GYPSUM CO — TYPE SBCB

4G. GYPSUM BOARD \* — (AS AN ALTERNATE TO ITEMS 4 THROUGH 4F) — NOMINAL 5/8 IN. THICK, 4 FT WIDE PANELS, APPLIED VERTICALLY AND SECURED AS DESCRIBED IN ITEM 4. PABCO BUILDING PRODUCTS L L C , DBA PABCO GYPSUM — TYPES QUIETROCK ES

4H. GYPSUM BOARD\* — (AS AN ALTERNATE TO ITEM 4) — NOT TO BE USED WITH ITEM 6. 6A. 6B. OR 6C. 5/8 IN. THICK. 4 FT. WIDE, PAPER SURFACED, APPLIED VERTICALLY OR HORIZONTALLY AND SECURED AS DESCRIBED IN ITEM 4. CERTAINTEED GYPSUM INC — TYPE SILENTFX

4I. GYPSUM BOARD\* — (AS AN ALTERNATE TO ITEM 4) — 5/8 IN. THICK, TWO LAYERS APPLIED EITHER HORIZONTALLY OR VERTICALLY, INNER LAYER ATTACHED TO STUDS WITH 1-1/4 IN, LONG TYPE W STEEL SCREWS SPACED 8 IN, OC. OUTER LAYER ATTACHED TO STUDS OVER INNER LAYER WITH 2 IN. LONG TYPE W STEEL SCREWS SPACED 8 IN. OC OFFSET 6 IN. FROM BASE LAYER, VERTICAL JOINTS LOCATED OVER STUDS, VERTICAL AND HORIZONTAL JOINTS BETWEEN INNER AND OUTER LAYERS STAGGERED. OUTER LAYER JOINTS COVERED WITH JOINT TAPE AND COMPOUND, SCREWHEADS COVERED WITH JOINT COMPOUND, AS AN ALTERNATE TO THE JOINT COMPOUND NOM 3/32 IN. THICK GYPSUM VENEER PLASTER MAY BE APPLIED TO THE ENTIRE SURFACE OF CLASSIFIED VENEER BASEBOARD. JOINTS REINFORCED. WALLBOARD OTHER THAN 48 IN. WIDE MUST BE APPLIED HORIZONTALLY. THE SOUNDBREAK XP TYPE X GYPSUM BOARD IS NOT TO BE USED WITH ITEM 6, 6A, 6B, OR 6C.

NATIONAL GYPSUM CO — TYPES EXP-C, FSK, FSK-C, FSK-G, FSW, FSW-3, FSW-5, FSW-6, FSW-C, FSW-G, FSMR-C, SOUNDBREAK XP TYPE X GYPSUM BOARD

4J. GYPSUM BOARD\* — (AS AN ALTERNATE TO ITEMS 4) — FOR DIRECT APPLICATION TO STUDS ONLY- FOR USE AS THE BASE LAYER OR AS THE FACE LAYER. 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 WHEN APPLIED AS THE BASE LAYER. 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 BACKED GYPSUM 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 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 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 AND DISCS TO HAVE A PURITY OF 99.5% MEETING THE FEDERAL SPECIFICATION QQ-L-201F, GRADES "B, C OR D". FASTENERS FOR FACE LAYER GYPSUM PANELS (ITEMS 4, 4A OR 4B) WHEN INSTALLED OVER LEAD BACKED BOARD TO BE MIN 2-1/2 IN. TYPE S-12 BUGLE HEAD STEEL SCREWS SPACED AS DESCRIBED IN ITEM 4. MAYCO INDUSTRIES INC — "X-RAY SHIELDED GYPSUM"

4K. GYPSUM BOARD\* — FOR USE WITH ITEM 7 — 5/8 IN. THICK, TWO LAYERS APPLIED VERTICALLY. INNER LAYER ATTACHED TO RESILIENT CHANNELS WITH 1 IN. LONG STEEL SCREWS SPACED 8 IN. OC. OUTER LAYER ATTACHED TO RESILIENT CHANNELS OVER INNER LAYER WITH 1-5/8 IN. LONG STEEL SCREWS SPACED 8 IN. OC. ALL JOINTS IN FACE LAYERS STAGGERED WITH JOINTS IN BASE LAYERS, JOINTS OF EACH BASE LAYER OFFSET WITH JOINTS OF BASE LAYER ON OPPOSITE SIDE. INSULATION, ITEMS 8 OR 9 IS REQUIRED AMERICAN GYPSUM CO — TYPES AGX-1, M-GLASS, AG-C, AGX-11

41 GYPSIIM BOARD\* — (AS AN ALTERNATE TO ITEMS 4) — FOR DIRECT APPLICATION TO STUDS ONLY- FOR USE AS THE BASE LAYER OR AS THE FACE LAYER. 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 WHEN APPLIED AS THE BASE LAYER. 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 BACKED GYPSUM WALLBOARD AND OPTIONAL AT REMAINING STUD LOCATIONS. LEAD BATTEN STRIPS, MIN 2 IN. WIDE, MAX 8 FT LONG WITH A MAX THICKNESS OF 0.14 IN. PLACED ON THE FACE OF STUDS AND ATTACHED TO THE STUD WITH CONSTRUCTION ADHESIVE AND TWO 1 IN. LONG TYPE S-12 PAN HEAD STEEL SCREWS, ONE AT THE TOP OF THE STRIP AND ONE AT THE BOTTOM OF THE STRIP. LEAD DISCS, NOMINAL 3/8 IN. DIAM BY MAX 0.085 IN. THICK. COMPRESSION FITTED OR ADHERED OVER THE SCREW HEADS. LEAD BATTEN STRIPS AND DISCS TO HAVE A PURITY OF 99.9% MEETING THE FEDERAL SPECIFICATION QQ-L-201F, GRADE "C". FASTENERS FOR FACE LAYER GYPSUM PANELS (ITEMS 4, 4A OR 4B) WHEN INSTALLED OVER LEAD BACKED BOARD TO BE MIN 2-1/2 IN. TYPE S-12 BUGLE HEAD STEEL SCREWS SPACED AS

RADIATION PROTECTION PRODUCTS INC — TYPE RPP - LEAD LINED DRYWALL

4M. GYPSUM BOARD\*—(AS AN ALTERNATE TO ITEM 4)—5/8 IN. THICK, 4 FT. WIDE, TWO LAYERS APPLIED VERTICALLY WITH VERTICAL JOINTS CENTERED OVER STUDS AND STAGGERED ONE STUD CAVITY ON OPPOSITE SIDES OF STUDS. SECURED AS DESCRIBED IN ITEM 4. CERTAINTEED GYPSUM INC — 5/8" EASI-LITE TYPE X

4N. GYPSUM BOARD\* — (AS AN ALTERNATE TO 5/8 IN. TYPE FSW IN ITEMS 4 OR 4I) — NOM. 5/16 IN. THICK GYPSUM PANELS APPLIED VERTICALLY OR HORIZONTALLY. TWO LAYERS OF 5/16 IN. FOR EVERY SINGLE LAYER OF 5/8 IN. GYPSUM BOARD DESCRIBED IN ITEM 4 OR 4L HORIZONTAL JOINTS ON THE SAME SIDE NEED NOT BE STAGGERED INNER LAYER OF EACH DOUBLE 5/16 IN. LAYER ATTACHED WITH FASTENERS. AS DESCRIBED IN ITEM 4 OR 4I. SPACED 24 IN. OC. OUTER LAYER OF EACH DOUBLE 5/16 IN. LAYER ATTACHED PER ITEM 4 OR 4I. NATIONAL GYPSUM CO — TYPE FSW

40. WALL AND PARTITION FACINGS AND ACCESSORIES \* — (AS AN ALTERNATE TO ITEMS 4 THROUGH 4N) — NOMINAL 5/8 IN. THICK, 4 FT WIDE PANELS, APPLIED VERTICALLY AND SECURED AS DESCRIBED IN ITEM 4. PABCO BUILDING PRODUCTS L L C , DBA PABCO GYPSUM — TYPE QUIETROCK 527

4P. GYPSUM BOARD\* — (AS AN ALTERNATE TO ITEM 4) — 5/8 IN. THICK, TWO LAYERS APPLIED EITHER HORIZONTALLY OR VERTICALLY. INNER LAYER ATTACHED TO STUDS WITH 1-1/4 IN. LONG TYPE W STEEL SCREWS SPACED 10 IN. OC WITH THE LAST TWO SCREWS 4 AND 1 IN. FROM THE EDGES OF THE BOARD. OUTER LAYER ATTACHED TO STUDS OVER INNER LAYER WITH 1-7/8 IN. LONG TYPE W STEEL SCREWS SPACED 10 IN. OC OFFSET 5 IN. FROM BASE LAYER WITH THE LAST TWO SCREWS 4 AND 1 IN. FROM THE EDGES OF THE BOARD. VERTICAL JOINTS LOCATED OVER STUDS. VERTICAL AND HORIZONTAL JOINTS BETWEEN INNER AND OUTER LAYERS STAGGERED. OUTER LAYER JOINTS COVERED WITH JOINT TAPE AND COMPOUND, SCREWHEADS COVERED WITH JOINT COMPOUND. WHEN USED IN WIDTHS OTHER THAN 48 IN., GYPSUM PANELS ARE TO BE INSTALLED HORIZONTALLY.

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — TYPE LGFC6A, TYPE LGFC2A, TYPE LGFC-C/A, TYPE LGFC-WD. TYPE LGLLX

4O GYPSUM BOARD\* — (AS AN ALTERNATE TO ITEM 4 FOR USE WITH ITEM 13) — ANY 5/8 IN THICK 4 FT WIDE GYPSUM BOARD UL CLASSIFIED FOR FIRE RESISTANCE (CKNX) ELIGIBLE FOR USE IN DESIGN NOS. U305 AND L501 OR G512. TWO LAYERS, APPLIED EITHER HORIZONTALLY OR VERTICALLY, AND SCREWED TO STUDS 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. FOR THE FACE LAYER, SCREW LENGTH TO BE INCREASED TO 2-1/2 IN. ALL JOINTS IN FACE LAYERS STAGGERED WITH JOINTS IN BASE LAYERS. WHEN USED IN WIDTHS OTHER THAN 48 IN., GYPSUM PANELS ARE TO BE INSTALLED HORIZONTALLY.

4R. GYPSUM BOARD\* — AS AN ALTERNATE TO ITEM 4 — 5/8 IN. THICK APPLIED EITHER HORIZONTALLY OR VERTICALLY. INNER LAYERS 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 SCREW 1 IN. FROM EDGE OF BOARD. OUTER LAYERS FASTENED O FRAMING WITH 1-7/8 IN. LONG TYPE W COARSE THREAD GYPSUM PANEL STEEL SCREWS SPACED A MAX 8 IN. OC, WITH LAST SCREW 1 IN. FROM EDGE OF BOARD. WHEN USED IN WIDTHS OTHER THAN 48 IN., GYPSUM BOARD TO BE INSTALLED HORIZONTALLY. ALL JOINTS IN FACE LAYERS STAGGERED WITH JOINTS IN BASE LAYERS. JOINTS OF EACH BASE LAYER OFFSET WITH JOINTS OF BASE LAYER ON OPPOSITE SIDE.

CERTAINTEED GYPSUM INC — TYPES EGRG, GLASROC, GLASROC-2, TYPE C, TYPE X, TYPE X-1, EASI-LITE TYPE X,

4S. GYPSUM BOARD\* — (AS AN ALTERNATE TO ITEM 4. FOR USE WITH ITEM 13A) — 5/8 IN. THICK, TWO LAYERS APPLIED VERTICALLY, INNER LAYER ATTACHED TO STUDS WITH THE 1-7/8 IN. NAILS SPACED 6 IN. OC. OUTER LAYER ATTACHED TO STUDS OVER INNER LAYER WITH THE 2-3/8 IN. LONG NAILS SPACED 8 IN. OC. VERTICAL JOINTS LOCATED OVER STUDS. ALL JOINTS IN FACE LAYERS STAGGERED WITH JOINTS IN BASE LAYERS. JOINTS OF EACH BASE LAYER OFFSET WITH JOINTS OF BASE LAYER ON OPPOSITE SIDE. UNITED STATES GYPSUM CO — TYPE SCX

5. MOLDED PLASTIC\* — NOT SHOWN, OPTIONAL — SOLID VINYL SIDING MECHANICALLY SECURED OVER THE OUTER LAYER TO FRAMING MEMBERS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDED INSTALLATION DETAILS. ALSIDE, DIV OF ASSOCIATED MATERIALS INC GENTEK BUILDING PRODUCTS LTD

6. STEEL FRAMING MEMBERS \* — (OPTIONAL, NOT SHOWN) — FURRING CHANNELS AND STEEL FRAMING MEMBERS AS DESCRIBED BELOW

VYTEC CORP

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 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 SELE-TAPPING #6 FRAMING SCREWS, MIN. 7/16 IN. LONG AT THE MIDPOINT OF THE OVERLAP, WITH ONE SCREW ON EACH FLANGE OF THE CHANNEL. WALLBOARD ATTACHED TO FURRING CHANNELS AS DESCRIBED IN ITEM 4.

B. STEEL FRAMING MEMBERS \* — USED TO ATTACH FURRING CHANNELS (ITEM 6A) 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 GROMMET. FURRING CHANNELS ARE FRICTION FITTED INTO CLIPS. RSIC-1 CLIP FOR USE WITH 2-9/16 IN. WIDE FURRING CHANNELS. RSIC-1 (2.75) CLIP FOR USE WITH 2-23/32 IN. WIDE FURRING CHANNELS. PAC INTERNATIONAL L L C — TYPES RSIC-1, RSIC-1 (2.75)

6A. STEEL FRAMING MEMBERS \* — (OPTIONAL, NOT SHOWN) — FURRING CHANNELS AND STEEL FRAMING MEMBERS

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 4. B. STEEL FRAMING MEMBER S\* — USED TO ATTACH FURRING CHANNELS (ITEM 6AA) 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.

STUDCO BUILDING SYSTEMS — RESILMOUNT SOUND ISOLATION CLIPS - TYPE A237R

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 6BB. 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 4. B. STEEL FRAMING MEMBERS \* — USED TO ATTACH FURRING CHANNELS (ITEM 6BA) TO STUDS, CLIPS SPACED 48 IN. OC., AND SECURED TO STUDS WITH 2-1/2 IN. COARSE DRYWALL SCREW THROUGH THE

6B. STEEL FRAMING MEMBER S\* — (OPTIONAL, NOT SHOWN) — FURRING CHANNELS AND STEEL FRAMING MEMBERS

 $\textbf{6C. STEEL FRAMING MEMBERS} \, ^\star - (\textbf{OPTIONAL}, \textbf{NOT SHOWN}) - \textbf{RESILIENT CHANNELS AND STEEL FRAMING} \\$ 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 4.

B. STEEL FRAMING MEMBERS \* — USED TO ATTACH RESILIENT CHANNELS (ITEM 6CA) 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

CENTER HOLE. FURRING CHANNELS ARE FRICTION FITTED INTO CLIPS.

**REGUPOL AMERICA** — TYPE SONUSCLIP

7. FURRING CHANNEL — OPTIONAL — NOT SHOWN — FOR USE ON ONE SIDE OF THE WALL WITH ITEM 4K — 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, ITEM 8 OR 9 IS REQUIRED.

8. BATTS AND BLANKETS\* — REQUIRED FOR USE WITH RESILIENT CHANNELS, ITEM 7, MIN. 3 IN. THICK MINERAL WOOL BATTS, PLACED TO FILL INTERIOR OF WALL, ATTACHED TO THE NOM 4 IN. FACE OF THE STUDS WITH STAPLES

**ROCKWOOL** — TYPE SAFENSOUND THERMAFIBER INC — TYPE SAFB, SAFB FF

9. BATTS AND BLANKETS \* — (AS AN ALTERNATE TO ITEM 8) — MIN. 3 IN. THICK GLASS FIBER BATTS BEARING THE UL CLASSIFICATION MARKING AS TO SURFACE BURNING AND/OR FIRE RESISTANCE. FRICTION-FITTED TO FILL THE STUD CAVITIES. SEE BATTS AND BLANKETS (BKNV OR BZJZ) CATEGORIES FOR NAMES OF CLASSIFIED COMPANIES. 9A. FIBER. SPRAYED\* — (OPTIONAL) — AS AN ALTERNATE TO BATTS AND BLANKETS (ITEM 8), REQUIRED FOR USE WITH RESILIENT CHANNELS, ITEM 7, NOT FOR USE WITH ITEM 6, 6A, 6B, OR 6C. — SPRAY APPLIED MINERAL WOOL INSULATION. THE FIBER IS APPLIED WITH ADHESIVE, AT A MINIMUM DENSITY OF 4.0 PCF, TO COMPLETELY FILL THE ENCLOSED CAVITY IN ACCORDANCE WITH THE APPLICATION INSTRUCTIONS SUPPLIED WITH THE PRODUCT. SEE FIBER, SPRAYED (CCAZ).

AMERICAN ROCKWOOL MANUFACTURING, LLC — TYPE ROCKWOOL PREMIUM PLUS

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 L L C , DBA PABCO GYPSUM — TYPE QUIETROCK QR-500 OR QR-510

11. CEMENTITIOUS BACKER UNITS \* — (OPTIONAL ITEM NOT SHOWN — FOR USE ON FACE OF 2 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 HORIZONTALLY OR VERTICALLY WITH VERTICAL JOINTS CENTERED OVER STUDS. FACE LAYER FASTENED OVER GYPSUM BOARD 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.

NATIONAL GYPSUM CO — TYPE DURABACKER, PERMABASE, DURABACKER PLUS, OR PERMABASE PLUS

12. WALL AND PARTITION FACINGS AND ACCESSORIES \* — (OPTIONAL, NOT SHOWN) - WHEN THE WALL ASSEMBLY IS USED AS AN EXTERNAL WALL. ON THE EXTERNAL SIDE OF THE WALL ONE OF THE FOLLOWING WALL AND PARTITION AND FACING ACCESSORIES MAY BE USED. REFER TO ITEMS (A) TO (C) BELOW

A. NON INSULATED SYSTEM WITH METAL CHANNELS — INSTALL MOISTURE BARRIER OVER THE GYPSUM BOARD ITEM 4 AND INSTALL ACRY METAL CHANNELS VERTICALLY AT A HORIZONTAL SPACING NOT GREATER THAN 24 INCHES OC., OVER THE MOISTURE BARRIER. ACRY METAL CHANNELS ATTACHED THROUGH THE MOISTURE BARRIER AND THE GYPSUM BOARD TO THE WOOD STUDS USING FASTENERS SPECIFIED BY THE MANUFACTURER AND FASTENERS SPACED MAX., 24 IN. OC. INSTALL ACRYTEC PANELS ON ACRY METAL CHANNELS USING 1-1/4" LONG CORROSION COATED STAINLESS STEEL SCREWS SPACED AT A MAX SPACING OF 24 INCHES OC, ALONG WITH MANUFACTURER'S APPROVED ADHESIVE (3M 540 OR TREMCO VULCUM 116). ADHESIVE TO BE APPLIED IN A ZIGZAG PATTERN ALONG EVERY CHANNEL. JOINT TREATMENT IN BETWEEN PANELS SHALL BE TREMCO ILLMOD 600 PRE COMPRESSED POLYURETHANE FOAM SEALANT.

B. INSULATED SYSTEM WITH METAL CHANNELS — INSTALL MOISTURE BARRIER OVER THE GYPSUM BOARD

ITEM 4. INSTALL GALVANIZED Z GIRT CHANNELS SPECIFIED BY THE MANUFACTURER OVER THE MOISTURE BARRIER AND THE GYPSUM BOARD ITEM 4. Z GIRT CHANNELS TO BE INSTALLED HORIZONTALLY AT A MAX. SPACING OF 24" OC. Z GIRT CHANNELS ATTACHED THROUGH THE GYPSUM BOARD AND THE MOISTURE BARRIER TO THE WOOD STUDS WITH SCREWS PROVIDED BY THE MANUFACTURER AT A MAX SPACING OF 24 INCHES OC. INSTALL MINERAL WOOL INSULATION BETWEEN THE Z GIRTS. MAXIMUM THICKNESS OF MINERAL WOOL INSULATION NOT TO EXCEED 6 IN. AS PER MANUFACTURER'S INSTRUCTIONS INSTALL ACRY METAL CHANNELS VERTICALLY OVER THE Z GIRTS AT A MAX HORIZONTAL SPACING OF 24 IN. OC. ACRYTEC PANELS INSTALLED ON ACRY CHANNEL WITH 1-1/4" LONG CORROSION COATED STAINLESS STEEL SCREWS AT A MAX SPACING OF 24 IN. OC, ALONG WITH MANUFACTURERS APPROVED ADHESIVE (3M 540 OR TREMCO VULCUM 116). ADHESIVE TO BE APPLIED IN A ZIGZAG PATTERN ALONG EVERY CHANNEL. JOINT TREATMENT IN BETWEEN PANELS TO BE TREMCO ILLMOD 600 PRE COMPRESSED POLYURETHANE FOAM SEALANT. C. NON INSULATED WOOD STRAPPING SYSTEM. — INSTALL MOISTURE BARRIER OVER THE GYPSUM BOARD ITEM 4 AND INSTALL 1" X 3" WOOD STRAPPING VERTICALLY AT A HORIZONTAL SPACING NOT GREATER THAN 24 INCHES OC., OVER THE MOISTURE BARRIER, 1" X 3" WOOD STRAPPING ATTACHED THROUGH THE MOISTURE BARRIER AND THE GYPSUM BOARD TO THE WOOD STUDS USING FASTENERS SPECIFIED BY THE

MANUFACTURER AND FASTENERS SPACED MAX., 24 IN. OC. ACRYTEC PANELS TO BE INSTALLED ON THE 1" X

3" WOOD STRAPPING USING MANUFACTURERS APPROVED STAINLESS STEEL FASTENERS SPACED AT

MAXIMUM 24 INCHES OC ALONG WITH TREMCO VULCUM 116 ADHESIVE APPLIED IN A ZIGZAG PATTERN

ALONG EVERY WOOD STRAP. JOINT TREATMENT IN BETWEEN PANELS TO BE TREMCO ILLMOD 600 PRE

COMPRESSED POLYURETHANE FOAM SEALANT. D. INSULATED WOOD STRAPPING SYSTEM — INSTALL MOISTURE BARRIER OVER THE GYPSUM BOARD ITEM 4. INSTALL EXTRUDED POLYSTYRENE INSULATION OVER MOISTURE BARRIER AND THE GYPSUM BOARD ITEM 4. MAX THICKNESS OF INSULATION NOT TO EXCEED 4 INCHES. INSTALL 1" X 3" WOOD STRAPPING VERTICALLY AT A HORIZONTAL SPACING NOT GREATER THAN 24 INCHES OC. WOOD STRAPPING ATTACHED THROUGH THE INSULATION, THE GYPSUM BOARD AND MOISTURE BARRIER TO THE WOOD STUDS USING FASTENERS SPECIFIED BY THE MANUFACTURER AND FASTENERS SPACED MAX. 24 IN. OC. ACRYTEC PANELS TO BE INSTALLED OVER THE WOOD STRAPPING USING MANUFACTURERS APPROVED STAINLESS STEEL FASTENERS AT A MAX SPACING OF 24 IN. OC AND TREMCO VULCUM 116 ADHESIVE APPLIED IN A ZIGZAG PATTERN ALONG EVERY WOOD STRAP. JOINT TREATMENT IN BETWEEN PANELS TO BE TREMCO

ILLMOD 600 PRE COMPRESSED POLYURETHANE FOAM SEALANT ACRYTEC PANEL INDUSTRIES — NOMINAL 5/8 INCH THICK ACRYTEC PANEL.

GACOONEPASS LOW GWP F1880, AND GACO WALLFOAM 183M.

13. FOAMED PLASTIC\* — (OPTIONAL, NOT SHOWN - FOR USE WITH ITEM 4Q) — SPRAY APPLIED, FOAMED PLASTIC INSULATION, AT ANY THICKNESS FROM PARTIAL FILL TO COMPLETELY FILLING STUD CAVITY. SES FOAM INC — NEXSEAL™ 2.0 OR NEXSEAL™ 2.0 LE SPRAY FOAM AND SUCRASEAL SPRAY FOAM. FOR USE IN BEARING AND NON-LOAD BEARING WALLS.

13A. FOAMED PLASTIC\* — (OPTIONAL, NOT SHOWN - FOR USE WITH ITEM 4S) — SPRAY APPLIED, FOAMED PLASTIC INSULATION, TO COMPLETELY FILLING STUD CAVITY. GACO WESTERN L L C — TYPES GACOEZSPRAY F4500. GACOPROFILL FR6500R, GACO 052N, GACOONEPASS F1850.

14. **FOAMED PLASTIC**\* — (OPTIONAL, NOT SHOWN - FOR USE OVER GYPSUM BOARD, ITEM 4) - POLYISOCYANURATE FOAMED PLASTIC BOARDS, ANY THICKNESS APPLIED VERTICALLY WITH VERTICAL JOINTS LOCATED OVER STUDS. MAY BE USED WITH MOLDED PLASTIC, ITEM 5 OR ANY EXTERIOR FACING, AS AUTHORIZED BY THE AUTHORITY HAVING JURISDICTION AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

HUNTER PANELS, A DIVISION OF CARLISLE CONSTRUCTION MATERIALS, LLC — "XCI CLASS A", "XCI 286", "XCI FOIL (CLASS A)", "XCI CG", "XCI FOIL", "XCI CG NH", "XCI FOIL NH" 15. BUILDING UNITS\* — (OPTIONAL, NOT SHOWN - FOR USE OVER GYPSUM BOARD, ITEM 4) POLYISOCYANURATE COMPOSITE FOAMED PLASTIC BOARDS, ANY THICKNESS, APPLIED VERTICALLY WITH VERTICAL JOINTS LOCATED

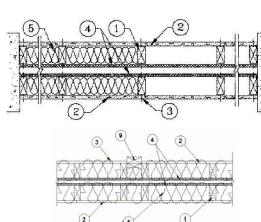
OVER STUDS. MAY BE USED WITH MOLDED PLASTIC, ITEM 5 OR ANY EXTERIOR FACING, AS AUTHORIZED BY THE AUTHORITY HAVING JURISDICTION AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION

HUNTER PANELS, A DIVISION OF CARLISLE CONSTRUCTION MATERIALS, LLC — "XCI NB", "XCI PLY"

#### DESIGN NO. U341

BEARING WALL RATING -- 1 HR. FINISH RATING -- MIN 20 MIN

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.



HORIZONTAL SECTION 1. WOOD STUDS -- NOM 2 BY 4 IN., SPACED 24 IN. OC MAX. CROSS BRACED AT MID-HEIGHT AND EFFECTIVELY FIRESTOPPED AT TOP AND BOTTOM OF WALL, NO MIN, AIR SPACE BETWEEN STUD ROWS EXCEPT TO

ACCOMMODATE ATTACHMENT OF SHEATHING, WHERE REQUIRED. SEE ITEMS 4 AND 5. 2. GYPSUM BOARD\* -- ANY 5/8 IN. THICK UL CLASSIFIED GYPSUM BOARD THAT IS ELIGIBLE FOR USE IN DESIGN NOS 1501 G512 OR 11305 NOM 5/8 IN THICK 4 FT WIDE GYPSLIM BOARD APPLIED HORIZONTALLY OR VERTICALLY UNLESS SPECIFIED BELOW AND NAILED TO STUDS AND BEARING PLATES 7 IN OC WITH 6D CEMENT COATED NAILS, 1-7/8 IN, LONG, 0.0915 IN, SHANK DIAM AND 1/4 IN, DIAM HEAD, AS AN ALTERNATE, NO. 6 BUGLE HEAD DRYWALL SCREWS, 1-7/8 IN. LONG, MAY BE SUBSTITUTED FOR THE 6D CEMENT COATED NAILS. WHEN STEEL FRAMING MEMBERS\* (ITEM 6-6C) ARE USED, WALLBOARD ATTACHED TO FURRING CHANNELS WITH 1 IN. LONG TYPE S BUGLE-HEAD STEEL SCREWS SPACED 12 IN. OC

WHEN USED IN WIDTHS OTHER THAN 48 IN., GYPSUM BOARD TO BE INSTALLED HORIZONTALLY. ACADIA DRYWALL SUPPLIES LTD (VIEW CLASSIFICATION) -- CKNX.R25370

AMERICAN GYPSUM CO (VIEW CLASSIFICATION) -- CKNX.R14196 BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO (VIEW CLASSIFICATION) -- CKNX.R19374 CERTAINTEED GYPSUM INC (VIEW CLASSIFICATION) -- CKNX.R3660

CGC INC (VIEW CLASSIFICATION) -- CKNX.R19751 CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C (VIEW CLASSIFICATION) -- CKNX.R18482

LOADMASTER SYSTEMS INC (VIEW CLASSIFICATION) -- CKNX.R11809 NATIONAL GYPSUM CO (VIEW CLASSIFICATION) -- CKNX.R3501 PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM (VIEW CLASSIFICATION) -- CKNX.R7094

PANEL REY S A (VIEW CLASSIFICATION) -- CKNX.R21796 SIAM GYPSUM INDUSTRY (SARABURI) CO LTD (VIEW CLASSIFICATION) -- CKNX.R19262

THAI GYPSUM PRODUCTS PCL (VIEW CLASSIFICATION) -- CKNX.R27517 UNITED STATES GYPSUM CO (VIEW CLASSIFICATION) -- CKNX.R1319

USG BORAL DRYWALL SFZ LLC (VIEW CLASSIFICATION) -- CKNX.R38438 USG BORAL DRYWALL SFZ LLC (VIEW CLASSIFICATION) -- CKNX.R38438 USG MEXICO S A DE C V (VIEW CLASSIFICATION) -- CKNX.R16089

GEORGIA-PACIFIC GYPSUM L L C (VIEW CLASSIFICATION) -- CKNX.R2717

2A. GYPSUM BOARD\* -- (AS AN ALTERNATE TO ITEM 2, NOT SHOWN) -- NOMINAL 5/8 IN. THICK, 4 FT WIDE PANELS, APPLIED VERTICALLY TO STUDS AND BEARING PLATES ON ONE SIDE OF THE ASSEMBLY WITH 1-5/8 IN. LONG TYPE S SCREWS SPACED 12 IN. OC AT PERIMETER OF PANELS AND 8 IN. OC IN THE FIELD. HORIZONTAL JOINTS OF VERTICALLY APPLIED PANELS NEED NOT BE BACKED BY STUDS. PANEL JOINTS COVERED WITH PAPER TAPE AND TWO LAYERS OF JOINT COMPOUND. SCREWHEADS COVERED WITH TWO LAYERS OF JOINT COMPOUND. BATTS AND BLANKETS PLACED IN STUD CAVITY AS DESCRIBED IN ITEM 5C. NOT EVALUATED FOR USE WITH STEEL FRAMING MEMBERS, FURRING CHANNELS OR FIBER, SPRAYED. PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM -- TYPE QUIETROCK QR-530 (FINISH RATING 23

2B. GYPSUM BOARD\* -- (AS AN ALTERNATE TO ITEM 2, NOT SHOWN) -- ANY 5/8 IN. THICK GYPSUM PANELS THAT ARE ELIGIBLE FOR USE IN DESIGN NOS. L501, G512 OR U305, SUPPLIED BY THE CLASSIFIED COMPANIES LISTED BELOW SHOWN IN THE GYPSUM BOARD\* (CKNX) CATEGORY. APPLIED HORIZONTALLY OR VERTICALLY AND ATTACHED TO STUDS AND BEARING PLATES WITH 1-1/4 IN. LONG TYPE W COARSE THREAD GYPSUM PANEL STEEL SCREWS SPACED A MAX 8 IN. OC, WITH LAST SCREW 1 IN. FROM EDGE OF BOARD. WHEN USED IN WIDTHS OTHER THAN 48 IN., GYPSUM BOARD TO BE INSTALLED HORIZONTALLY.

UNITED STATES GYPSUM CO USG BORAL DRYWALL SFZ LLC

2C. GYPSUM BOARD\* -- (AS AN ALTERNATE TO ITEM 2, NOT SHOWN) -- 5/8 IN. THICK GYPSUM PANELS APPLIED HORIZONTALLY OR VERTICALLY AND ATTACHED TO STUDS AND BEARING PLATES WITH 1-1/4 IN. LONG TYPE W COARSE THREAD GYPSUM PANEL STEEL SCREWS SPACED A MAX 8 IN. OC, WITH LAST SCREW 1 IN. FROM EDGE OF BOARD. WHEN USED IN WIDTHS OTHER THAN 48 IN., GYPSUM BOARD TO BE INSTALLED HORIZONTALLY

CERTAINTEED GYPSUM INC -- TYPE C, TYPE X OR TYPE X-1

NATIONAL GYPSUM CO -- TYPE FSK, TYPE FSK-G, TYPE FSW, TYPE FSW-3, TYPE FSW-5, TYPE FSW-G, TYPE FSK-C, TYPE FSW-C, TYPE FSMR-C, TYPE FSW-6, TYPE FSL

THAI GYPSUM PRODUCTS PCL -- TYPE C OR TYPE X

2D. GYPSUM BOARD\* -- (AS AN ALTERNATE TO ITEMS 2, 2A, 2B AND 2C) -- 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 AS DESCRIBED IN ITEM 2. WHEN USED IN WIDTHS OF OTHER THAN 48 IN., GYPSUM BOARDS ARE TO BE INSTALLED HORIZONTALLY GEORGIA-PACIFIC GYPSUM L L C -- GREENGLASS TYPE X. TYPE DGG.

2E. GYPSUM BOARD\* -- (AS AN ALTERNATE TO ITEMS 2 THROUGH 2D) -- 5/8 IN. THICK, 4 FT. WIDE, PAPER SURFACED APPLIED VERTICALLY ONLY AND SECURED AS DESCRIBED IN ITEM 2. GEORGIA-PACIFIC GYPSUM L L C -- TYPE X COMFORTGUARD SOUND DEADENING GYPSUM BOARD

2F. GYPSUM BOARD\* -- (AS AN ALTERNATE TO ITEMS 2 THROUGH 2E) - INSTALLED AS DESCRIBED IN ITEM 2. 5/8 IN. THICK, 4 FT. WIDE, PAPER SURFACED, APPLIED VERTICALLY ONLY AND FASTENED TO THE STUDS AND PLATES WITH 6D CEMENT COATED NAILS 1-7/8 IN. LONG. 0.0915 IN. SHANK DIAM AND 1/4 IN. DIAM HEADS, 7 IN. OC. NOT FOR USE WITH ITEM #6.

NATIONAL GYPSUM CO -- SOUNDBREAK XP TYPE X GYPSUM BOARD

2G. GYPSUM BOARD\* -- (AS AN ALTERNATE TO ITEMS 2 THROUGH 2F) -- NOMINAL 5/8 IN. THICK, 4 FT WIDE PANELS, APPLIED VERTICALLY AND SECURED AS DESCRIBED IN ITEM 2. PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM -- TYPES QUIETROCK ES.

2H. GYPSUM BOARD\* -- (AS AN ALTERNATE TO ITEMS 2 THROUGH 2G) -- INSTALLED AS DESCRIBED IN ITEM 2. 5/8 IN. THICK, 4 FT. WIDE, PAPER SURFACED, APPLIED VERTICALLY OR HORIZONTALLY FASTENED TO THE STUDS AND PLATES WITH 1-1/4 IN. LONG TYPE W COARSE THREAD GYPSUM PANEL STEEL SCREWS SPACED A MAX 8 IN. OC, WITH LAST SCREW 1 IN. FROM EDGE OF BOARD. CERTAINTEED GYPSUM INC -- TYPE SILENTFX

21. WALL AND PARTITION FACINGS AND ACCESSORIES\* -- (AS AN ALTERNATE TO ITEMS 2 THROUGH 2H) --NOMINAL 5/8 IN. THICK, 4 FT WIDE PANELS, APPLIED VERTICALLY AND SECURED AS DESCRIBED IN ITEM 2. PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM -- TYPE QUIETROCK 527.

2J. GYPSUM BOARD\* -- (AS AN ALTERNATE TO 5/8 IN. TYPE FSW IN ITEM 2) -- 2 LAYERS NOM. 5/16 IN. THICK GYPSUM PANELS APPLIED VERTICALLY OR HORIZONTALLY. HORIZONTAL JOINTS ON THE SAME SIDE NEED NOT BE STAGGERED. INNER LAYER ATTACHED WITH FASTENERS, AS DESCRIBED IN ITEM 2, SPACED 24 IN. OC. OUTER LAYER ATTACHED PER ITEM 2. NATIONAL GYPSUM CO -- TYPE FSW.

2K. GYPSUM BOARD\* -- (AS AN ALTERNATE TO ITEM 2) -- 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 INC 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. CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C -- TYPE LGFC6A (FINISH RATING 21 MIN), TYPE LGFC2A, TYPE LGFC-C/A, TYPE LGFC-WD, TYPE LGLLX

3 JOINTS AND NAILHEADS -- GYPSLIM BOARD JOINTS OF OUTER LAYER COVERED WITH TAPE AND JOINT COMPOUND, NAIL HEADS OF OUTER LAYER COVERED WITH JOINT COMPOUND, AS AN ALTERNATE, NOM 3/32 IN THICK GYPSUM VENEER PLASTER MAY BE APPLIED TO THE ENTIRE SURFACE OF CLASSIFIED VENEER BASEBOARD WITH JOINTS REINFORCED WITH PAPER TAPE.

4. SHEATHING -- (OPTIONAL) -- SEPTUM MAY BE SHEATHED WITH MIN 7/16 IN. THICK WOOD STRUCTURAL PANELS MIN GRADE "C-D" OR "SHEATHING" OR MIN 1/2 IN. THICK MINERAL AND FIBER BOARDS\* SEE MINERAL AND FIBER BOARDS (CERZ) CATEGORY FOR NAMES OF CLASSIFIED COMPANIES

5. BATTS AND BLANKETS\* -- 3-1/2 IN. MAX THICKNESS GLASS OR MINERAL FIBER BATT INSULATION.

OPTIONAL WHEN SHEATHING (ITEM 4) IS USED ON BOTH HALVES OF WALL. SEE BATTS AND BLANKETS (BZJZ) CATEGORY FOR LIST OF CLASSIFIED COMPANIES. 5A. FIBER, SPRAYED\* -- 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/FT3, IN ACCORDANCE WITH THE APPLICATION INSTRUCTIONS SUPPLIED WITH THE PRODUCT. U S GREENFIBER L L C -- INS735 & INS745 FOR USE WITH WET OR DRY APPLICATION. INS510LD, INS515LD, INS541LD, INS735, INS745, INS765LD, AND INS770LD ARE TO BE USED FOR DRY APPLICATION ONLY. 5B. FIBER, SPRAYED\* -- AS AN ALTERNATE TO BATTS AND BLANKETS (ITEM 5) AND ITEM 5A WHEN SHEATHING (ITEM 4) IS USED ON BOTH HALVES OF WALL - SPRAY APPLIED CELLULOSE INSULATION

MATERIAL. THE FIBER IS APPLIED WITH WATER TO INTERIOR SURFACES IN ACCORDANCE WITH THE

APPLICATION INSTRUCTIONS SUPPLIED WITH THE PRODUCT. APPLIED TO COMPLETELY FILL THE

ENCLOSED CAVITY. MINIMUM DRY DENSITY OF 4.3 POUNDS PER CUBIC FT. NU-WOOL CO INC -- CELLULOSE INSULATION

5C. BATTS AND BLANKETS\* -- (REQUIRED FOR USE WITH WALL AND PARTITION FACINGS AND ACCESSORIES, ITEM 2A. USE OF SHEATHING, ITEM 4, DOES NOT NULLIFY REQUIREMENT OF ITEM 5C FOR USE WITH ITEM 2A) -- 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

5D. FIBER, SPRAYED\* -- AS AN ALTERNATE TO BATTS AND BLANKETS (ITEM 5) AND ITEM 5A WHEN SHEATHING (ITEM 4) IS USED ON BOTH HALVES OF WALL - SPRAY APPLIED CELLULOSE FIBER. THE FIBER IS APPLIED WITH WATER TO COMPLETELY FILL THE ENCLOSED CAVITY IN ACCORDANCE WITH THE APPLICATION INSTRUCTIONS SUPPLIED WITH THE PRODUCT. THE MINIMUM DRY DENSITY SHALL BE 4.30

INTERNATIONAL CELLULOSE CORP -- CELBAR-RL

6 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. 2-9/16 IN. OR 2-23/32 IN. WIDE BY 7/8 IN. DEEP, SPACED 24 IN. OC PERPENDICULAR TO STUDS. CHANNELS SECURED TO STUDS AS DESCRIBED IN ITEM B. ENDS OF ADJOINING CHANNELS ARE OVERLAPPED 6 IN. AND TIED TOGETHER WITH DOUBLE STRAND OF NO. 18 SWG GALV STEEL WIRE NEAR EACH END OF OVERLAP. AS AN ALTERNATE, ENDS OF ADJOINING CHANNELS MAY BE OVERLAPPED 6 IN. AND SECURED TOGETHER WITH TWO SELF-TAPPING #6 FRAMING SCREWS, MIN. 7/16 IN. LONG AT THE MIDPOINT OF THE OVERLAP, WITH ONE SCREW ON EACH FLANGE OF THE CHANNEL. WALLBOARD ATTACHED TO FURRING CHANNELS AS DESCRIBED IN ITEM 2.

B. STEEL FRAMING MEMBERS\* -- USED TO ATTACH FURRING CHANNELS (ITEM A) TO STUDS (ITEM 1). CLIPS SPACED 48 IN. OC., AND SECURED TO STUDS WITH NO. 8 X 2-1/2 IN. COARSE DRYWALL SCREW THROUGH THE CENTER GROMMET. FURRING CHANNELS ARE FRICTION FITTED INTO CLIPS. RSIC-1 CLIP FOR USE WITH 2-9/16 IN. WIDE FURRING CHANNELS. RSIC-1 (2.75) CLIP FOR USE WITH 2-23/32 IN. WIDE FURRING CHANNELS.

PAC INTERNATIONAL L L C -- TYPES RSIC-1, RSIC-1 (2.75).

6A. 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 2.

B. STEEL FRAMING MEMBERS\* -- USED TO ATTACH FURRING CHANNELS (ITEM A) 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

6B. STEEL FRAMING MEMBERS\* -- (OPTIONAL, NOT SHOWN) -- FURRING CHANNELS AND STEEL FRAMING MEMBERS AS DESCRIBED BELOW:

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

A. FURRING CHANNELS -- FORMED OF NO. 25 MSG GALV STEEL. SPACED 24 IN. OC PERPENDICULAR

B. STEEL FRAMING MEMBERS\* -- USED TO ATTACH FURRING CHANNELS (ITEM 6BA) 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. STUDCO BUILDING SYSTEMS -- RESILMOUNT SOUND ISOLATION CLIPS - TYPE A237R

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 6CB. 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

B. STEEL FRAMING MEMBERS\* -- USED TO ATTACH FURRING CHANNELS (ITEM 6CA) 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.

6D. 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

**REGUPOL AMERICA** -- TYPE SONUSCLIP

BOARD ATTACHED TO RESILIENT CHANNELS AS DESCRIBED IN ITEM 2. B. STEEL FRAMING MEMBERS\* -- USED TO ATTACH RESILIENT 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. RESILIENT CHANNELS ARE SECURED TO CLIPS WITH ONE NO. 10 X 1/2 IN. PAN-HEAD SELF-DRILLING SCREW.

7. 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

KEENE BUILDING PRODUCTS CO INC -- TYPE RC+ ASSURANCE CLIP

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 L L C, DBA PABCO GYPSUM -- TYPE QUIETROCK QR-500 AND QR-510 O MINEDAL AND EIDED DOADD\* (ODTIONIAL NOT CHOMIN) NOMINIAL 4/2 IN THICK A ET MIDE DANIEL C FOR OPTIONAL USE AS AN ADDITIONAL LAYER ON ONE OR BOTH SIDES OF THE ASSEMBLY WITH LONG DIMENSION PARALLEL AND CENTERED OVER STUDS. ATTACHED TO STUDS AND TOP AND BOTTOM BEARING PLATES AS DESCRIBED IN ITEM 2. WHEN INSTALLED BETWEEN THE WOOD FRAMING AND THE UI 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. **HOMASOTE CO** -- HOMASOTE TYPE 440-32

9. NON-BEARING WALL PARTITION INTERSECTION -- (OPTIONAL) -- TWO NOMINAL 2 BY 4 IN. STUD OR NOMINAL 2 BY 6 IN STUD 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 : 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.

\* INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

**QUINEBAUG RIVER** 

**PROPOSED** CONSTRUCTION

> 32 School Street Jewett City, Connecticut 06351



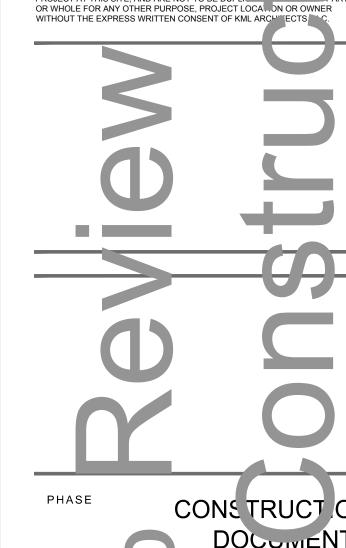
(860) 460-6188 p

kathy.kmlarchitects@gmail.com e

kmlarchitects.com w

171 Branch Hill Road a Preston, CT 06365-8605

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND REL WORK BEFORE FABRICATION AND/OR INSTALLATION. DRAw. BE SCALED. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE ALL NOTES ON THIS DRAWING ARE TYPICAL AND PLY COMPARABLE CONDITIONS.
THESE DRAWINGS ARE COPY RIGHT PROPERTY OF KM ARCHITECTS LU AND HAVE BEEN SPECIFICALLY PREPARED FOR THE OVER OF THIS PROJECT AT THIS SITE, AND ARE NOT TO BE DUPLI

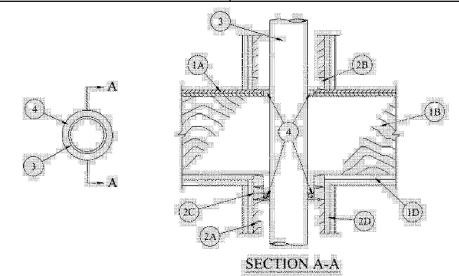


APRIL 28, 2020 Issue Date: Scale: As Noted Jewett City - QRC

## UL F- C 1009

	<b>b. F-C-1009</b> 08, 2018
ANSI/UL1479 (ASTM E814)	CAN/ULC S115
Rating — 1 and 2 Hr (See Item 1)	F Rating — 1 and 2 Hr (See Item 1)
T Rating — 1/4 Hr	FT Rating — 1/4 Hr
ng At Ambient — Less Than 1 CFM/sq ft	FH Rating — 1 and 2 Hr (See Item 1)
L Rating At 400 F — 4 CFM/sq ft	FTH Rating — 1/4 Hr
	L Rating At Ambient — Less Than 1 CFM/sq ft

L Rating At 400 F - 4 CFM/sq f



1. Floor-Ceiling Assembly — The 1 or 2 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The F Rating of the firestop system is equal to the rating of the floor-ceiling assembly. The general

construction features of the floor-ceiling assembly are summarized below:

A. Flooring System — Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture\* as specified in the individual Floor-Ceiling Design. Diam of opening to be max 1 in. (25 mm) larger than diam of pipe. As an alternate, the opening may be square-cut with a max dimension 1 in. (25 mm) greater than the

B. Wood Joists\* — Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members\* with bridging as required and with ends firestopped. C. Furring Channels — (Not Shown) —(As required ) Resilient galvanized steel furring installed in accordance with the manner specified in the individual L500 Series Designs in the Fire Resistance Directory D. Gypsum Board\* — Thickness, type, number of layers and fasteners shall be as specified in the individual Floor-

2. Chase Wall — (Optional) - The through penetrant (Item 3) may be routed through a fire rated or non-rated single, double, or staggered wood stud/gypsum board chase wall. Depth of chase wall to be min 1 in. greater than the diameter of the through penetrant. The chase wall shall be constructed to include the following construction features:

A. Studs — Nom 2 by 4 in. (51 by 102 mm), 2 by 6 in. (51 by 152 mm) or double nom 2 by 4 in. (51 by 102 mm) lumber studs. Nom 2 by 4 in. (51 by 102 mm) studs are allowed for through-penetrants (Item 3) not exceeding nom 2

Ceiling Design. Diam of opening to be max 1 in. (25 mm) larger than diam of pipe.

B. Sole Plate — Nom 2 by 4 in. (51 by 102 mm), 2 by 6 in. (51 by 152 mm) or parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Diam of opening is to be max 1 in. (925 mm) larger than diam of pipe. As an alternate, the opening may be square-cut with a max dimension 1 in. (25 mm) greater than the diam of the pipe. Plates may be discontinuous over opening, terminating at two opposing edges of opening. Max length of discontinuity to be 1 in. (25 mm) greater than diam of through penetrant.

C. **Top Plate** — The double top plate shall consist of two nom 2 by 4 in. (51 by 102 mm), 2 by 6 in. (51 by 152 mm) or two sets of parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Diam of opening is to be max 1 in. (25 mm) larger than diam of pipe. As an alternate, the opening may be square-cut with a max dimension 1 in. (25 mm) greater than the diam of the pipe. Plates may be discontinuous over opening, terminating at two opposing edges of opening. Max length of discontinuity to be 1 in. (25 mm) greater than diam of through penetrant. D. **Gypsum Board\*** — One or two layers of min 1/2 in. (13 mm) gypsum board.

E. Steel Plate — (Not Shown) When lumber plates are discontinuous, nom 1-1/2 in. (38 mm) wide No. 20 gauge (or heavier) galv steel plates shall be installed to connect each discontinuous lumber plate and to provide a form for the fill material. Steel plates sized to lap 2 in. (51 mm) onto each discontinuous lumber plate and secured to lumber plates with steel screws or nails.

3. Through Penetrants — One metallic pipe, conduit or tubing to be installed within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of floor assembly. The annular space within the firestop system shall be min 0 in. (point contact) to max 1 in. (25 mm). The following types and sizes of metallic pipes or conduits may be used:

A. Steel Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe B. Iron Pipe — Nom 4 in. (102 mm) diam (or smaller) cast or ductile iron pipe.

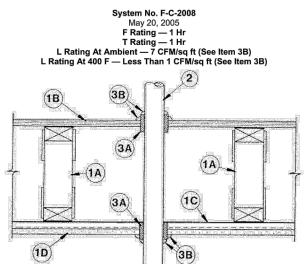
C. Conduit — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or steel conduit. D. Copper Tubing — Nom (102 mm) 4 in. diam (or smaller) Type L (or heavier) copper tubing.

E. Copper Pipe — Nom (102 mm) 4 in. diam (or smaller) Regular (or heavier) copper pipe. 4. Fill, Void or Cavity Material\* — Sealant — Min 3/4 in. (19 mm) thickness of fill material applied within the annulus, flush with the top surface of the floor or the sole plate. Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP601S, CFS-S SIL GG, CP606, FS-One Sealant or FS-ONE

MAX Intumescent Sealant (Note: L Ratings apply only when FS-ONE Sealant is used.) \* 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 2018-03-08

## UL F- C 2008



1. Floor Assembly — The fire rated wood truss or combination wood and steel truss Floor-Ceiling assembly shall be constructed of the materials and in the manner described in the individual L500 Series Design in the UL Fire Resist include the following construction features: A. Trusses — Min 12 in. (305 mm) deep parallel chord trusses fabricated from 2 by 4 in. (51 by 102 mm) lumber in conjunction with galv steel truss plates or **Structural Wood Members\*** with bridging as required.

B. Flooring — Nom 3/4 in. (19 mm) thick plywood flooring with or without Floor Topping Mixture\*. Diam of hole-sawed opening in flooring to be 1/2 to 3/4 in. (13 to 19 mm) larger than diam of pipe. Max diam of opening in flooring is 3 in. (76 mm). C. Furring Channels — Rigid or resilient galv steel furring channels installed perpendicular to bottom chord of trusses. D. Gypsum Board\* — Nom 4 ft (1.22 m) wide by 5/8 in. (16 mm) thick, screw-attached to furring channels. Diam of hole-sawed opening in gypsum wallboard ceiling to be 1/2 to 3/4 in. (13 to 19 mm) larger than diam of pipe. Max diam of opening in ceiling is 3 in. (76 mm)

2. Nonmetallic Pipe — Nom 2 in. (51 mm) diam (or smaller) Schedule 40 polyvinyl chloride (PVC), SDR 13.5 chlorinated polyvinyl chloride (CPVC) or solid-core Schedule 40 acrylonitrile-butadiene-styrene (ABS) pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems. One pipe to be installed approx midway between trusses and centered in circular openings in flooring and in ceiling. A nom 1/4 in. to 3/8 in. (6 to 10 mm) annular space is required in the firestop system. Pipe to be rigidly supported on both sides of Floor-Ceiling assembly.

2A. Electrical Nonmetallic Tubing+ — Nom 1 in. (25 mm) diam (or smaller) corrugated wall ENT constructed of polyvinyl chloride. ENT to be installed as a complete system with all terminations in junction boxes, outlet boxes or other approved enclosures as specified in the National Electrical Code. Max one ENT per through opening. ENT to be centered in opening and rigidly supported on both sides of the Floor-Ceiling assembly. See Electrical Nonmetallic Tubing (FKHU) category in Electrical Construction Materials Directory for names of manufacturers.

3. Firestop System — The details of the firestop system shall be as follows: A. Fill, Void or Cavity Materials\* — Wrap Strip — Nom 1/4 in. (6 mm) thick intumescent elastomeric material faced on one side with aluminum foil, supplied to 2 in. (51 mm) wide strips. Nom 2 in. (51 mm) wide strip tightly-wrapped around nonmetallic pipe (foil side exposed), secured with two steel tie wires and slid into hole-sawed opening in flooring (Item 1B) and in gypsum wallboard ceiling (Item 1D). Bottom edge of wrap strip to project 9/16 to 11/16 in. (14 to 17.5 mm) below bottom surface of flooring and below

bottom (ceiling) surface of gypsum board. **3M COMPANY** — Type FS-195+ B. Fill, Void or Cavity Materials\* — Caulk, Sealant or Putty — Nom 1/4 in. (6 mm) thickness of caulk or putty to be applied to the exposed edge of the wrap strip layer (top of flooring and bottom of gypsum board ceiling). Generous application of caulk or putty to be applied to fill all gaps at the wrap strip/flooring and wrap strip/gypsum board ceiling interfaces.

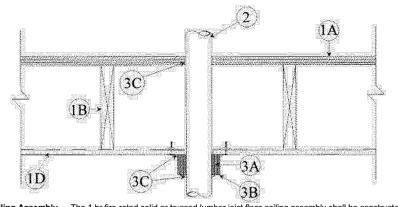
3M COMPANY — CP 25WB+ Caulk, FB-3000 WT Sealant, MP+ Stix Putty (Note: L Ratings apply only when Type CP 25WB+

caulk or FB-3000 WT sealant is used. CP 25WB+ not suitable for use with CPVC pipes.) 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 2005-05-20

#### UL F- C 2024

F Ratings — 1 and 2 Hr (See Item 1) T Ratings — 0, 1, 1-1/2 and 2 Hr (See Item 3)



I. Floor-Ceiling Assembly — The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The 2 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in Design Nos. L505, L511 or L536 in the UL Fire Resistance Directory. The F Rating of the firestop system is equal to the rating of the floorceiling assembly. The general construction features of the floor-ceiling assembly are summarized below:

A. Flooring System — Lumber or plywood subfloor with finish floor of lumber plywood or Floor Topping Mixture\* as specified in the individual Floor-Ceiling Design.

B. Wood Joists\* — For 1 hr fire-rated floor-ceiling assemblies nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or **Structural Wood Members\*** with bridging as required and with ends firestopped. For 2 hr firerated floor-ceiling assemblies, nom 2 by 10 in. (51 by 254 mm) lumber joists spaced 16 in. (406 mm) OC with nom 1 by 3 in. (25 by 76 mm) lumber bridging and with ends firestopped. C. Furring Channels — (Not Shown) — Resilient galv steel furring installed perpendicular to wood joists between first and second layers of wallboard (Item 1D) in 2 hr fire-rated assembly. Furring channels spaced max 24 in. (610 mm) OC.

D. **Gypsum Board\*** — Nom 4 ft (122 cm) wide by 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. First layer of wallboard nailed to wood joists. Second layer of wallboard (2 hr fire-rated assembly) screw-attached to furring channels. 2. Through Penetrants — One nonmetallic pipe, conduit or tubing to be installed approx midway between wood joists. Diam of openings hole-sawed through flooring system and through two layers gypsum wallboard ceiling to be 0 to 1/4 in. (0 to 6 mm) larger than the outside diam of through-penetrant. Pipe or conduit to be rigidly supported on both sides of the floor-ceiling assembly. The following types and sizes of nonmetallic pipes or conduits may be used: A. Polyvinyl Chloride (PVC) Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 solid-core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.

B, Cellular-Core Polyvinyl Chloride (ccPVC) Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system. C. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 4 in. (102 mm) diam (or smaller) SDR13.5 CPVC pipe for use in closed (process or supply) piping systems. D. Acrylonitrile Butadiene Styrene (ABS) Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 solid-core ABS pipe for

use in closed (process or supply) or vented (drain, waste or vent) piping systems. E. Cellular-Core Acrylonitrile Butadiene Styrene (ccABS) Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 cellular core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems. 3 Fireston System — The details of the fireston system shall be as follows:

A. Fill, Void or Cavity Materials\* — Wrap Strip — Nom 1/4 in. (6 mm) thick intumescent elastomeric material faced on one side with aluminum foil, supplied in 1 and 2 in. (25 and 51 mm) wide strips. Strips tightly wrapped around nonmetallic pipe (foil side exposed) with the edges butted against the bottom surface of the gypsum wallboard ceiling. The min wrap strip width, the number of layers of wrap strip required, the type of pipe and the nom diam, as well as the F and T Rating of the system are shown in the

Pipe Type	Nom Pipe Diam In.	F Rating Hr	T Rating Hr	Wrap Strip Width In.	Min Wrap Strip Layers
PVC, CPVC, ABS,	1/2 (13 mm) to 1-1/2 (38 mm)	1	1	1 (25 mm)	1
ccPVC or ccABS (a)					
PVC, CPVC, ABS,	2 (51 mm)to 2-1/2 (64 mm)	1	1	1 (25 mm)	2
ccPVC, or ccABS (a	)				
PVC, CPVC, ABS,	3 (76 mm)	1	1	1 (25 mm)	3
ccPVC or ccABS (a)					
PVC, CPVC, ABS,	1/2 (13 mm) to 2 (51 mm)	1	1	2 (51 mm)	1
ccPVC or ccABS (a)	1				
PVC, CPVC, ABS or ccPVC	2-1/2 (64 mm) to 4 (102 mm)	1	1	2 (51 mm)	2
ccABS (a)	2-1/2 (64 mm) to 3 (76 mm)	1	1/2	2 (51 mm)	2
ccABS (a)	3-1/2 (89 mm) to 4 (102 mm)	1	1/2	2 (51 mm)	3
PVC, CPVC, ABS, or ccPVC	1/2 (13 mm)to 1-1/2 (38 mm)	2	1-1/2	1 (25 mm)	1
ccABS (a)	1/2 (13 mm) to 1-1/2 (38 mm)	2	2	2 (51 mm)	2
ABS, PVC, ccPVC, or CPVC	1/2 (13 mm) to 2 (51 mm)	2	1-1/2	2 (51 mm)	1
ABS, PVC, ccPVC or CPVC	2-1/2 (64 mm) to 3 (76 mm)	2	1-1/2	2 (51 mm)	2
ABS	3-1/2 (89 mm) to 4 (102 mm)	2	1-1/2	2 (51 mm)	3
PVC, ccPVC or CPVC	3-1/2 (89 mm) to 4 (102 mm)	2	2	2 (51 mm)	3

## 3M COMPANY — Type FS-195+

B. Steel Collar — Nom 2 in. (51 mm) deep collar with 1-1/4 in. (32 mm) wide by 2 in. (51 mm) long anchor tabs and min 3/4 in. (19 mm) long tabs to retain wrap strip layers. Coils of precut 0.016 in. (.41 mm) thick (30 gauge) galv sheet steel are available from wrap strip manufacturer. As an alternate, collar my be field fabricated from min 0.016 in (.41 mm) thick (.30 gauge) galy sheet steel in accordance with instruction sheet applied by wrap strip manufacturer Steel collar, with anchor tabs bent outward 90 degrees, wrapped tightly around wrap strip layers with min 1 in. (25 mm) overlap at the seam. With steel anchor tabs pressed tightly against underside of gypsum wallboard ceiling, compress collar around wrap strip layers using a min 1/2 in. (13 mm) wide by 0.028 in. (.71 mm) thick stainless steel band clamp at the collar midheight. As an alternate to the band clamps, collars may be secured by a means No. 10 by 1/2 in. (13 mm) long sheet metal screws installed in the vertical axis at the center of the 1 in. (25 mm) overlap along the perimeter joint of the collar. A min of three screws is required.

Secure collar to gypsum wallboard ceiling using 3/16 in. (5 mm) diam steel toggle bolts (5/8 in. (16 mm) grip) in conjunction with 1-1/4 in. (32 mm) diam steel fender washers. Min of three fasteners, symmetrically located, required for nom 1/2 in. to nom 3 in. (13 mm to 76 mm) diam pipes. Min of four symmetrically located fasteners required for nom 3-1/2 in. and 4 in. (89mm and 102 mm) diam pipes. As a final step, bend wrap strip retainer tabs 90 degrees toward pipe to lock wrap strip layers in position.

C. Fill, Void or Cavity Materials\* — Caulk or Sealant — Generous application of caulk to be applied around the perimeter of the steel collar at its interface with the gypsum wallboard ceiling and around the perimeter of the pipe at its interface with the gypsum wallboard ceiling and around the perimeter of the pipe at its interface with the gypsum wallboard ceiling and around the perimeter of the pipe at its interface with the gypsum wallboard ceiling and around the perimeter of the pipe at its interface with the gypsum wallboard ceiling and around the perimeter of the pipe at its interface with the gypsum wallboard ceiling and around the perimeter of the pipe at its interface with the gypsum wallboard ceiling and around the perimeter of the pipe at its interface with the gypsum wallboard ceiling and around the perimeter of the pipe at its interface with the gypsum wallboard ceiling and around the perimeter of the pipe at its interface with the gypsum wallboard ceiling and around the pipe at its interface with the gypsum wallboard ceiling and around the pipe at its interface with the gypsum wallboard ceiling and around the gypsum wallboard ceiling and around the gypsum wallboard ceiling at the gypsum wallboard ceiling and around the gypsum wallboard ceiling at the gypsum wallboard ceiling layers. Caulk also applied around perimeter of pipe to fill annular space to max extent possible, flush with top surface of floor.

3M COMPANY — CP25 WB+, IC 15WB+ caulk, FireDam 150+ caulk or FB-3000 WT sealant. (Note: CP 25WB+ and FireDam 150+ not suitable for use with CPVC pipes.)

D. Foil Tape (not shown) — Nom 4 in. (102 mm) wide, 3 mil thick aluminum tape wrapped around pipe prior to the installation of he wrap strip (Item 3A). Min of one wrap, flush with the ceiling and proceeding downward. Tape is required only for nom 3-1/2 in. to 4 in. (89 mm to 102 mm) diam ABS pipes and for all ABS pipes. E. Firestop Device\* — (Not Shown) — As an alternate to Item A and B when nom 1-1/2 in. (32 mm), 2 in. (51 mm), 3 in. (76 mm), or 4 in. (102 mm) diam nonmetallic pipes are used, a firestop device consisting of a sheet-steel split collar lined with intumescent material and provided with steel clips for attachment may be used in accordance with the table below. Firestop device to be installed on underside of ceiling in accordance with the accompanying installation instructions.

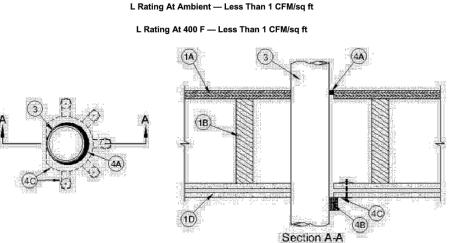
de of ceiling in accordance with the accompanying installation instructions.				
Pipe Type	Nom Pipe Diam, In. (mm)	F Rating Hr	T Rating Hr	Firestop Device
PVC, CPVC, ABS,	1-1/2 (32)	1	1	PPD 1.5 or PPD 150
ccPVC or ccABS (a)				
PVC, CPVC, ABS,	2 (51)	1	1	PPD 2 or PPD 200
ccPVC or ccABS (a)				
PVC, CPVC, ABS,	3 (76)	1	1	PPD 3 or PPD 300
ccPVC or ccABS (a)				
PVC, CPVC, ABS or ccPVC	4 (102)	1	1	PPD 4 or PPD 400
ccABS (a)	2 (51)	1	1/2	PPD 200
ccABS (a)	3 (76)	1	1/2	PPD 300
ccABS (a)	4 (102)	1	1/2	PPD 400
PVC, CPVC, ABS or ccPVC	1-1/2 (32)	2	1-1/2	PPD 1.5 or PPD 150
ccABS (a)	1-1/2 (32)	2	2	PPD 150
ABS, PVC, ccPVC or CPVC	1-1/2 (32)	2	1-1/2	PPD 150
ABS, PVC, ccPVC or CPVC	2 (51)	2	1-1/2	PPD 200
ABS, PVC, ccPVC or CPVC	3 (76)	2	1-1/2	PPD 300
PVC, ccPVC or CPVC	4 (102)	2	2	PPD 400
ABS	4 (102)	2	1-1/2	PPD 400

(a) — Requires use of aluminum tape detailed in Item 3D

UL F- C 2355

## System No. F-C-2355 December 08, 2008

F Ratings — 1 and 2 Hr (See Item 1) T Ratings — 1 and 2 Hr (See Item 1)



1. Floor-Ceiling Assembly — The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The 2 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in Design Nos. L505, L511 or L536 in the UL Fire Resistance Directory. The F and T Ratings of the firestop system are equal to the rating of the floor-ceiling assembly. The general construction features of the floor-ceiling assembly are summarized below:

A. Flooring System — Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping

Mixture\* as specified in the individual Floor-Ceiling Design. Diam of opening hole-sawed in flooring shall be max 1/2 in. (13 mm) larger than diam of through penetrant (Item 3). B. Wood Joists\* — For 1 hr fire-rated floor-ceiling assemblies nom 10 in, deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or **Structural Wood Members\*** with bridging as required and with ends firestopped. For 2 hr fire-rated floor-ceiling assembly, nom 2 by 10 in. (51 by 250 mm) lumber joists spaced 16 in. (406 mm) OC with nom 1 by 3 in. (25 by 76 mm) lumber bridging with ends firestopped. C. Furring Channels — (Not Shown)— Resilient galv steel furring installed perpendicular to wood joists between first and second layers of gypsum board (Item 1D) in 2 hr fire-rated assembly. D Gypsum Board\* — Nom 4 ft (1.2 m) wide by 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. First layer of gypsum board nailed to wood joists. Second layer of gypsum board (2 hr firerated assembly) screw-attached to furring channels. Diam of opening shall be max 1/2 in. (13 mm) larger

than nom diam of through penetrant (Item 3). 2. Chase Wall — (Optional, Not Shown)—The through-penetrant (Item 3) may be routed through a 1 or 2 hr fire-rated single, double or staggered wood stud/gypsum board chase wall constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and which includes the following construction features:

A. Studs — Nom 2 by 6 in. (51 by 152 mm) or double nom 2 by 4 in. (51 by 102 mm) lumber studs. B. Sole Plate — Nom 2 by 6 in. (51 by 152 mm) or parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Diam of opening hole-sawed in sole plate to be max 1/2 in. (13 mm) larger than diam of through penetrant (Item 3). C. Top Plate — The double top plate shall consist of two nom 2 by 6 in. (51 by 152 mm) or two sets of parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Diam of opening shall be max 1/2 in. (13

mm) larger than diam of through penetrant (Item 3). D. **Gypsum Board\*** — Thickness, type, number of layers and fasteners shall be as specified in the individual Wall or Partition Design. Through Penetrants — One nonmetallic pipe or conduit to be installed either concentrically or eccentrically within the firestop system. The annular space between the pipe or conduit and the periphery of the opening shall be min 0

in. (0 mm, point contact) to a max 1/2 in. (13 mm). Pipe or conduit to be rigidly supported on both sides of floor-ceiling. The following types and sizes of pipes or conduits may be used: A. Polyvinyl Chloride (PVC) Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 cellular or solid core PVC pipe for use in closed (process or supply) or vented (drain, waste, or vent) piping systems. B. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 4 in. (102 mm) diam (or smaller) SDR 13.5 CVPC pipe for use in closed (process or supply) piping systems. C. Acrylonitrile Butadiene Styrene (ABS) Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 cellular core or solid core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent)

D. Rigid Nonmetallic Conduit+ — Nom 3 in. (76 mm) diam (or smaller) Schedule 40 PVC conduit installed in accordance with the National Electrical Code, (NFPA No. 70). 4. Firestop System — The firestop system shall consist of the following: A. Fill, Void or Cavity Material\* — Sealant — Min 3/8 in. (10 mm) thickness of fill material applied within

B. Fill, Void or Cavity Material\* — Wrap Strip — Nom 1/8 in. (3.2 mm) or 3/16 in. (4.8 mm) thick intumescent material faced on both sides with a plastic film, supplied in 1-1/2 in. or 2 in. (51 mm) wide strips or nom 1/4 in. (6 mm) thick intumescent material faced on both sides with a plastic film, supplied in 1-1/2 in. (38 mm) wide strips. For nom 1-1/2 in. (38 mm) and 2 in. (51 mm) diam pipes/conduits, a min of two layers of wrap strip are required. For nom 2-1/2 in. (64 mm) or 3 in. (76 mm) diam pipes/conduits, a min of three layers of wrap strip are required. For nom 3-1/2 in (89 mm) and 4 in. (102 mm) diam pipes/conduits, a min of four layers of wrap strip are required. The layers of wrap strip are to be eccentrically installed such that the layers do not completely encircle the penetrant. The layers are wrapped around the penetrant flush with bottom surface of ceiling or top plate such that the ends butt up to the tangent of the periphery of the opening at the point contact location. Layers of wrap strip temporarily held in place with tape SPECIFIED TECHNOLOGIES INC — SpecSeal RED Wrap Strip, SpecSeal BLU Wrap Strip or SpecSeal

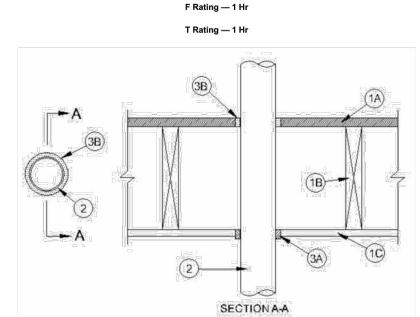
C. Steel Collar — Collar fabricated from coils of precut 0.016 in. (4 mm) thick (No. 30 MSG) galv sheet steel available from wrap strip manufacturer. Collar shall be nom 1-1/2 in, (38 mm) or 2 in, (51 mm) deep (dependent upon width of wrap strip) with min four 1 in. (25 mm) wide by 2 in. (51 mm) long anchor tabs for attachment to the ceiling or top plate. Retainer tabs. 3/4 in. (19 mm) wide tapering down to 3/8 in. (10 mm) wide and located opposite the anchor tabs, are folded 90 degree toward through-penetrant surface to maintain the annular space around the through-penetrant and to retain the wrap strips. Steel collar wrapped around wrap strips and through penetrant with a 1 in. (25 mm) wide overlap along its perimeter joint. Steel collar tightened around wrap strips and through penetrant using min 1/2 in. (13 mm) wide by 0.028 in. (7 mm) thick stainless steel hose clamp installed at midheight of the collar or using three symmetrically located No. 8 steel sheet metal screws. Collar secured to gypsum board surface with 1/8 in. (3 mm) diam steel hollow wall anchors in conjunction with min 1 in. (25 mm) diam steel fender washers installed symmetrically opposite the point contact location. When installed inside chase wall, the collar is fastened to the top plate with nom 3/4 in. (19 mm) long steel wood screws in conjunction with nom 1 in. (25 mm) diam steel fender washers. The number of fasteners used is dependent upon the nom diam of the through penetrant. Two fasteners, symmetrically located, are required for nom 1-1/2 in (38 mm) and 2 in. (51 mm) diam through penetrants. Three fasteners, symmetrically located, are required for nom 2-1/2 in. (64 mm) and 3 in. (76 mm) diam through penetrants. Five fasteners, symmetrically located, are required for nom 3-1/2 in. (89 mm) and 4 in. (102 mm) diam through penetrants.

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

System No. F-C-2368

## UL F- C 2368

Last Updated on 2008-12-08



1. Floor - Ceiling Assembly — The 1 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Designs in the UL Fire Resistance Directory, as summarized below:

A. Flooring System — Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture\* as specified in the individual Floor-Ceiling Design. Max diam of floor opening is 4 in. (102 mm). B. Wood Joists — Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members\* with bridging as required and with ends firestopped.

C. Gypsum Board\* — Nom 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. Wallboard secured to joists as specified in the individual Floor-Ceiling Design. Max diam of ceiling opening is 4 in. (102 mm) 2. Through Penetrants — One nonmetallic pipe to be centered within the firestop system. The annular space between pipe and periphery of opening shall be nom 1/4 in. Pipe to be rigidly supported on both sides of floor assembly. The following types and sizes of nonmetallic pipes may be used:

A. Polyvinyl Chloride (PVC) Pipe — Nom 3 in. (76mm) Schedule 40 solid core PVC or cellular core PVC (ccPVC) pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems. B. Acrylonitrile Butadiene Styrene (ABS) Pipe — Nom 3 in. (76mm) Schedule 40 solid core ABS or cellular core ABS (ccABS) for use in closed (process or supply) or vented (drain, waste or vent) piping systems

3. Firestop System — The firestop system shall consist of the following: A. Fill, Void or Cavity Material\* - Wrap Strip — One layer of nom 1/4 in. thick by 2 in. wide intumescent wrap strip tightly wrapped around the outer circumference of the pipe with ends butted and held in place with foil tape. Wrap strip slid into the annular space with the bottom edge of the wrap strip extending 1/4 in. below gypsum board ceiling.

B. Fill, Void or Cavity Material\* - Caulk — Min 3/4 in. (19 mm) thickness of fill material applied within annulus, flush with top surface of floor.

RECTORSEAL — Biostop 500+

\* 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 2007-12-27

## UL F- C 3012

System No. F-C-3012 ANSI/UL1479 (ASTM E814) CAN/ULC S115 F Ratings — 1 and 2 Hr (See Item 1) F Ratings — 1 and 2 Hr (See Item 1) Γ Ratings — 0, 1 and 1-3/4 Hr (See Item 3) FT Ratings — 0, 1 and 1-3/4 Hr (See Item 3) FH Ratings - 1 and 2 Hr (See Item 1 FTH Ratings — 0, 1 and 1-3/4 Hr (See Item 3)

> **SECTION A-A** 1. Floor-Ceiling Assembly — The 1 or 2 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be

constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction features of the floor-ceiling assembly are summarized A. Flooring System — Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture\* as specified in the individual Floor-Ceiling Design. Max diam of opening for 1 or 2 hr assembly is 2-1/2 in. (64 mm) or 2 in. (51 mm), respectively. B. Wood Joists\* — Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members\* with bridging as required and with ends firestoppe C. Furring Channels — (Not Shown) — (As required) - Resilient galvanized steel furring installed in accordance with the manner specified in the individual L500 Series Designs in the Fire Resistance

D. Gypsum Board\* — Thickness, type, number of layers and fasteners shall be as specified in the individual Floor-Ceiling Design. Max diam of opening for 1 or 2 hr assembly is 2-1/2 in. (64 mm) or 2 in. (51 The F Rating of the firestop system is equal to the rating of the floor-ceiling assembly.

2. Chase Wall — (Optional) - The through penetrant (Item 3) may be routed through a fire-rated or non-rated single, double or staggered wood stud/gypsum wallboard chase wall. The chase wall shall be constructed to include the A. **Studs** — Nom 2 by 6 in. (51 by 152 mm) or double nom 2 by 4 in. (51 by 102 mm) lumber studs. B. Sole Plate — Nom 2 by 6 in. (51 by 152 mm) or parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Max diam of opening for 1 or 2 hr rated assembly is 2-1/2 in. (64 mm) or 2 in. (51 mm), respective C. Top Plate — The double top plate shall consist of two nom 2 by 6 in. (51 by 152 mm) or two sets of parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Max diam of opening for 1 or 2 hr rated assembly is 2-1/2 in. (64 mm) or 2 in. (51 mm), respectively.

D. Gypsum Board\* — One or two layers of min 1/2 in. (13 mm) gypsum board. 3. Cables - In 1 hr fire-rated assemblies, aggregate cross-sectional area of cables in opening to be max 45 percentof the cross-sectional area of the opening (max 2 in. (51 mm) diam bundle). Cables to be rigidly supported on both sides of floor assembly. Any combination of the following types and sizes of copper conductors may be used:

A. RG 59 coaxial cable with single copper conductor, cellular polyethylene cellular foam insulation and

B. Max 8/C No. 22 AWG telephone cable with polyvinyl chloride (PVC) jacketing. C. Max 2/C No. 12 AWG cable with polyvinyl chloride (PVC) insulation and jacketing.

D. Max 3/C with ground No. 2/0 AWG aluminum or copper Type SER cable with polyvinyl chloride (PVC) E. Max 3/C with ground No. 2/0 AWG Type NM cable with polyvinyl chloride (PVC) insulation.

F. Max 3/C No. 12 AWG MC (BX) cable with polyvinyl chloride (PVC) insulation. G. Max 1 in, diam metal clad TEK cable with PVC jacket. H. Max 4/C with ground No. 300 kcmil (or smaller) aluminum SER cable with PVC insulation and jacket. I. Through Penetrating Product\* - Any cables, Metal-Clad Cable+ or Armored Cable+ currently

Classified under the Through Penetrating Products category. See Through Penetrating Product (XHLY) category in the Fire Resistance Directory for names of The T Rating is 1 and 1-3/4 hr for 1 and 2 hr rated assemblies, respectively, for cables 3A through 3G. The T

Rating is 0 hr for cables 3H and 3I. 4. Fill, Void or Cavity Material\* — Sealant — Min 3/4 in. (19 mm) thickness of fill material applied within the annulus, flush with top surface of floor or sole plate. Min 5/8 in. (16 mm) thickness of fill material also applied within the annulus, flush with bottom surface of ceiling or lower top plate.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS611A Sealant or FS-One Sealant or FS-ONE MAX

Last Updated on 2018-04-06

## UL F- C 8009

System No. F-C-8009

January 21, 2015	
ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 1 Hr	F Rating —
T Rating — 1 Hr	FT Rating —
	FH Rating —
	FTH Rating —
A (A)  (A)  (B)  (A)  (B)  (A)  (A)  (A)	(5B) (C)

## SECTION A-A

System tested with a pressure differential of 2.5 Pa between the exposed and the unexposed surfaces with the higher pressure on the exposed side.

1. Floor-Ceiling Assembly — The 1 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory, as A. Flooring System — Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture\* as specified in the individual Floor-Ceiling Design. Max diam of opening is 3 in. (76 mm) B. Wood Joists — Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members\* with bridging as required and with ends firestopped C. Gypsum Board\* — Thickness, type, number of layers and fasteners shall be as specified in the individual Floor-Ceiling Design. Max diam of opening in ceiling [when chase wall (Item 2) is not provided] is 3 in. (76

2. Chase Wall — (Optional, Not Shown) — The through penetrant (Item 3) may be routed through a 1 hr fire-rated single, double or staggered wood stud/gypsum wallboard chase wall constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include A. Studs — Nom 2 by 6 in. (51 by 152 mm) lumber or double nom 2 by 4 in. (51 by 102 mm) lumber studs.

B. Sole Plate — Nom 2 by 6 in. (51 by 152 mm) lumber or parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Max diam of opening shall be 3 in. (76 mm). C. Top Plate — The double top plate shall consist of two nom 2 by 6 in. (51 by 152 mm) lumber plates or 2 sets of parallel nom 2 by 4 in. (51 by 102 mm) lumber, tightly butted. Max diam of opening is 3 in. (76 mm).  $\hbox{D. {\bf Gypsum\ Board*}$--$Thickness, type, number of layers and fasteners shall be as specified in individual Wall}\\$ 3. Through Penetrants — Pipe, cable and tubing to be bundled and rigidly supported on both sides of floor assembly.

A nom annular space of min 0 in. (point contact) to max 1/2 in. (13 mm) is required within the firestop system. The following types and sizes of pipe, cable and tubing are to be used in the firestop system in sufficient quantities to fill the A. **Cable** — Type PJT thermoset cable, 5/C No. 18 AWG copper conductor, plastic insulation and jacket. B. Polyvinyl Chloride (PVC) Pipe — Nom 1-1/2 in. (38 mm) diam (or smaller) Schedule 40 solid core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems. C. Copper Tubing — Nom 3/4 in. (19 mm) diam (or smaller) Type L (or heavier) copper tubing. D. Copper Tubing — Nom 1/2 in. (13 mm) diam (or smaller) Type L (or heavier) copper tubing. 4. Tube Insulation — Plastics+ — Nom 1/2 in. (13 mm) thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. Insulation to be installed only on one through reverant having a max nom See Plastics+ (QMFZ2) category in the Recognized Component Directory for names of manufacturers. Any

5. Firestop System — The firestop system shall consist of the following:

A. Firestop Device\* — Firestop Collar — Firestop collar shall be installed in accordance with the accompanying installation instructions. Collar to be installed and latched around the penetrants and secured to underside of gypsum wallboard ceiling using the anchor hooks provided with the collar. The anchor hooks are to be secured to the surface of the ceiling with min 3/16 in. diam min 2-1/2 in. long toggle bolts.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 64-3 90/3"N, CP 64-3 63/2"N, CP 64-3 50/1-

Recognized Component tube insulation material meeting the above specifications and having a UL94 Flammability

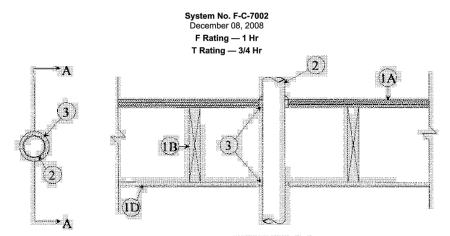
B. Fill, Void or Cavity Material\* — Sealant — Min 3/4 in. (19 mm) thickness of fill material applied within the annulus, flush with top surface of floor or sole plate. Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with bottom surface of ceiling or lower top plate. Caulk to be forced into interstices of penetration group to max extent possible at top surface of floor or sole plate and bottom surface of ceiling or HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS611A, FS-ONE Sealant or FS-ONE MAX

+Bearing the UL Recognized Component Mark \*Bearing the UL Classification Marking

Classification of 94-5VA may be used.

Last Updated on 2015-01-21

## UL F- C 7002



SECTION A-A 1. Floor-Ceiling Assembly — The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory, as summarized below: A. Flooring System — Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture\* as specified in the individual Floor-Ceiling Design. Max diam of floor opening is 5 in. B, Wood Joists — Nom 2 by 10 in, lumber joists spaced 16 in, OC with nom 1 by 3 in, lumber bridging and with ends firestopped. As an alternate to lumber joists, nom 10 in. deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members\* with bridging as required with ends firestopped. C. Furring Channels — (Not Shown) — Resilient galv steel furring installed perpendicular to wood joists (Item 1B) between wallboard (Item 1D) and wood joists or furring channels as required in the individual Floor-Ceiling D. Gypsum Board\* — Nom 4 ft wide by 5/8 in, thick as specified in the individual Floor-Ceiling Design Wallboard secured to wood joists or furring channels as specified in the individual Floor-Ceiling Design. Max diam of ceiling opening is 5 in.

1.1 Chase Wall — (Not Shown, optional) The through penetrant (Item 2) may be routed through a 1 hr fire-rated single, double or staggered wood stud/gypsum wallboard chase wall constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features: A. Studs - Nom 2 by 6 in. or double nom 2 by 4 in. lumber studs.

B. Sole Plate — Nom 2 by 6 in. or parallel 2 by 4 in. lumber plates, tightly butted. C. Top Plate — The double top plate shall consist of two nom by 6 in. or two sets of parallel 2 by 4 in. lumber plates, tightly butted. Max diam of opening is 5 in. D. **Gypsum Board\*** — Thickness, type, number of layers and fasteners shall be as specified in individual Wall

2. Steel Duct — Nom 4 in. diam (or smaller) No. 30 gauge (or heavier) steel duct. One duct to be centered within the firestop system. Diam of openings hole-sawed through flooring system and through gypsum wallboard ceiling to the nom 1/2 in. larger than the outside diam of through-penetrant. Steel duct to be rigidly supported on both sides of floor-ceiling assembly. 3. Fill, Void or Cavity Material\* — Sealant — Min 3/4 in. thickness of fill material applied within annulus on top surface of floor. Min 5/8 in. thickness of fill material applied within annulus on bottom surface of ceiling or lower top plate of chase wall assembly. Additional fill material to be installed such that a min 1/8 in. crown is formed around the penetrating item on bottom surface of ceiling or lower top plate of chase wall assembly. SPECIFIED TECHNOLOGIES INC — SpecSeal Series SSS Sealant or SpecSeal LCI Sealant

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 2008-12-08

## **QUINEBAUG RIVER** CHURCH

## **PROPOSED** CONSTRUCTION

32 School Street Jewett City, Connecticut 06351



(860) 460-6188 r

kathy.kmlarchitects@gmail.com e

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171 Branch Hill Road a Preston, CT 06365-8605

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Description

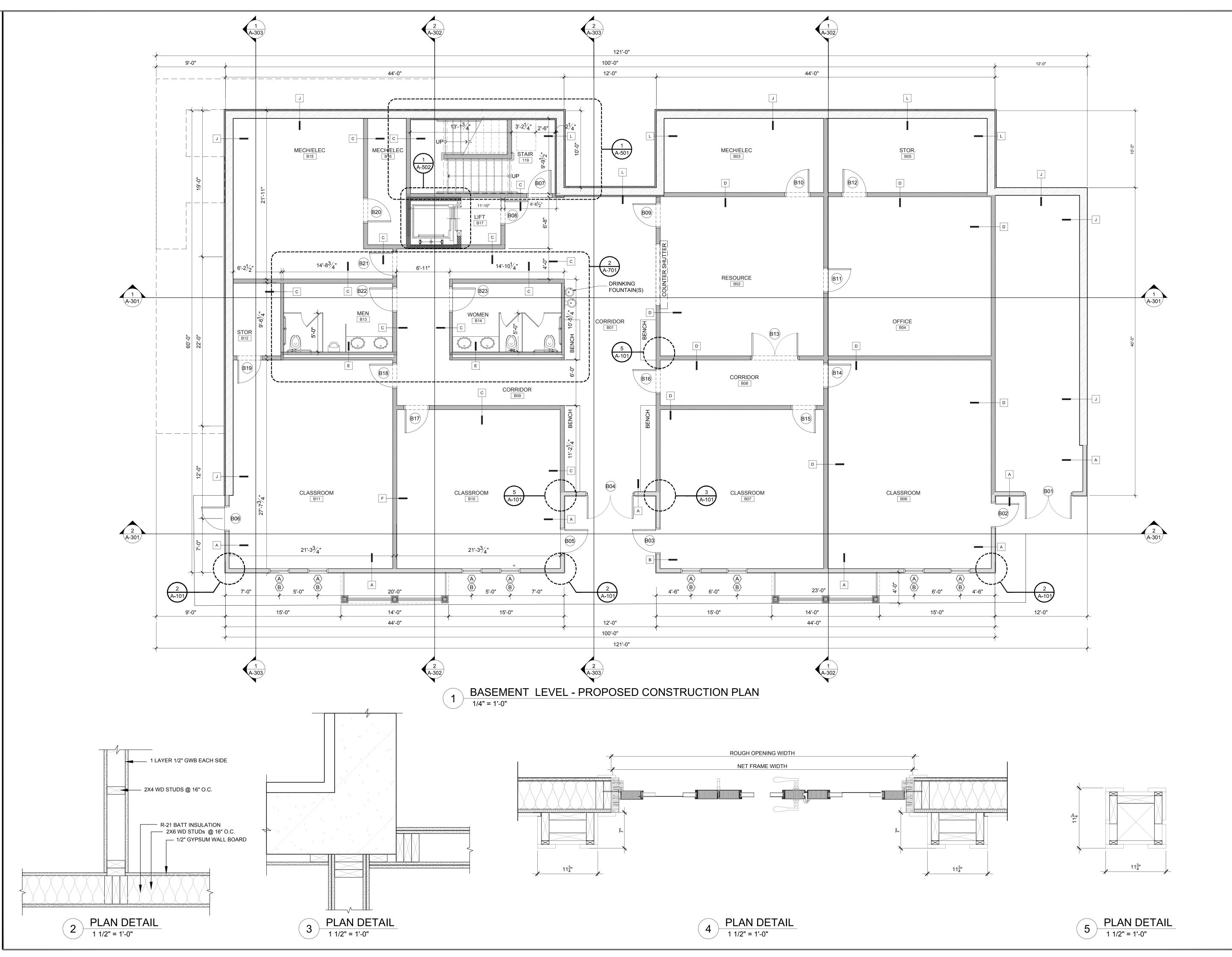
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APRIL 28, 2020 Issue Date: Scale: As Noted Jewett City - QRC

**Drawing Number** 

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Last Updated on 2009-11-20



## PROPOSED CONSTRUCTION

32 School Street

Jewett City, Connecticut 06351



CONSTRUCTION DOCUMENTS

Description

2 11/25/19 OWNER R V. LC VER LEVEL

1 02/2 10 OWNER R V. LC VER LEVEL

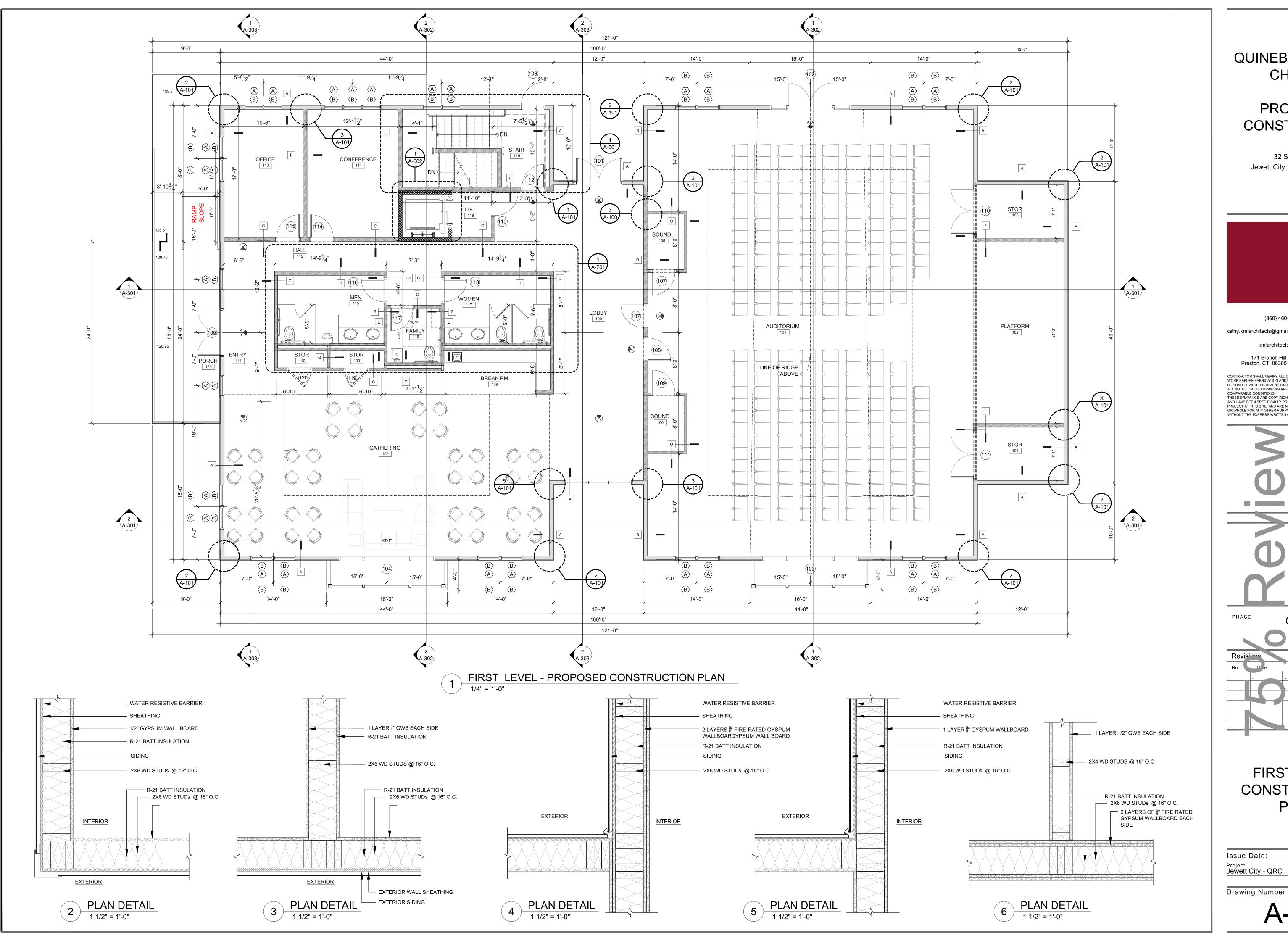
BASEMENT LEYEL CONSTRUCTION PLAN

Issue Date:

Project:
Jewett City - QRC

Scale: As Noted

Drawing Number



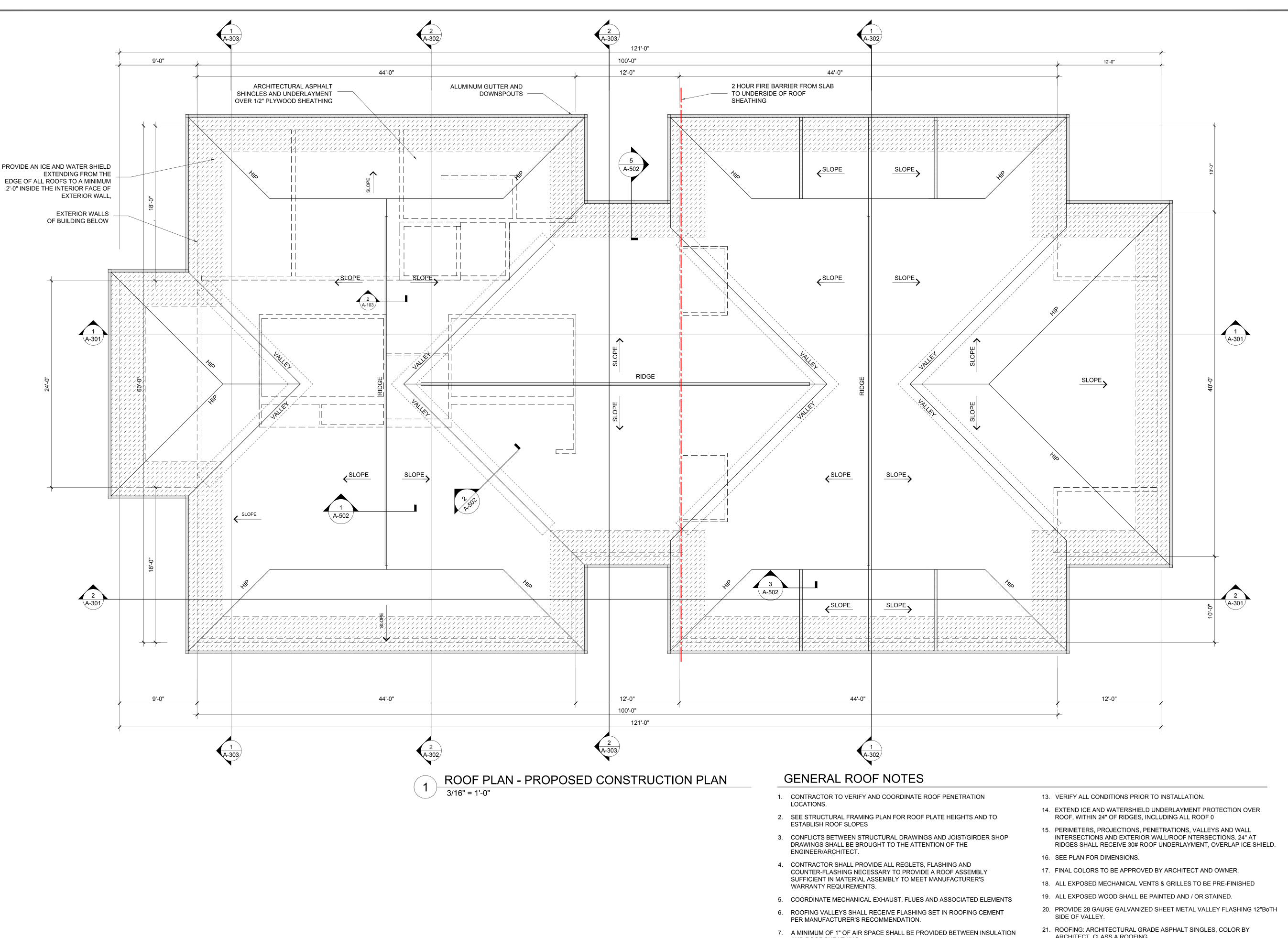
PROPOSED CONSTRUCTION

32 School Street
Jewett City, Connecticut 06351



APRIL 28, 2020

Scale: As Noted



## PROPOSED CONSTRUCTION

32 School Street Jewett City, Connecticut 06351



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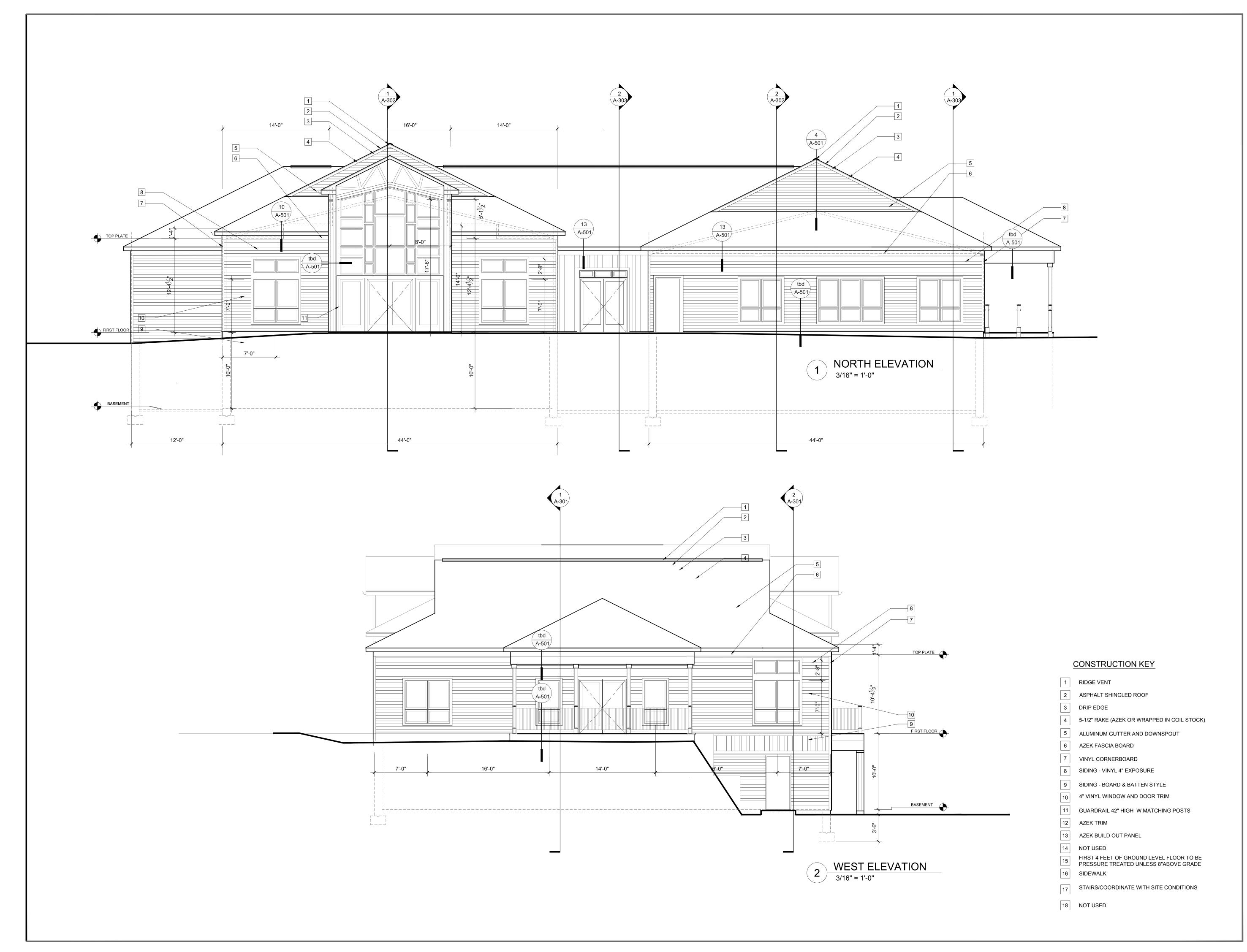
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APRIL 28, 2020 Issue Date: Scale: As Noted Jewett City - QRC

- AND ROOF SHEATHING.
- 8. PROVIDE UPPER VENTS AS REQUIRED TYPICAL. PROVIDE ADDITIONAL
- ROOF VENTS AT LOCATIONS AS REQUIRED. COORDINATE WITH VENTILATION REQUIREMENTS AND DRAFT STOP LOCATIONS. 9. PROVIDE CONTINUOUS GUTTERS AT ALL ROOFS. VERIFY AND COORDINATE
- LOCATIONS WITH CIVIL FOR CONNECTIONS INTO STORM DRAINS. 10. SEE EXTERIOR ELEVATIONS AND DETAILS FOR ADDITIONAL INFORMATION.
- 11. IN ANY OVER FRAMED AREA. PROVIDE 22" x 30" OPENING IN LOWER ROOF SHEATHING FOR VENTILATION AND ACCESS. SEE STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
- 12. ROOFING SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- ARCHITECT. CLASS A ROOFING.
- 22. DASHED LINE = PERIMETER OF WALL BELOW, PER PLAN.
- 23. ALL FLUE / VENT SHALL BE UL APPROVED VENT CAP.
- 24. COORDINATE WITH ELECTRICAL AT SOFFITS PER OWNER AND ELECTRCIAN;
- 25. PROVIDE GUTTER AT EAVES PER SECTIONS. CONTINUOUS TO DOWNSPOUTS.



## PROPOSED CONSTRUCTION

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OR WHOLE FOR ANY OTHER PURPOSE, PROJECT LOCA...ON OWITHOUT THE EXPRESS WRITTEN CONSENT OF KML ARCHITE

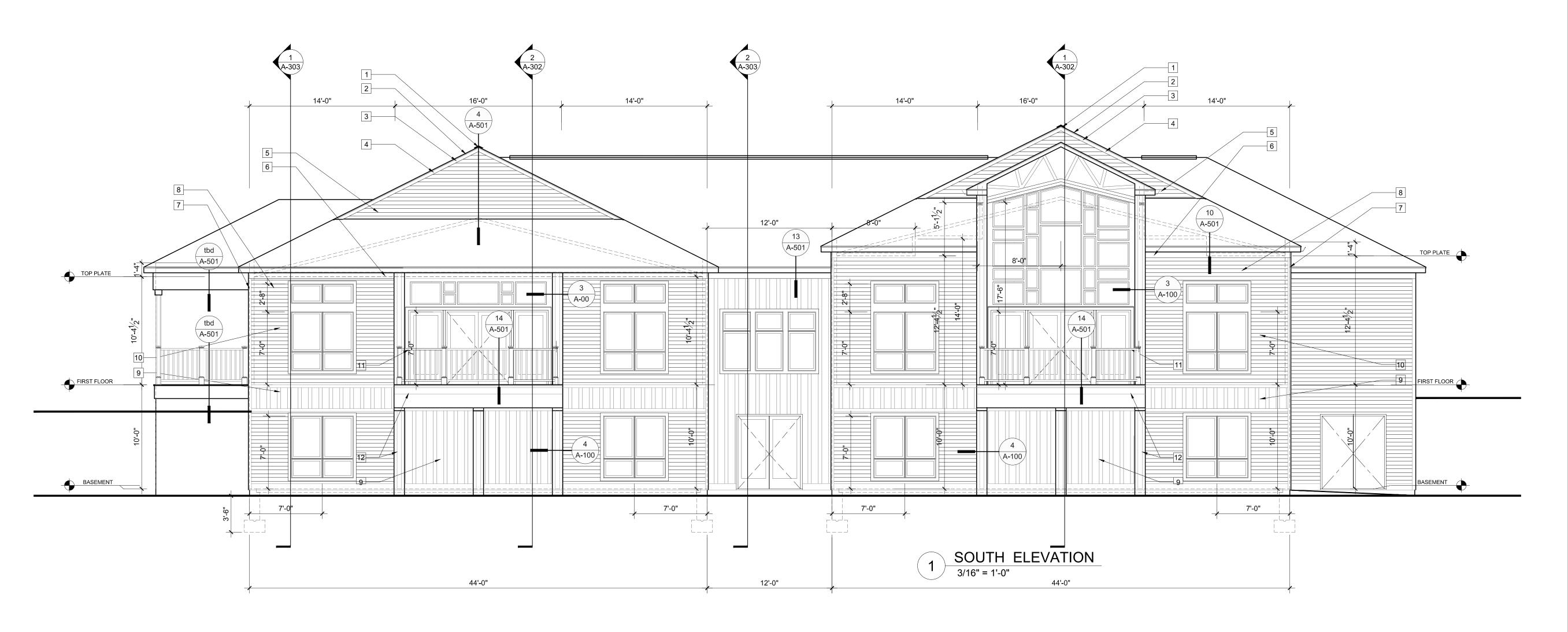
CONSTRUCT ON DOCUMENTS

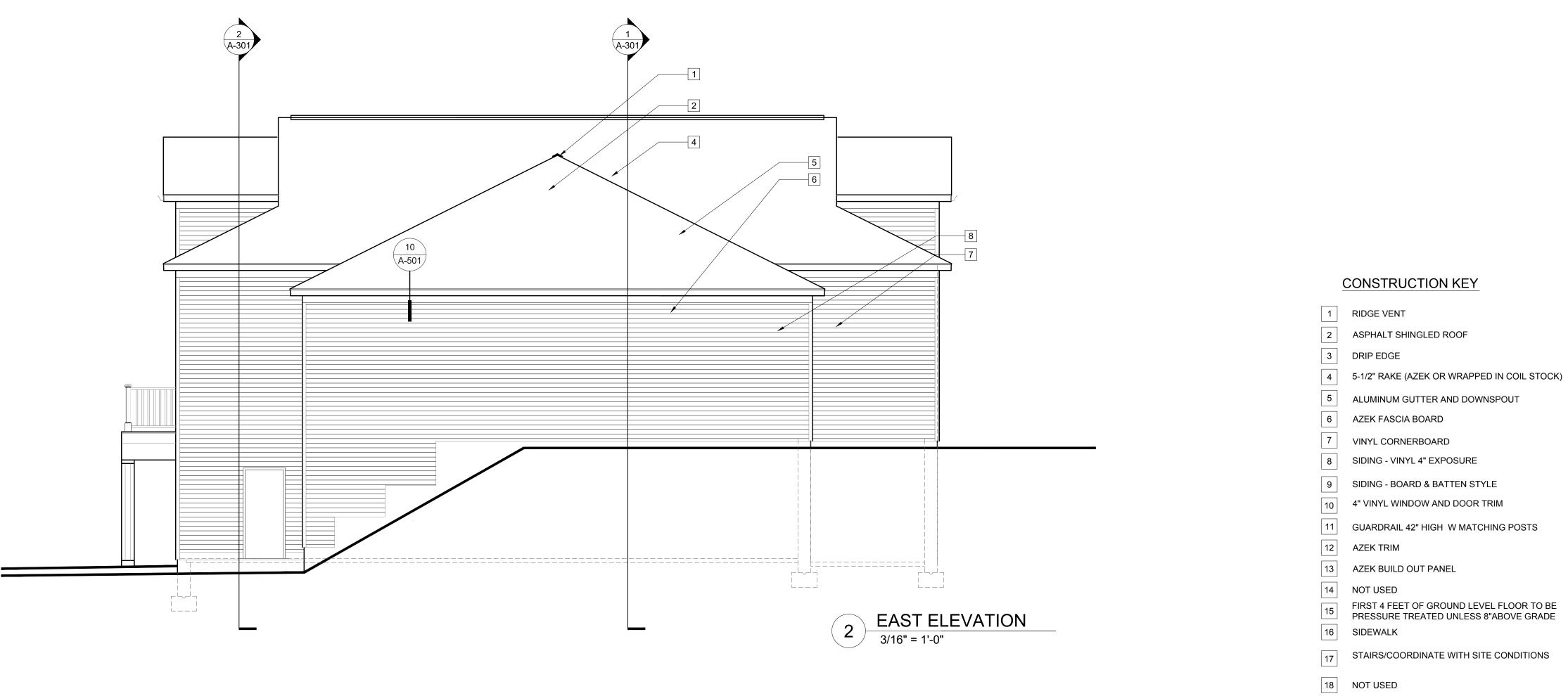
EXTERIOR ELEVATIONS

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## PROPOSED CONSTRUCTION

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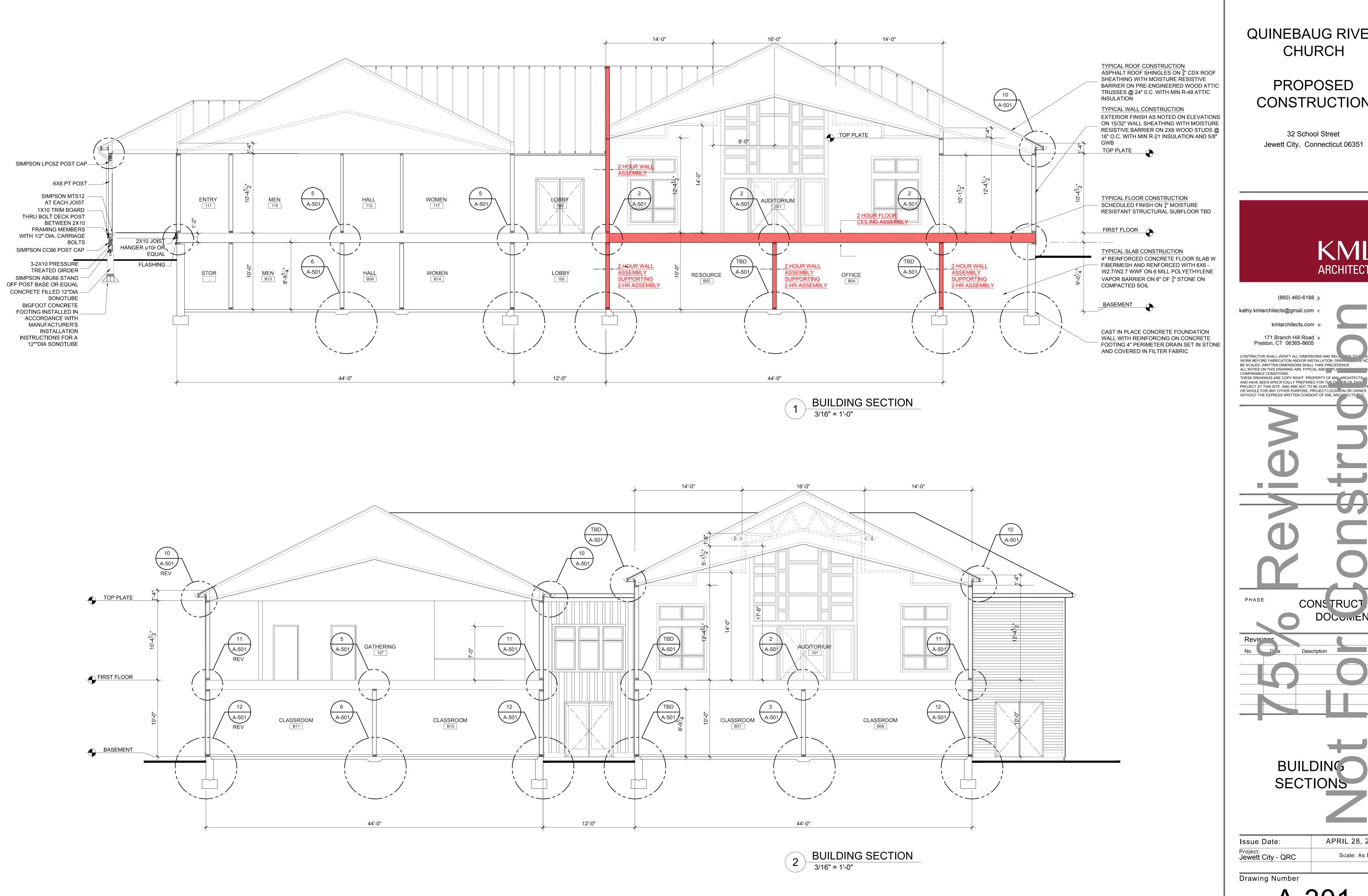


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Project:
Jewett City - QRC

APRIL 28, 2020

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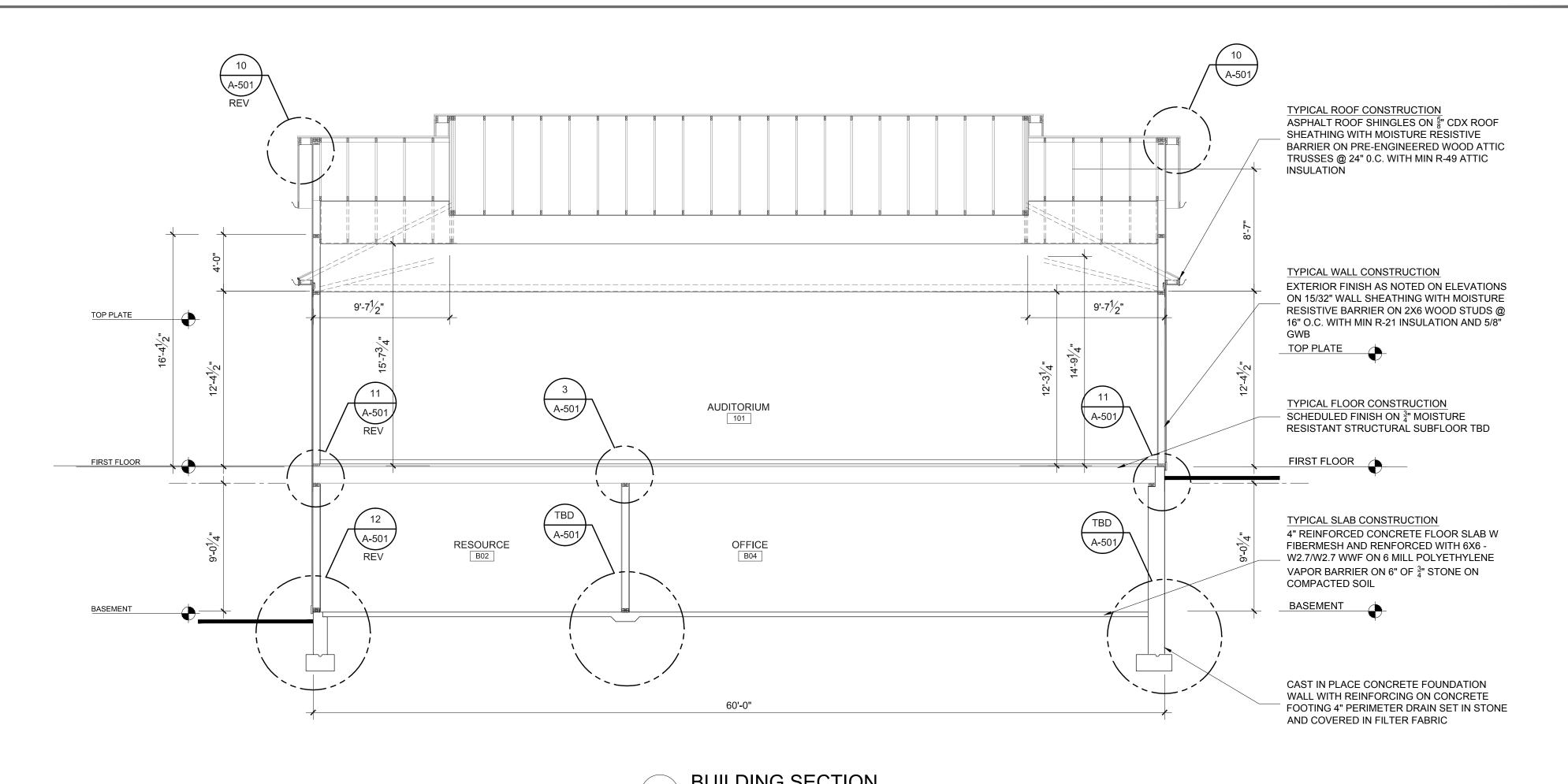
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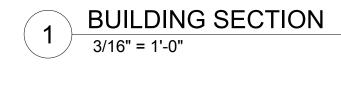
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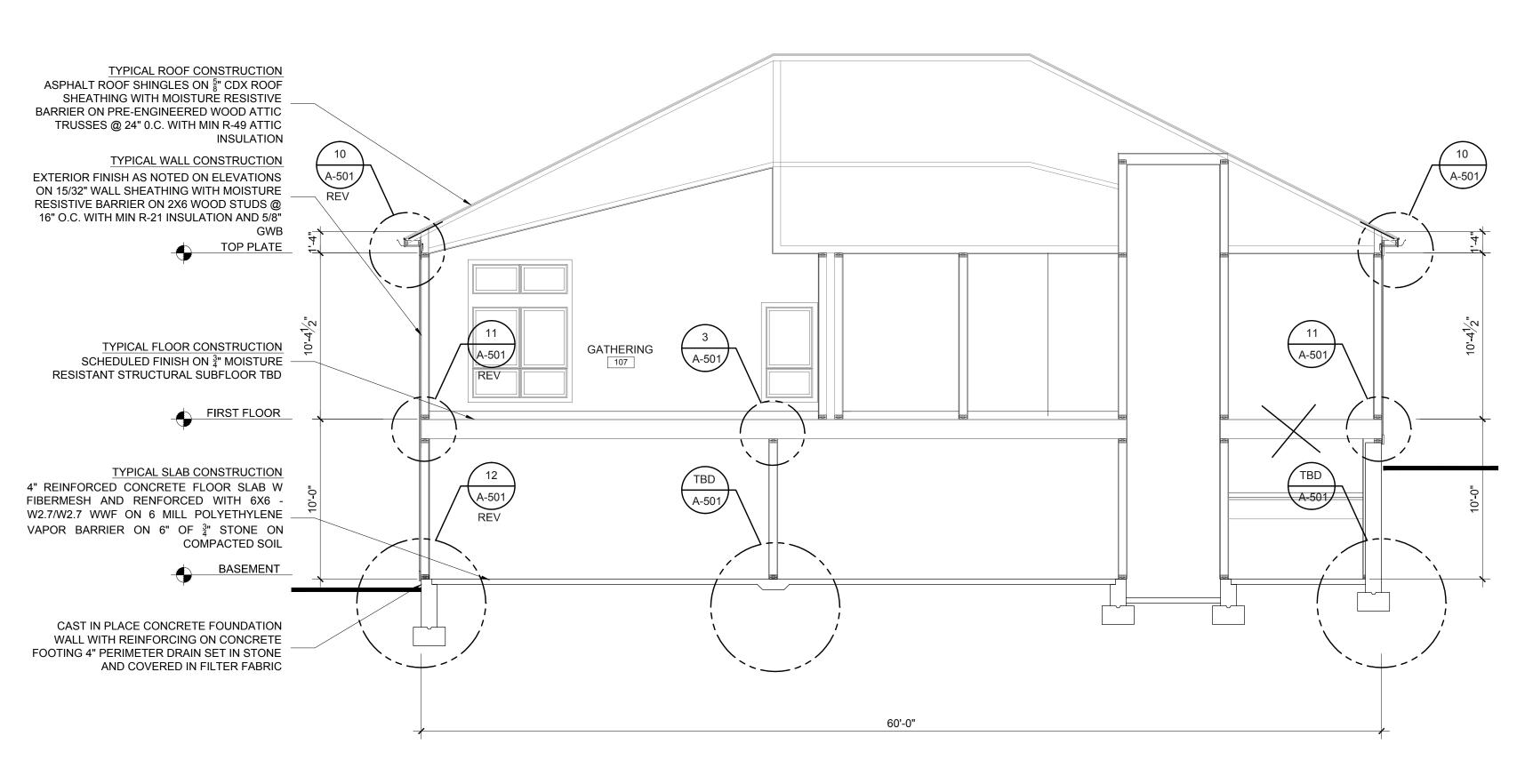
CONSTRUCTION DOCUMENTS

BUILDING SECTIONS

APRIL 28, 2020 Issue Date: Project: Jewett City - QRC Scale: As Noted







2 BUILDING SECTION
3/16" = 1'-0"

## QUINEBAUG RIVER CHURCH

## PROPOSED CONSTRUCTION

32 School Street

Jewett City, Connecticut 06351



(860) 460-6188 p

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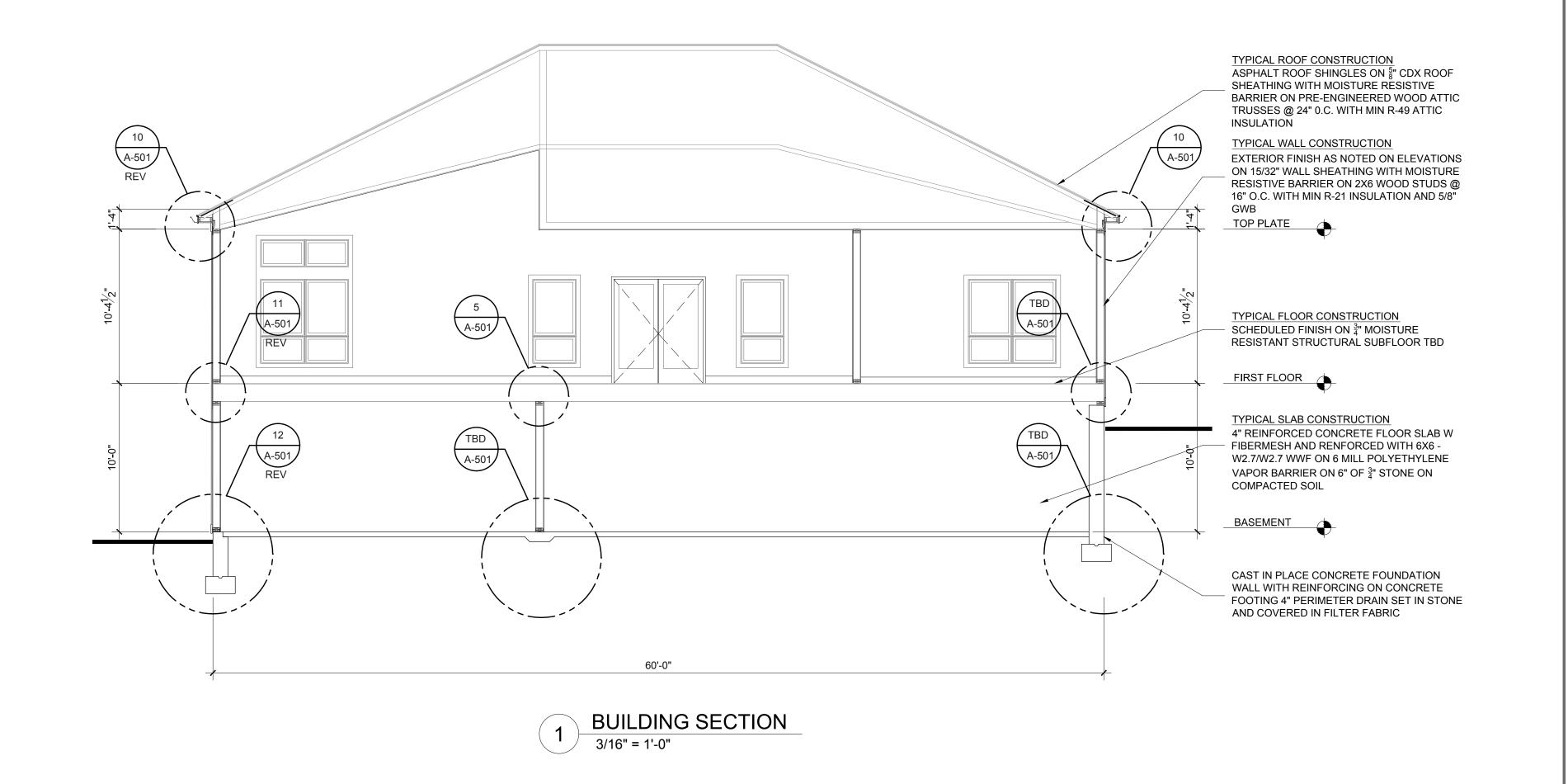
CONSTRUCTION DOCUMENTS

BUILDING SECTIONS

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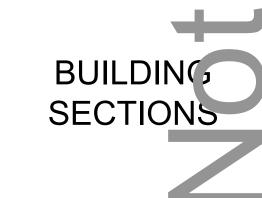
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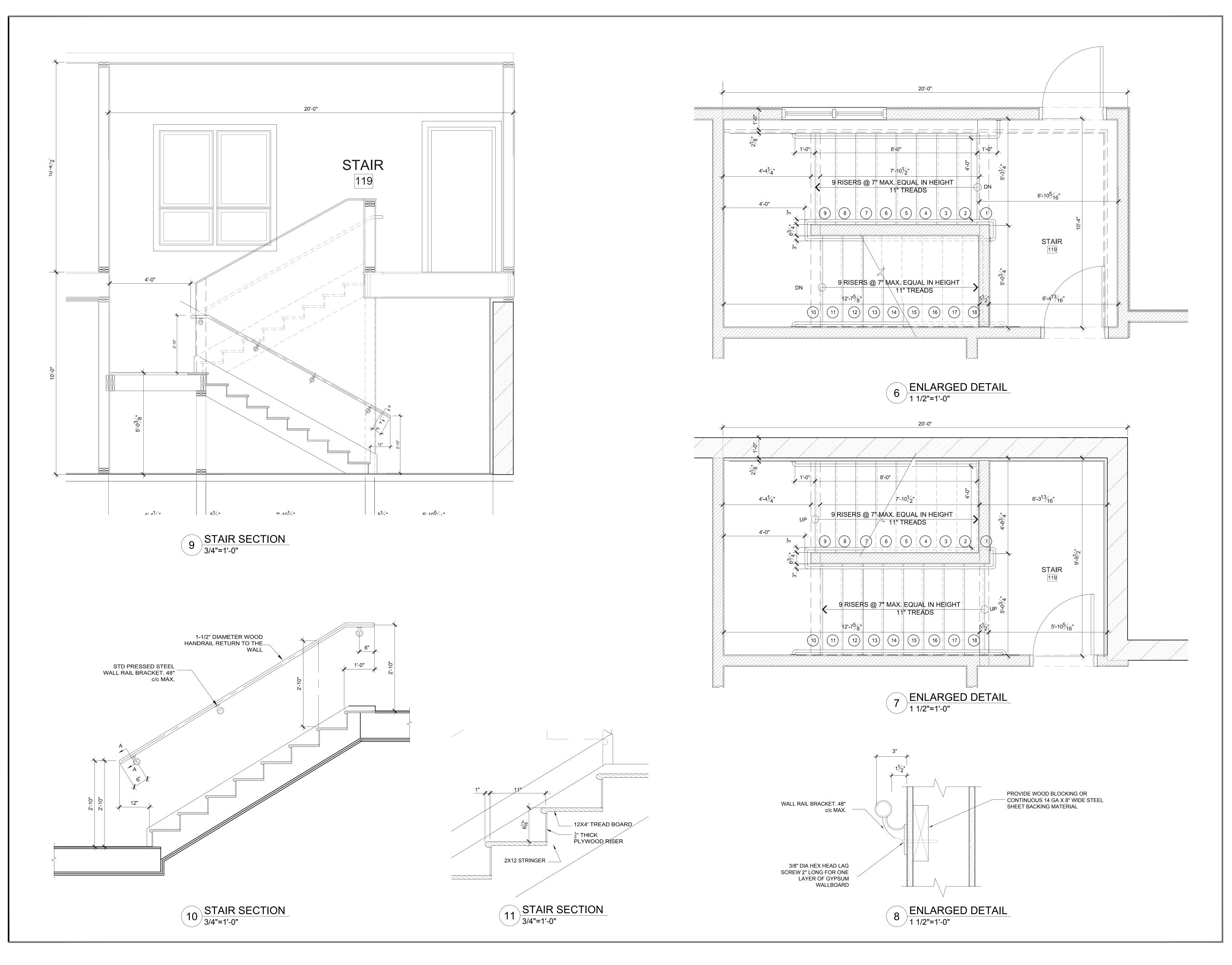


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CONSTRUCTION DOCUMENTS

ENLARGED STAIR PLANS & DETAILS

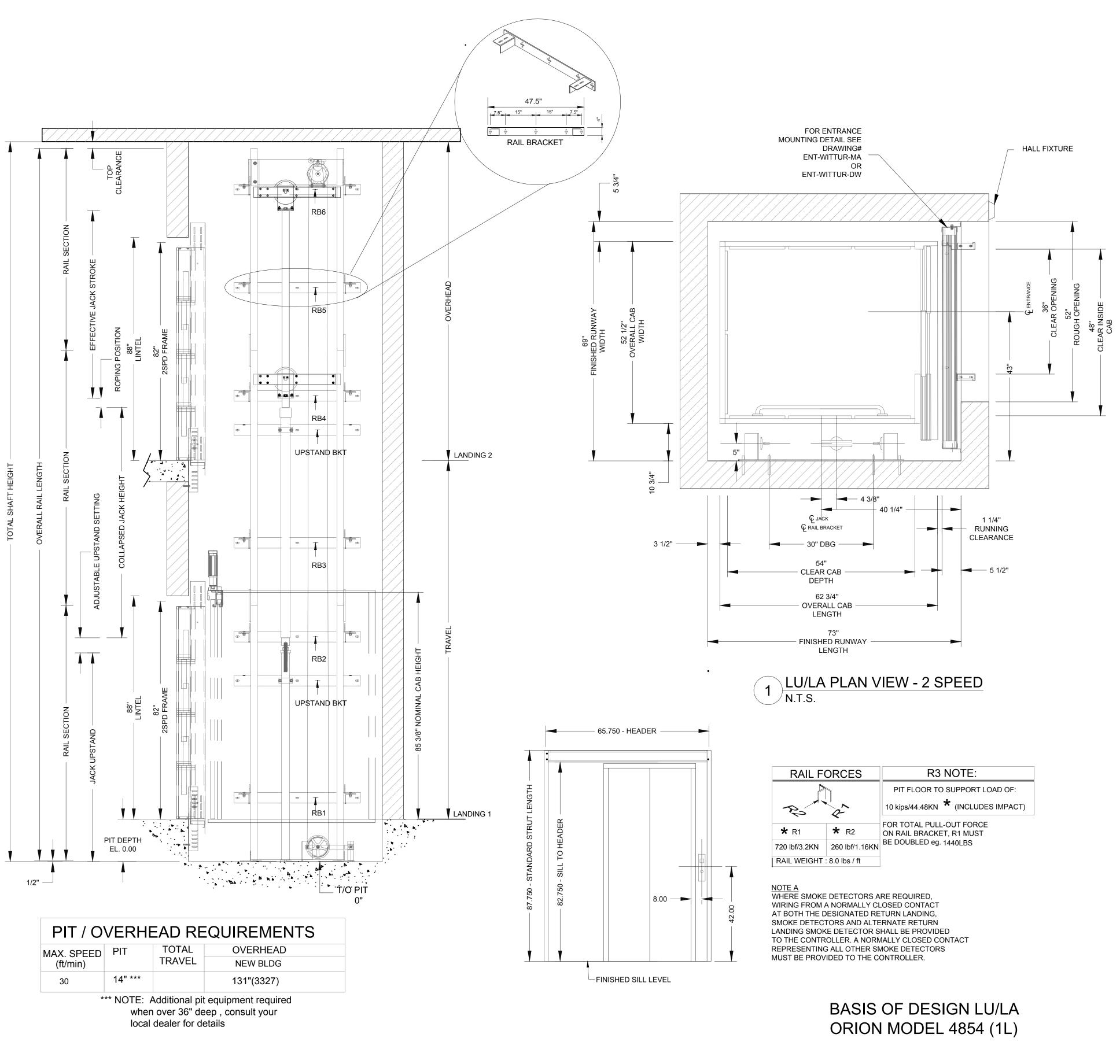
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A-40<sup>2</sup>



## COORDINATION ITEMS

## \*GENERAL

## HOISTWAY

THE HOISTWAY MUST BE IN ACCORDANCE WITH SAFETY CODE FOR ELEVATORS (ASME A17.1 OR B44-2000) AND ALL STATE/PROVINCIAL AND LOCAL CODES.

#### PLUMB HOISTWAY

DUE TO CLOSE RUNNING CLEARANCES OWNER/AGENT MUST ENSURE THAT HOISTWAY AND PIT (WHERE PROVIDED) ARE LEVEL, PLUMB AND SQUARE AND ARE IN ACCORDANCE WITH THE DIMENSIONS ON THESE DRAWINGS.

#### MINIMUM OVERHEAD CLEARANCE

OWNER/AGENT MUST ENSURE MINIMUM OVERHEAD CLEARANCE IS IN COMPLIANCE WITH CODES.

#### **CONSTRUCTION SITE**

OWNER/AGENT TO PROVIDE ALL MASONRY, CARPENTRY AND DRYWALL WORK AS REQUIRED AND SHALL PATCH AND MAKE GOOD (INCLUDING FINISH PAINTING) ALL AREAS WHERE WALLS/FLOORS MAY REQUIRE TO BE CUT, DRILLED OR ALTERED IN ANY WAY TO PERMIT THE PROPER INSTALLATION OF THE LIFT.

#### **DIMENSIONS**

CONTRACTOR/CUSTOMER TO VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO OUR OFFICE IMMEDIATELY.

## \*STRUCTURAL

#### FLOOR/SUPPORT WALL LOADS

STRUCTURAL ENGINEER TO ASSURE THAT BUILDING AND SHAFT WILL SAFELY SUPPORT ALL LOADS IMPOSED BY THE LIFT EQUIPMENT. REFER TO THE TABLES ON THIS DRAWING FOR LOADS IMPOSED BY THE EQUIPMENT.

#### DOORS

REFERENCE STRUCTURAL DRAWINGS FOR DOOR LINTELS/HEADERS

## \*MACHINE ROOM

#### LOCATION/ACCESS

MACHINE ROOM LOCATED AT THE LOWEST LEVEL ADJACENT TO HOISTWAY, UNLESS SHOWN OTHERWISE ON THE LAYOUT DRAWINGS. FIELD ADJUSTMENT BY INSTALLER MAY BE NECESSARY TO MEET JOB SITE CONDITIONS OR REGULATIONS. ACCESS TO MACHINE ROOM TO BE THROUGH A SELF CLOSING AND SELF LOCKING DOOR

## SLEEVES FOR OIL & ELECTRIC LINES-

PROVIDED BY OTHERS, FROM MACHINE ROOM TO HOISTWAY. (POSITION PER INSTALLERS INSTRUCTIONS).

	INPUT VOLTAGE	DISCONNECT	TIME DELAY	FULL LOAD
	(V/PH/CYCLE)	SIZE (AMPS)	FUSE (AMPS)	CURRENT (AMPS)
MOTOR INFO	208/3PH/60HTZ	30	30	15.6
	230/1PH/60HTZ	60	50	21
CAB LIGHTS	115/1PH		15	

## \*ELECTRICAL

## **POWER SUPPLY**

(SEE SPECIFICATIONS) LOCKABLE FUSED DISCONNECT WITH AUXILIARY CONTACT TO BRAKE THE BATTERY FEED, OR CIRCUIT BREAKERS WITH A 3-POLE BREAKER FOR BATTERY FEED REQUIRED, IN COMPLIANCE WITH ELECTRICAL CODE, AS FOLLOWS: (LOCATED ON WALL ON LOCK JAMB SIDE OF MACHINE ROOM DOOR)

## PERMANENT POWER

POWER MUST BE SUPPLIED.

## LIGHTING

OWNER/AGENT TO ENSURE AT LEAST 5 FTC OR 54 LUX AMBIENT LIGHTING OVER ELEVATOR AREA.

## \*ENTRANCES

## FASCIA PANEL BELOW UPPER LEVEL ENTRANCE

FASCIA PANEL MUST BE FASTENED TO A SOLID WALL AND BE PERPENDICULAR TO THE FLOOR AND WALLS. HOISTWAY FASCIA IS NOT SELF-SUPPORTING FOR LONG, CONTINUOUS RUNS VOID OF ENTRANCES. ADEQUATE SUPPORT AND THE FASCIA MUST BE PROVIDED BY OTHERS.

## **ENTRANCE ASSEMBLIES**

TO ALIGN WITH PLATFORM AND INTERLOCK EQUIPMENT. OTHERS TO ALLOW AN ADEQUATE ROUGH OPENING.

## RETURN WALLS

BY OTHERS AFTER ENTRANCE ASSEMBLIES ARE IN PLACE. ENTRANCE ASSEMBLY MUST BE SECURELY FASTENED TO WALLS BY ELEVATOR CONTRACTOR.

## **QUINEBAUG RIVER** CHURCH

## PROPOSED CONSTRUCTION

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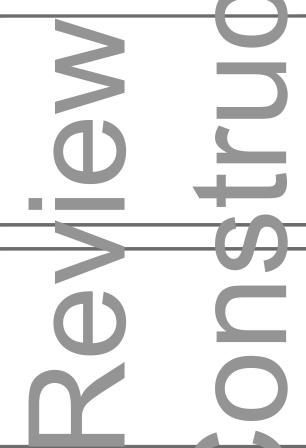
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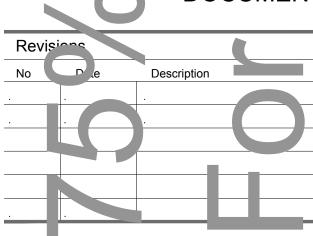
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PHASE

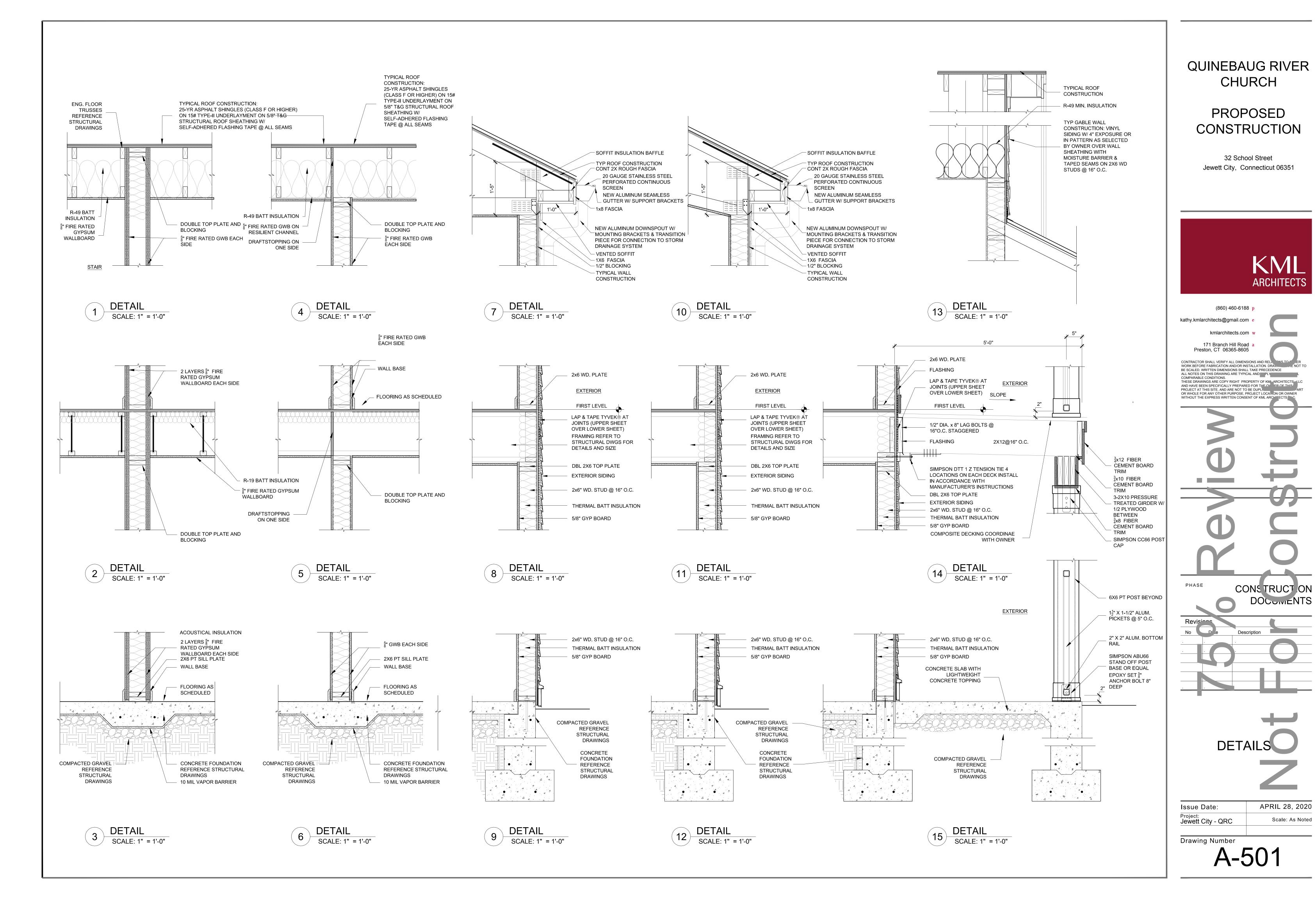


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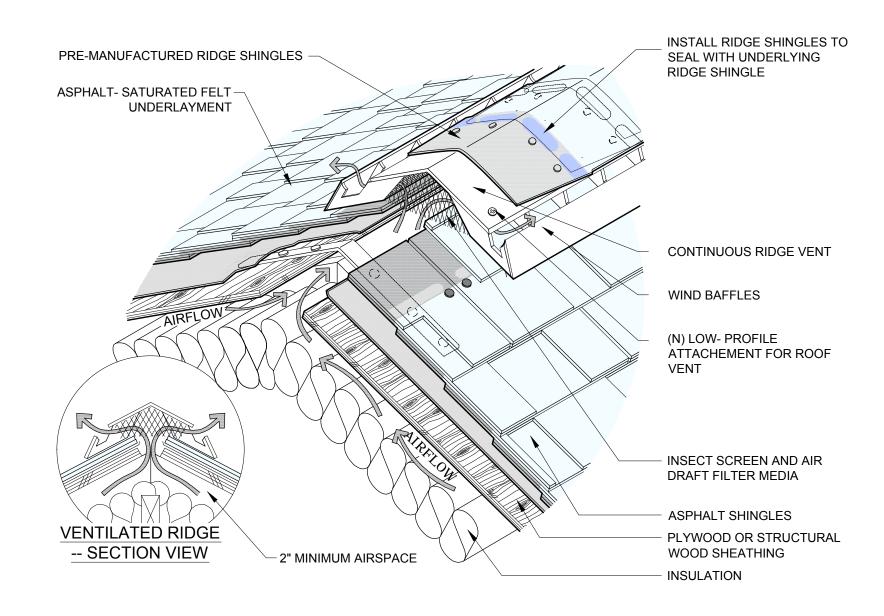
ELEVATION/HALL FIXTURE LOCATION

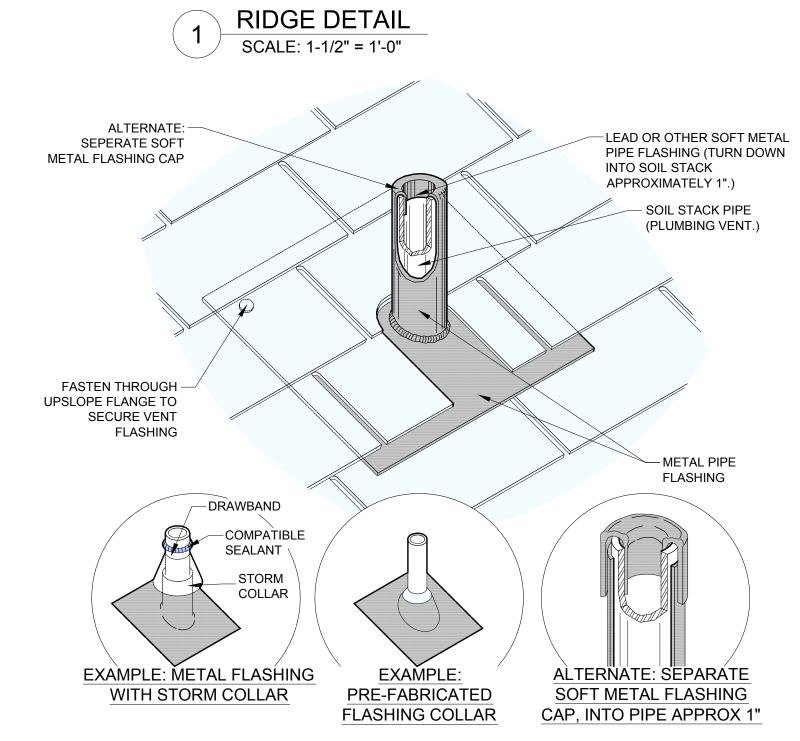
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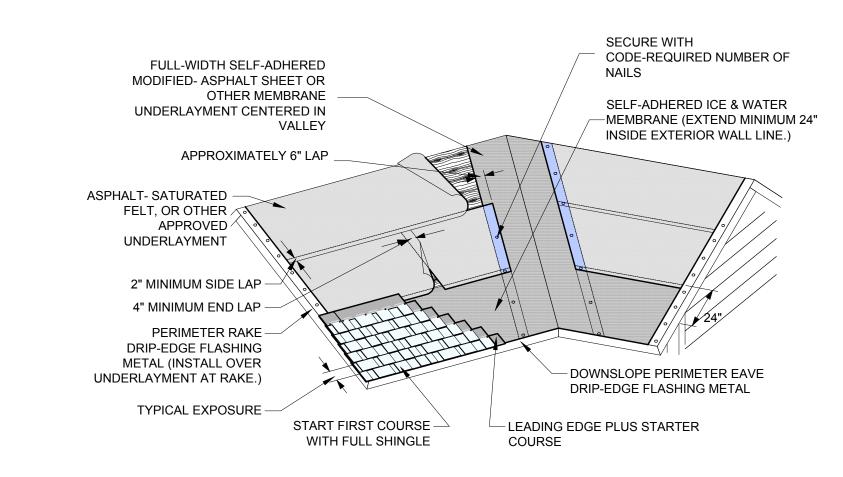
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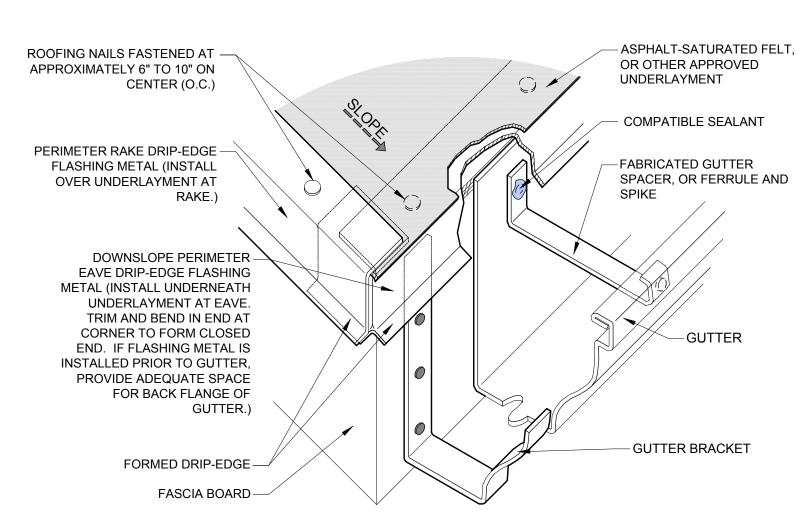
- SOIL PIPE STACKS SHOULD EXTEND A MINIMUM OF 8" ABOVE ROOF SURFACE.
   IF EXPOSED FASTENERS ARE PLACED THROUGH VENT'S DOWNSLOPE FLANGE, THEY SHOULD BE WEATHERTIGHT, GASKETED FASTENERS (E.G., RING-SHANK NAILS OR SCREWS).
- DIMENSIONS SHOWN ARE RECOMMENDED MINIMUMS AND ARE INTENDED TO BE
  APPROXIMATE TO ALLOW FOR REASONABLE TOLERANCES DUE TO FIELD CONDITIONS.





- MINIMUM SLOPE FOR INSTALLATION OF ASPHALT SHINGLES IS 4:12, IF ONLY ONE LAYER
  OF NO. 15 ASPHALT SATURATED FELT. FOR ROOF SLOPES LESS THAN 4:12 A MINIMUM
  OF TWO LAYERS OF ICE AND WATER SHIELD IS TO BE INSTALLED.
- INSTALL 6 SHINGLE NAILS APPROXIMATELY 1" IN FROM EACH EDGE AND THE REMAINING 2 NAILS EVENLY SPACED ALONG THE LENGTH
- INSTALLATION OF PERIMETER DRIP-EDGE METAL FLASHING IS REQUIRED



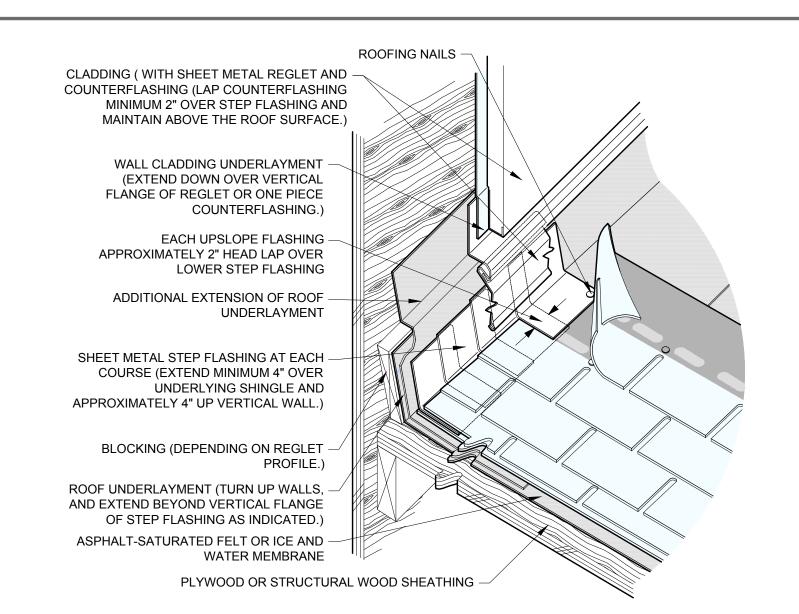


- PERIMETER DRIP EDGE METAL FLASHING TO BE A MINIMUM OF 26-GAUGE PRE-FINISHED/PAINTED
  GALVANIZED STEEL, 16-OZ. COPPER, .032-INCH THICK PRE-FINISHED ALUMINUM, OR AN EQUIVALENT

  OR A STEEL OF THE STEEL S
- LONGEVITY CORROSION-RESISTANT METAL.

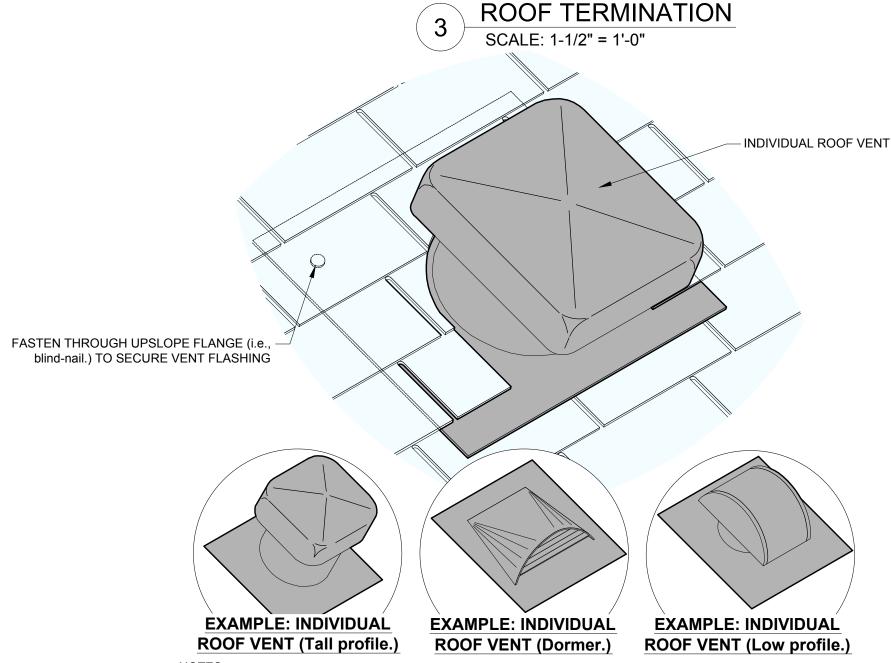
   THE PERIMETER ON THE ROOF DECK SHOULD PROVIDE A CONTINUOUS SOLID WOOD NAILING SURFACE
- OVER WHICH TO APPLY THE SHEET METAL DRIP-EDGE FLASHING.
   THE VERTICAL-FACE FLANGE OF SHEET METAL DRIP-EDGE FLASHING SHOULD BE OF SUFFICIENT LENGTH
  TO PERMIT WATER TO DRIP OFF THE ROOF, AND INTO GUTTER (IF PRESENT), WITHOUT AFFECTING THE
  UNDERLYING CONSTRUCTION DURING TIMES OF NO WIND.
- THE HORIZONTAL FLANGE (I.E. ROOF SIDE) OF SHEET METAL DRIP-EDGE FLASHING SHOULD EXTEND APPROXIMATELY 2" TO 3" MINIMUM ONTO THE ROOF.





- SHEET METAL STEP FLASHING IS TO BE A MINIMUM OF 26-GAUGE PRE-FINISHED/PAINTED GALVANIZED STEEL, 16 OZ. COPPER, .032-INCH THICK PRE-FINISHED ALUMINUM, OR AN
- EQUIVALENT LONGEVITY NON-CORROSIVE METAL.

   VERTICAL FLANGE OF STEP FLASHING SHOULD BE LAPPED A MINIMUM OF 2".



NOTES:

1. IN COLD CLIMATES, WHERE SNOW AND ICE ARE COMMON, AN ICE & WATER PROTECTOR MEMBRANE, SUCH AS IKO ARMOURGUARD OR STORMSHIELD, IS REQUIRED AS AN ICE-DAM PROTECTION MEMBRANE AT ALL POTENTIAL ICE DAMING LOCATIONS SUCH AS DOWNSLOPE EAVES, VALLEYS, CRICKETS, AROUND

- PENETRATIONS, AND RAKE EDGES.

  2. IN COLD CLIMATES, CONSIDER HIGH PROFILE ("SHAKE-TYPE") ROOF VENTS AS THEY ARE TALLER THAN REGULAR SHINGLE-TYPE ROOF VENTS AND PROVIDE BETTER PROTECTION IN AREAS OF SNOW AND ICE
- ACCUMULATION. IN ADDITION, THEY BETTER PROMOTE THE STACK-EFFECT TO FACILITATE VENTILATION.

  3. IF EXPOSED FASTENERS ARE PLACED THROUGH VENT'S DOWNSLOPE FLANGE, THEY SHOULD BE WEATHERTIGHT, GASKETED FASTENERS (E.G., RING-SHANK NAILS OR SCREWS).
- 4. DIMENSIONS SHOWN ARE RECOMMENDED MINIMUMS AND ARE INTENDED TO BE APPROXIMATE TO ALLOW FOR REASONABLE TOLERANCES DUE TO FIELD CONDITIONS.
- 5. THE PROFILE OF SPECIFIC COMPONENTS, THEIR CONFIGURATION OR SEQUENCING, CAN VARY WITH THE
- ROOF SYSTEM, WITH CLIMATIC DIFFERENCES, AND REGIONAL OR AREA PRACTICES.
- 6. IT MAY BE THAT THE LAYOUT OF THE ROOF VENT PENETRATION OCCURS IN SUCH A WAY THAT AN ASPHALT SHINGLE BUTT-END JOINT, OR SHINGLE TAB CUTOUT, ALIGNS WITH THE EDGE AND/OR BACK OF THE METAL FLASHING'S FLANGE. IN THIS CASE, A PRESSURE-SENSITIVE SELF-ADHERED MODIFIED-ASPHALT MEMBRANE, OR OTHER MEMBRANE, TO STRIP-IN THE SIDES AND BACK OF THE METAL FLASHING FLANGE IS TO BE INSTALLED TO EFFECTIVELY EXTEND THESE FLANGES.

## QUINEBAUG RIVER CHURCH

## PROPOSED CONSTRUCTION

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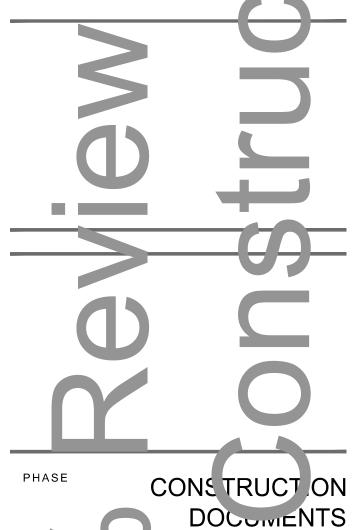
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Revisions

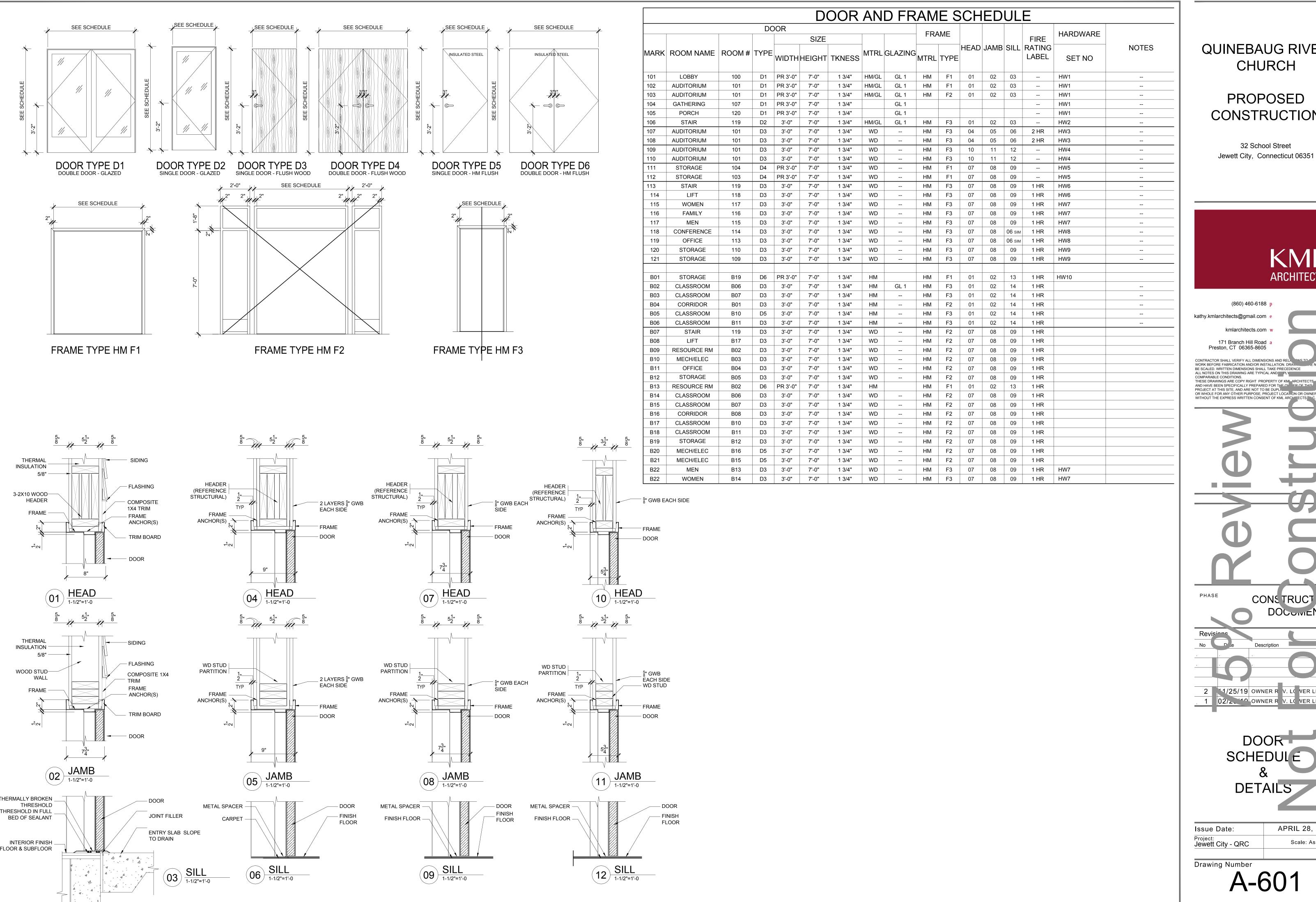
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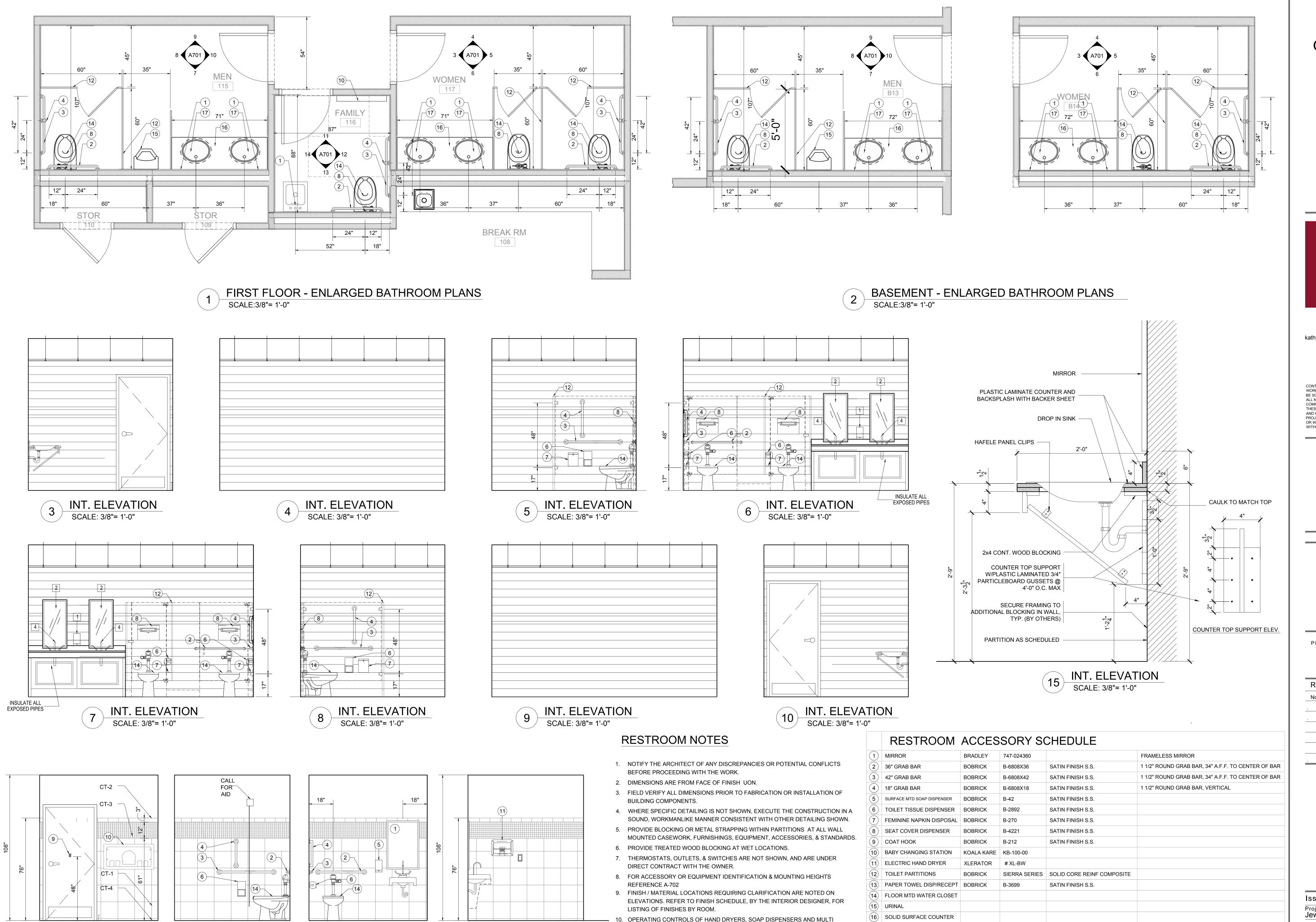
CONSTRUCT ON DOCUMENTS

Description

2 1/25/19 OWNER R V. LC VER LEVEL 1 02/2 OWNER R V. L( VER LEVEL

> DOOR SCHEDULE DETAILS

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PURPOSE UNITS TO BE LOCATED 42" A.F.F MAX.

PROTECTION/INSULATION FOR EXPOSED PIPES

13. FLUSH HANDLE TO BE ON EXPOSED SIDE OF WATER CLOSET

11. TOILET PAPER DISPENSERS MOUNTED 19" MIN. TO CENTER LINE ABOVE THE FLR.

12. NOTE D: "LAV GUARD" MODEL #102 BY "TRUEBRO" OR EQUAL TO BE USED AS

14 INT. ELEVATION
SCALE: 3/8"= 1'-0"

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

12 INT. ELEVATION
SCALE: 3/8"= 1'-0"

11 INT. ELEVATION
SCALE: 3/8"= 1'-0"

DROP IN PORCELAIN SINK

(21) SERVICE MOP SINK FAUCET | FIAT

#MSB2424

#830AA @ 36" AFF.

WALL MOUNTED SINK

SERVICE MOP SINK

FLOOR DRAIN

QUINEBAUG RIVER CHURCH

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