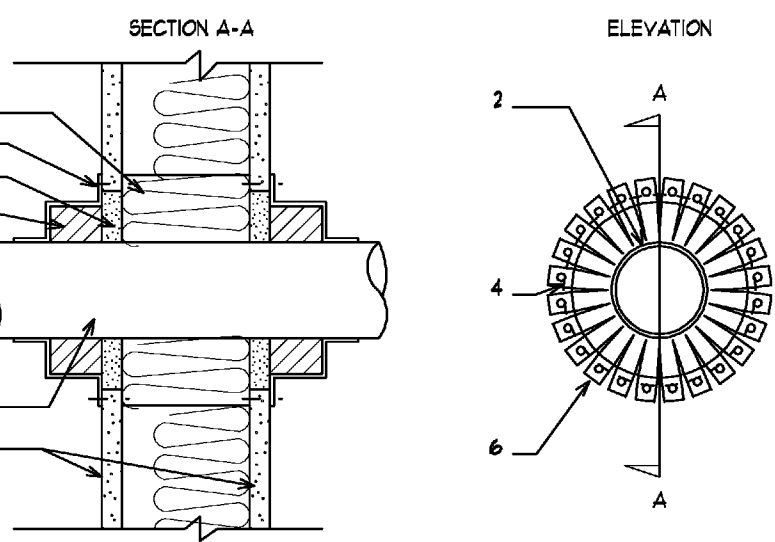
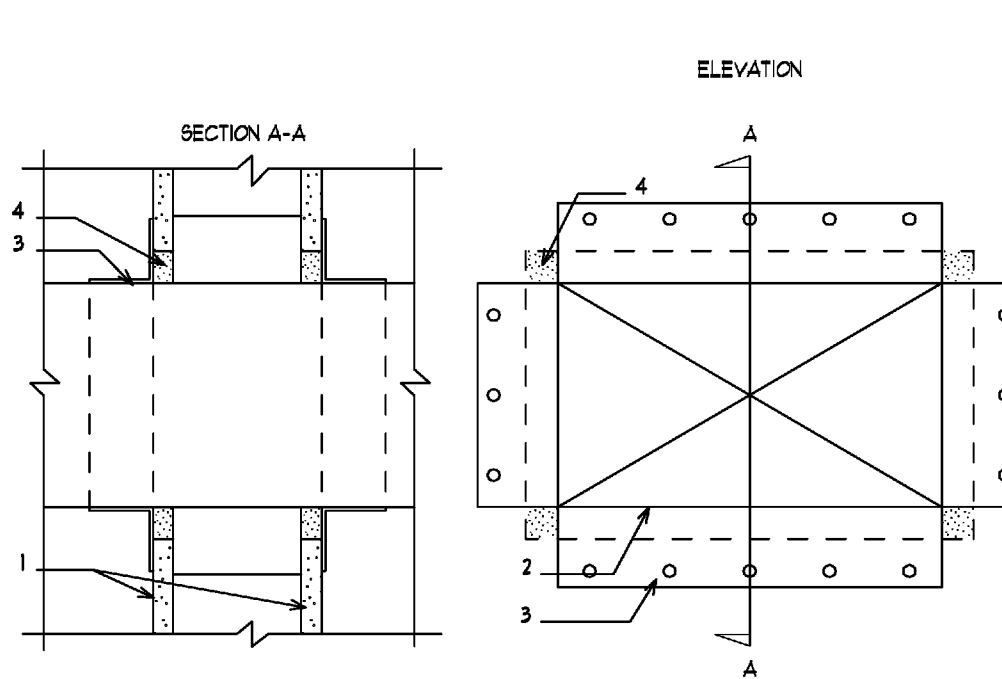


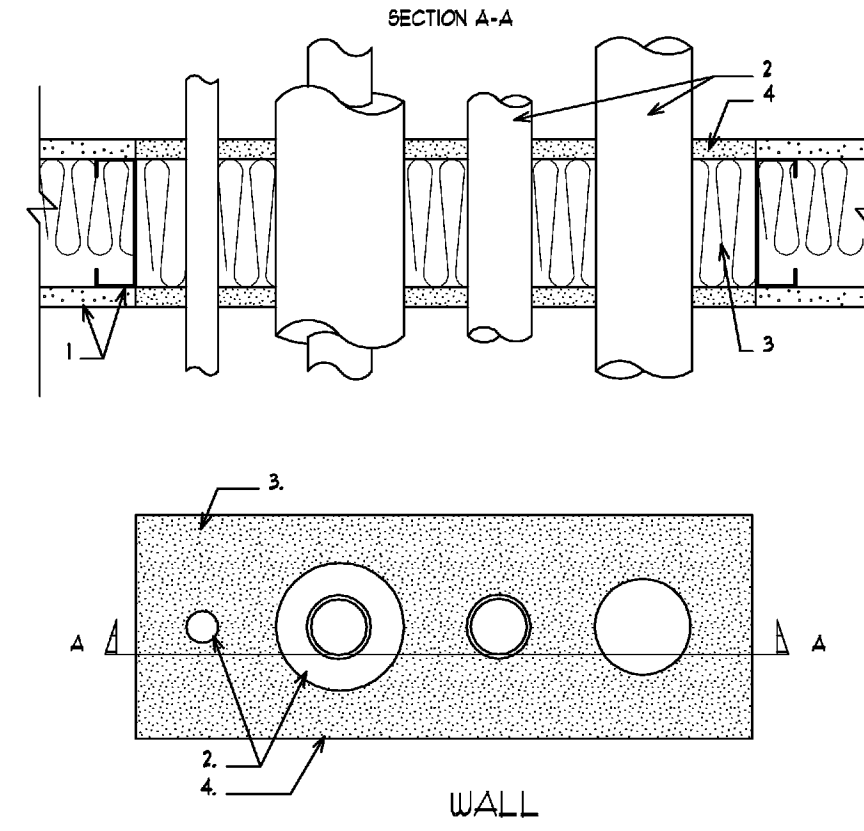
1. WALL ASSEMBLY  
FIRE RESISTANT GYPSUM PANEL WALL ASSEMBLY AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITIONS DESIGNS IN UL FIRE RESISTANCE DIRECTORY.
2. METALLIC PIPE:  
- NOMINAL 4" DIAMETER (OR SMALLER) METAL TUBING  
USE MIN. TO MAX. GIVEN ANNUAL SPACE BETWEEN PIPE AND PERIPHERY OF OPENING AS REQUIRED BY UL THROUGH-PENETRATION FIRE-STOPPING SYSTEM.
3. FORMING MATERIAL:  
- UL CLASSIFIED INSULATION  
APPLY AMOUNT RECOMMENDED BY MANUFACTURER AROUND PIPE AS REQUIRED BY UL THROUGH-PENETRATION FIRESTOPPING SYSTEM.
4. FILL VOID OR CAVITY MATERIAL:  
- UL CLASSIFIED FIRESTOPPING SEALANT COMPOUND  
APPLY AMOUNT RECOMMENDED BY MANUFACTURER AROUND PERIPHERY OF OPENING AS REQUIRED.



1. WALL ASSEMBLY  
FIRE RESISTANT GYPSUM PANEL WALL ASSEMBLY AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITIONS DESIGNS IN UL FIRE RESISTANCE DIRECTORY.
2. NON-METALLIC PIPE:  
- NOMINAL 4" DIAMETER (OR SMALLER) TUBING  
THE ANNUAL SPACE BETWEEN PIPE AND PERIPHERY OF OPENING SHALL BE AS REQUIRED BY UL THROUGH-PENETRATION FIRESTOPPING SYSTEM. A MAX. OF ONE PIPE MAY BE INSTALLED WITHIN THE THROUGH-OPENING.
3. FORMING MATERIAL:  
- UL CLASSIFIED INSULATION  
APPLY AMOUNT RECOMMENDED BY MANUFACTURER AROUND PIPE AS REQUIRED BY UL THROUGH-PENETRATION FIRESTOPPING SYSTEM.
4. FILL VOID OR CAVITY MATERIAL:  
- UL CLASSIFIED FIRESTOPPING SEALANT COMPOUND  
APPLY AMOUNT RECOMMENDED BY MANUFACTURER AROUND PERIPHERY OF OPENING AS REQUIRED.
5. URAP STRIP:  
- UL CLASSIFIED INTUMESCENT STRIP  
APPLY AMOUNT RECOMMENDED BY MANUFACTURER AROUND PERIPHERY OF OPENING AS REQUIRED.
6. STEEL COLLAR:  
- MANUFACTURER'S STANDARD DESIGN AS REQUIRED FOR UL THROUGH-PENETRATION FIRESTOP SYSTEM.



1. WALL ASSEMBLY  
FIRE RESISTANT GYPSUM PANEL WALL ASSEMBLY AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITIONS DESIGNS IN UL FIRE RESISTANCE DIRECTORY.
2. INSULATED AIR DUCT  
THE ANNUAL SPACE SHALL BE AS REQUIRED BY UL THROUGH-PENETRATION BETWEEN DUCT AND PERIPHERY OF OPENING. AIR DUCT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF THE WALL ASSEMBLY.
3. STEEL ANGLES:  
- STEEL ANGLES ATTACHED ALL FOUR SIDES  
OF THE DUCT ON BOTH SIDES OF THE WALL ASSEMBLY. ATTACH AS REQUIRED BY UL THROUGH-PENETRATION FIRESTOPPING SYSTEM.
4. FILL VOID OR CAVITY MATERIAL:  
- UL CLASSIFIED FIRESTOPPING SEALANT COMPOUND  
APPLY AMOUNT RECOMMENDED BY MANUFACTURER AROUND PERIPHERY OF OPENING AS REQUIRED.



1. WALL ASSEMBLY  
FIRE RESISTANT GYPSUM PANEL WALL ASSEMBLY AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITIONS DESIGNS IN UL FIRE RESISTANCE DIRECTORY.
2. THROUGH PENETRANTS:  
- STEEL PIPES, COPPER PIPES, POLYVINYL CHLORIDE (PVC) PIPES  
ANNUAL SPACE BETWEEN PIPES AND PIPES AND PERIPHERY OF OPENING SHALL BE AS REQUIRED BY UL THROUGH-PENETRATION FIRESTOPPING SYSTEM.
3. FORMING MATERIAL:  
- UL CLASSIFIED INSULATION  
APPLY AMOUNT RECOMMENDED BY MANUFACTURER AROUND PENETRANTS AS REQUIRED BY UL THROUGH-PENETRATION FIRESTOPPING SYSTEM.
4. FILL VOID OR CAVITY MATERIAL:  
- UL CLASSIFIED FIRESTOPPING SEALANT COMPOUND  
APPLY AMOUNT RECOMMENDED BY MANUFACTURER AROUND PERIPHERY OF OPENING AS REQUIRED.

## METALLIC PIPE @ WALL

- 1 HOUR FIRE RATED  
UL DES. NO. UL1062, UL DES. NO. UL1023,  
UL DES. UL 1052 OR APPROVED EQUAL
- 2 HOUR FIRE RATED  
UL DES. NO. UL1040 OR APPROVED EQUAL

## NON-METALLIC PIPE @ WALL

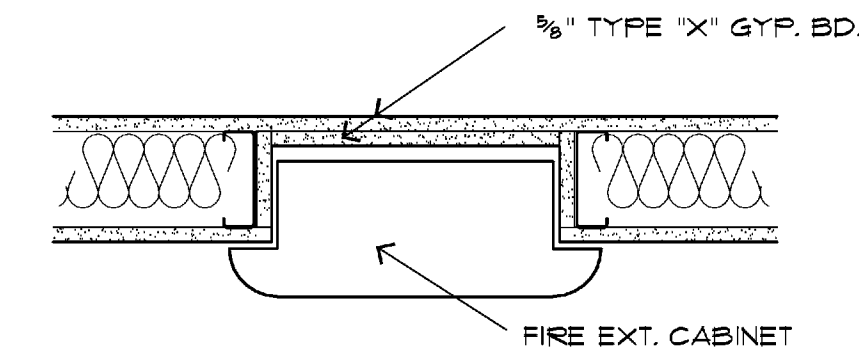
- 1 HOUR FIRE RATED  
UL DES. NO. UL2036, UL DES. NO. UL2003,  
UL DES. NO. UL2023 APPROVED EQUAL
- 2 HOUR FIRE RATED  
UL DES. NO. UL2023 OR APPROVED EQUAL

## AIR DUCT @ WALL

- 1 HOUR FIRE RATED  
UL DES. NO. UL1023, UL1049, UL5033, UL1001 OR  
APPROVED EQUAL
- 2 HOUR FIRE RATED  
UL DES. NO. UL5033 OR APPROVED EQUAL

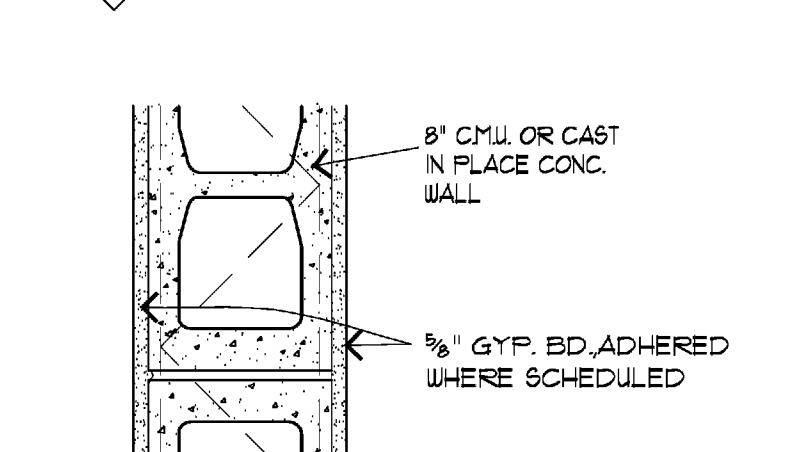
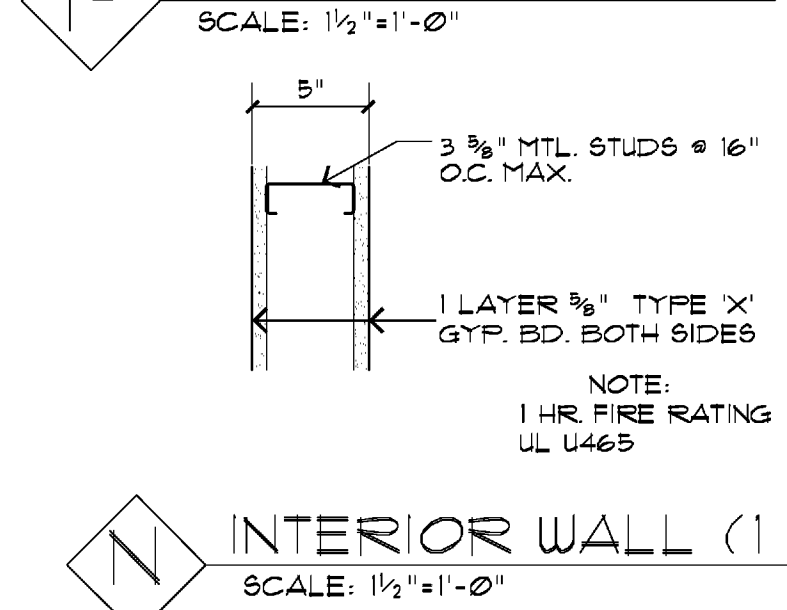
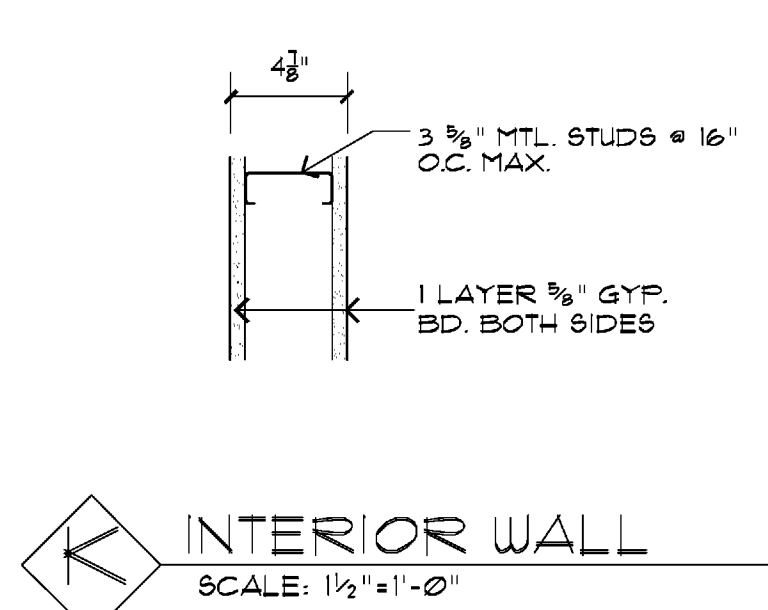
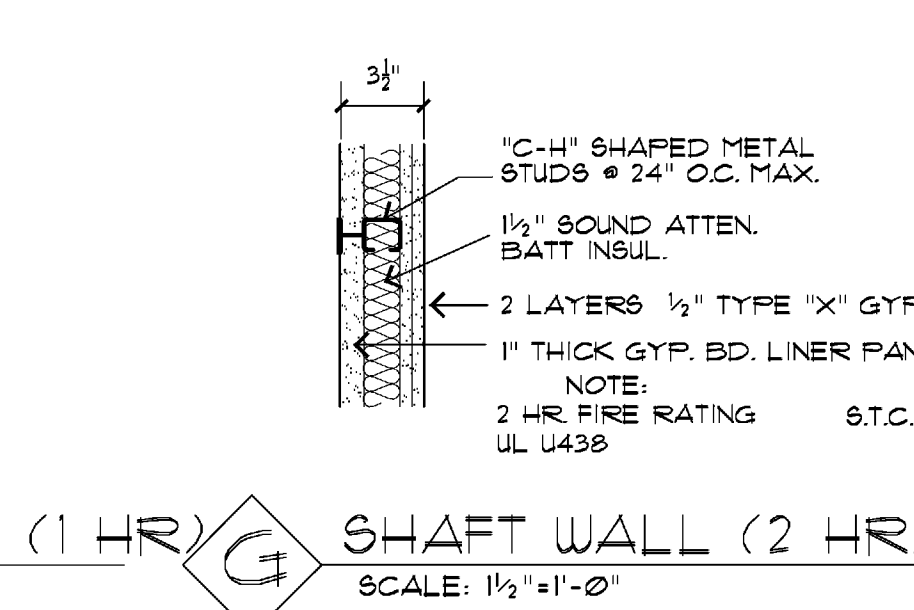
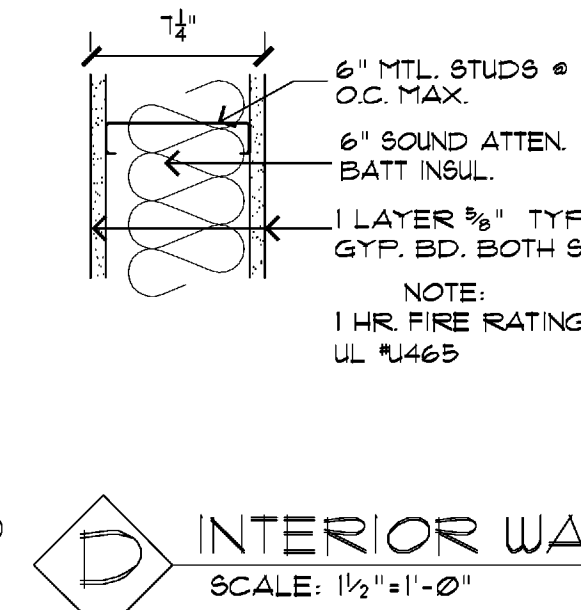
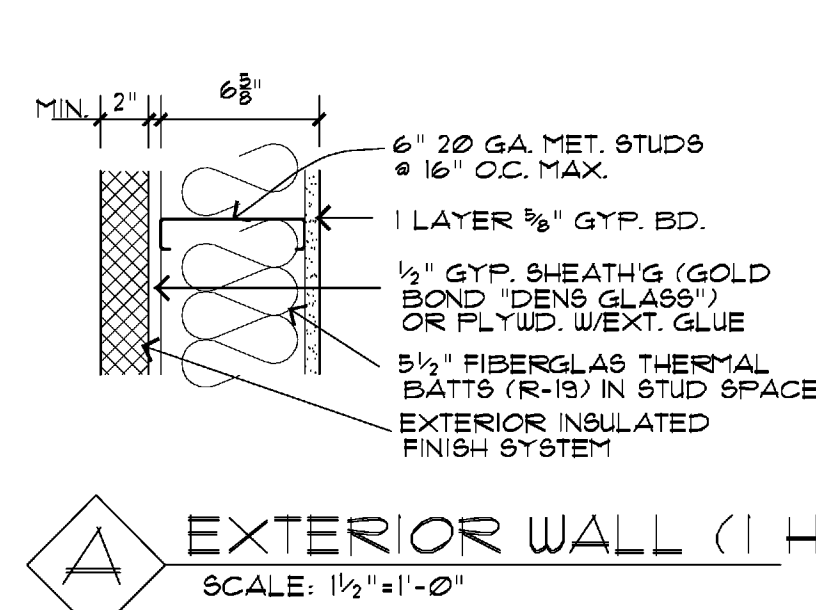
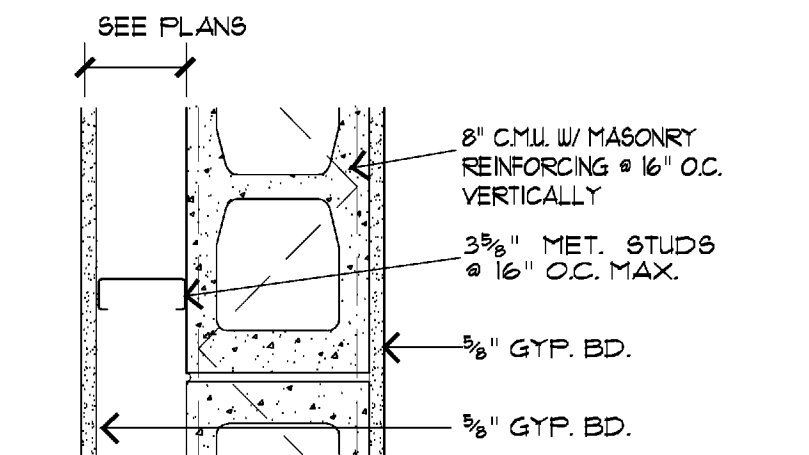
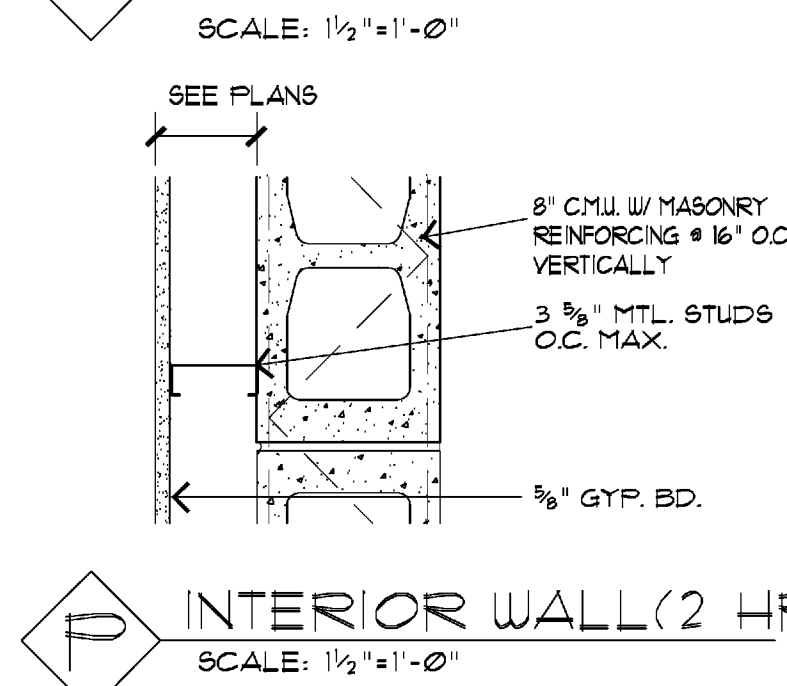
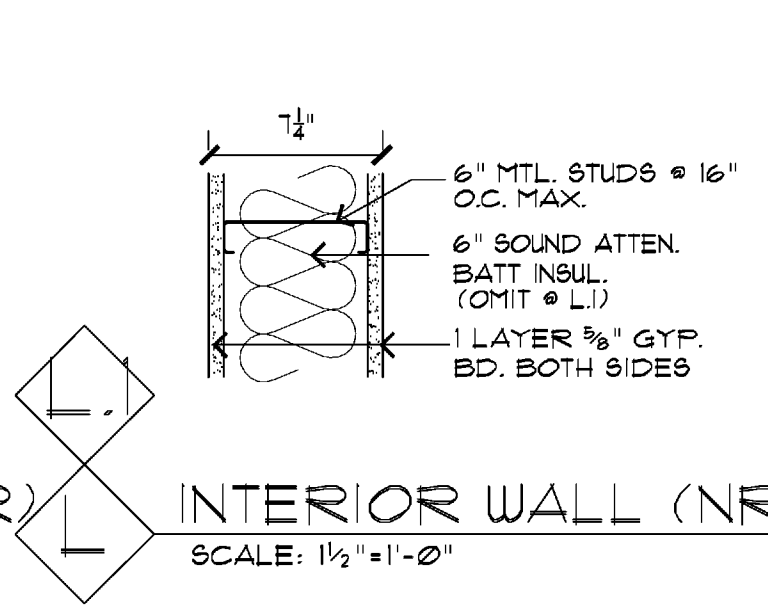
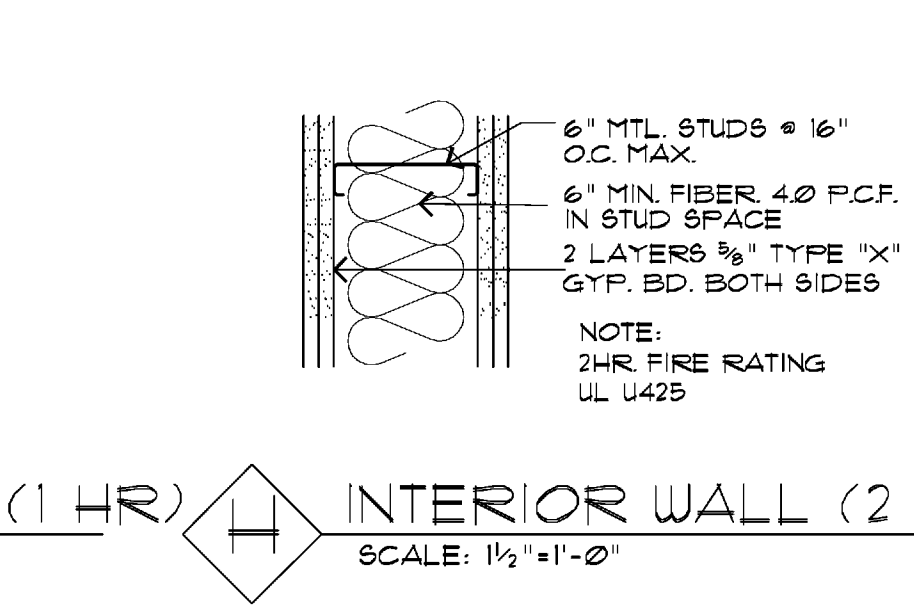
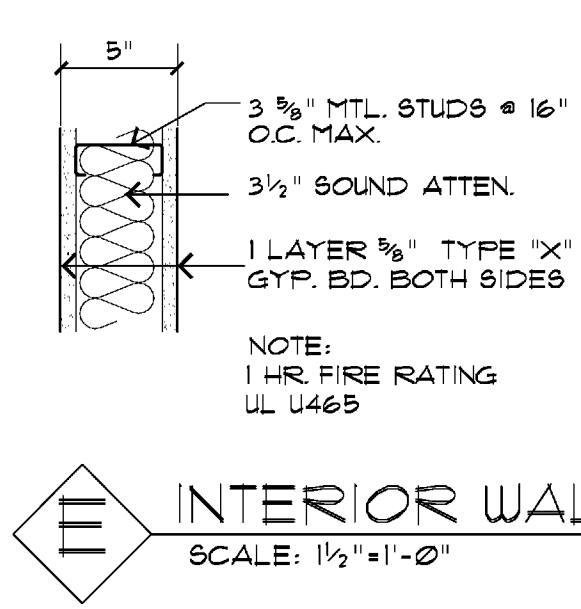
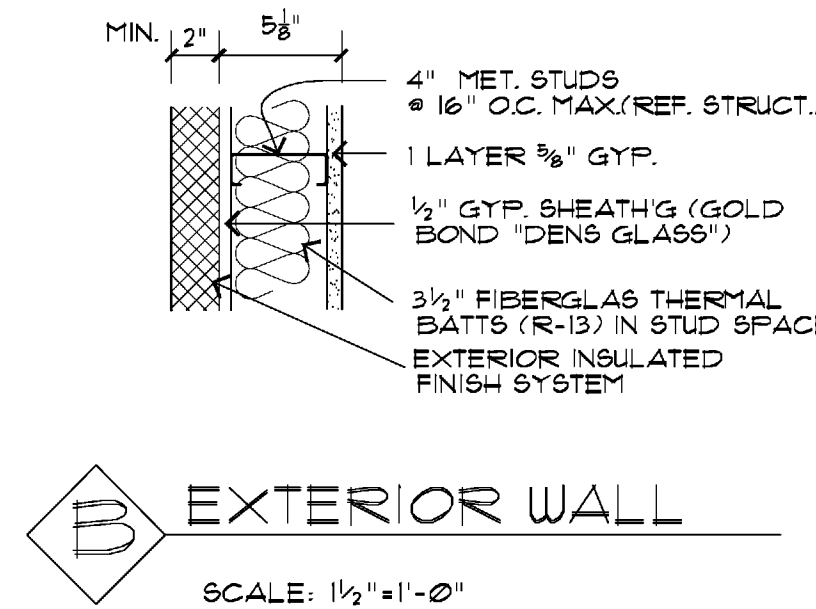
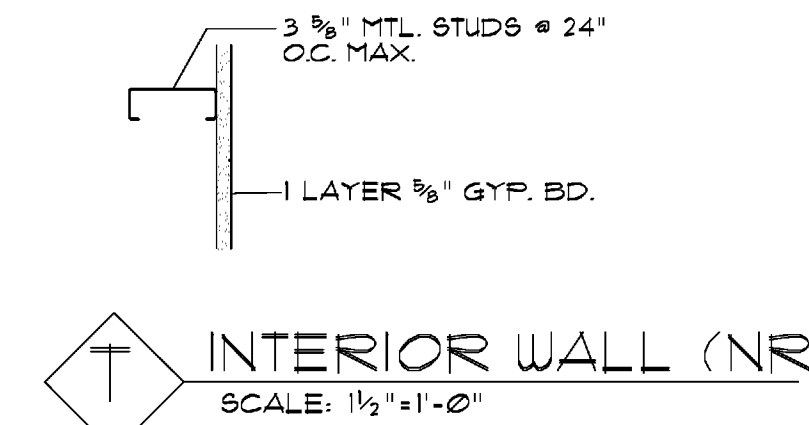
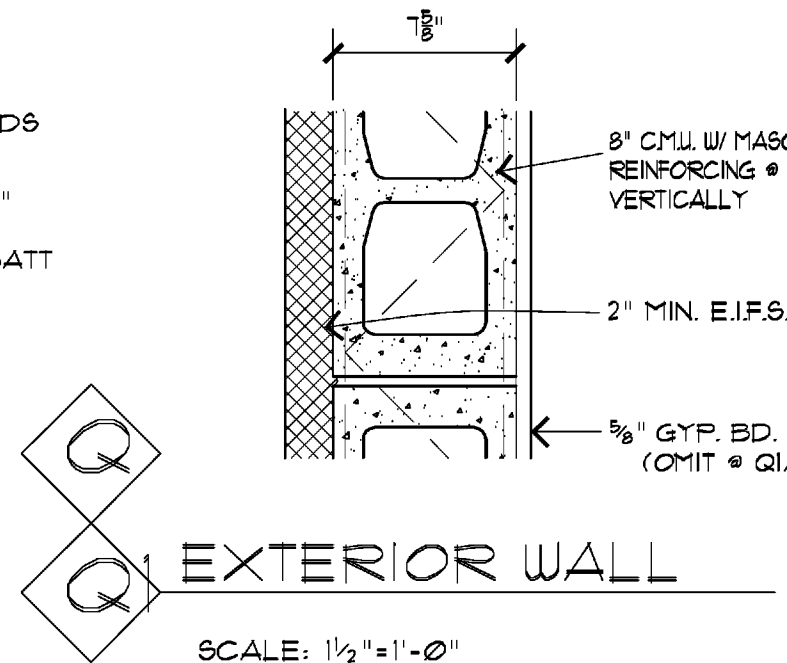
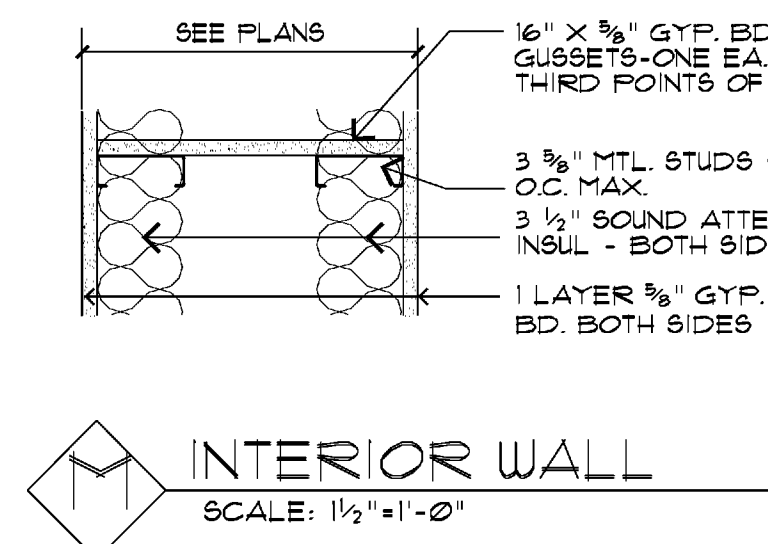
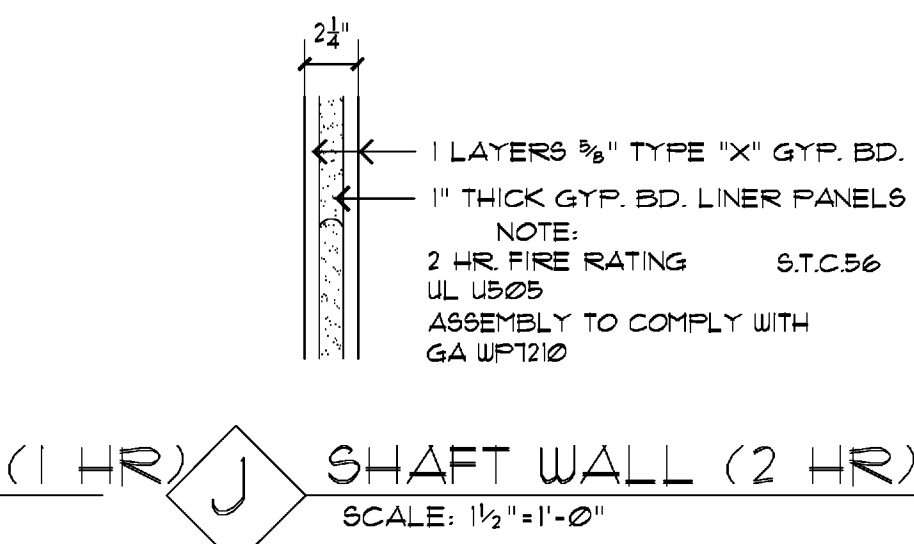
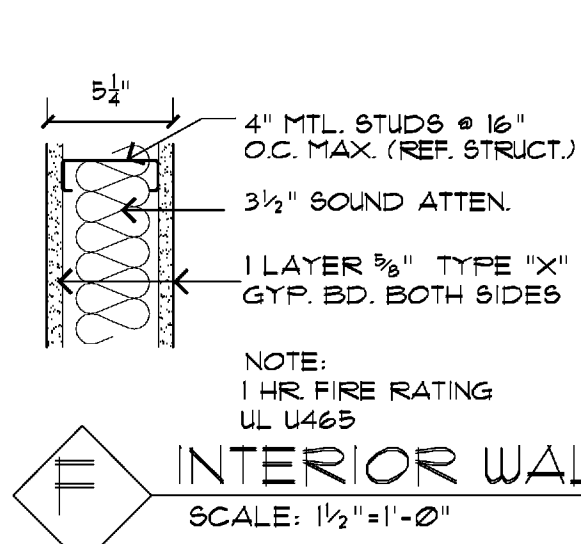
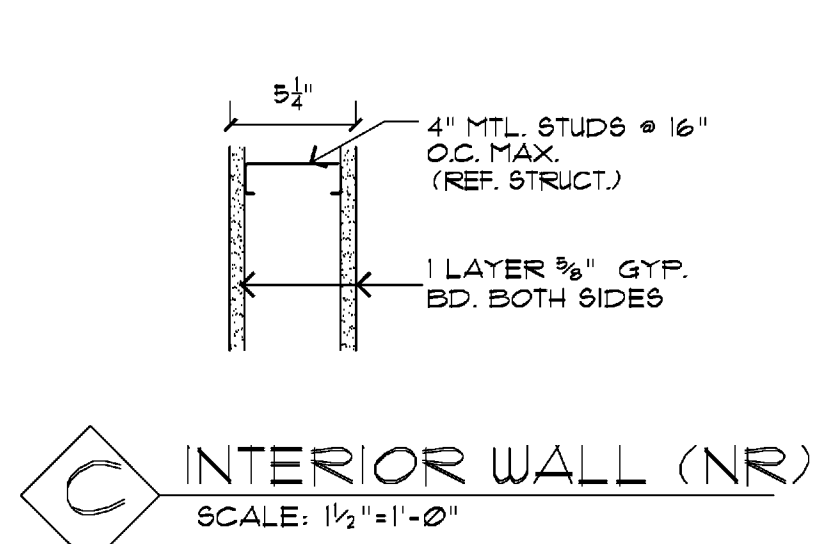
## MULTIPLE PIPES/ PENETRATION @ WALL

- 1 HOUR FIRE RATED  
UL DES. NO. UL8003, OR APPROVED EQUAL
- 2 HOUR FIRE RATED  
UL DES. NO. UL8003, UL DES. NO. UL 8001,  
OR APPROVED EQUAL



## 3 FIRE EXT. CABINET

## 2 TYPICAL FIRESTOPPING DETAILS



## 1 WALL TYPES

**PARTITION TYPE PRIORITY LEGEND**

PARTITION TYPE	PRIORITY
TWO HOUR FIRE AND SMOKE WALL	PRIORITY 1 - HIGHEST
TWO HOUR FIRE WALL	PRIORITY 2
TWO HOUR SMOKE WALL	PRIORITY 3
ONE HOUR FIRE AND SMOKE WALL	PRIORITY 4
ONE HOUR FIRE WALL	PRIORITY 5
NON-RATED WALL	PRIORITY 6 - LOWEST

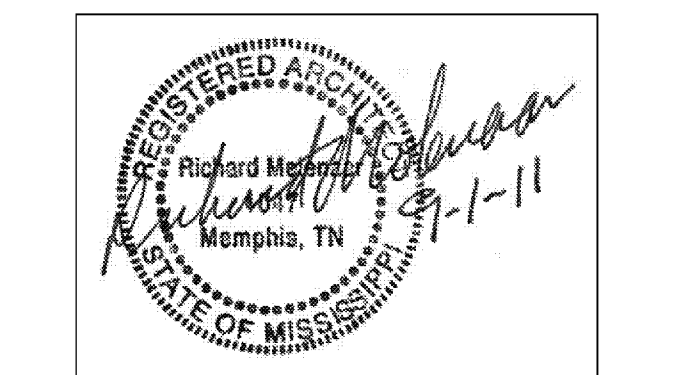
PROVIDE ALL RATED WALLS IN ACCORDANCE WITH UL LISTING. MANUFACTURER'S INSTRUCTIONS AND APPROVED HOURS DETAILS. REFER TO RATED PARTITION PLANS & ENLARGED PLANS FOR PARTITION TYPE, LOCATION AND EXTENT OF ALL RATED WALLS.

**NOTE**

The provisions of IBC Section 712 shall govern the materials and the methods of construction used to protect through penetrations and membrane penetrations.

1. Penetrations into or through fire-resistance-rated vertical or horizontal assemblies in which openings are protected shall meet the requirements of section 712.3
2. Penetrations of a structural floor or the ceiling membrane of a roof/ceiling assembly shall meet the requirements of section 712.3.2 for through penetrations of horizontal assemblies without fire-resistance ratings.

In combustible construction fireblocking must be installed to cut off both vertical and horizontal concealed draft openings and must form an effective barrier between floors, between a top story and a roof or attic [IBC 712.1 and 712.2].



PROJECT NAME:  
**COURTYARD**  
Riverwind Drive Pearl, Mississippi

SHEET TITLE:  
**Rated Penetration Details**  
**Wall Types**

PROJECT NO. 09018  
DATE: 9/1/2011

LATEST REVISION:

DRAWN BY: cj  
CHECKED BY: rm  
SHEET NUMBER: **A901**