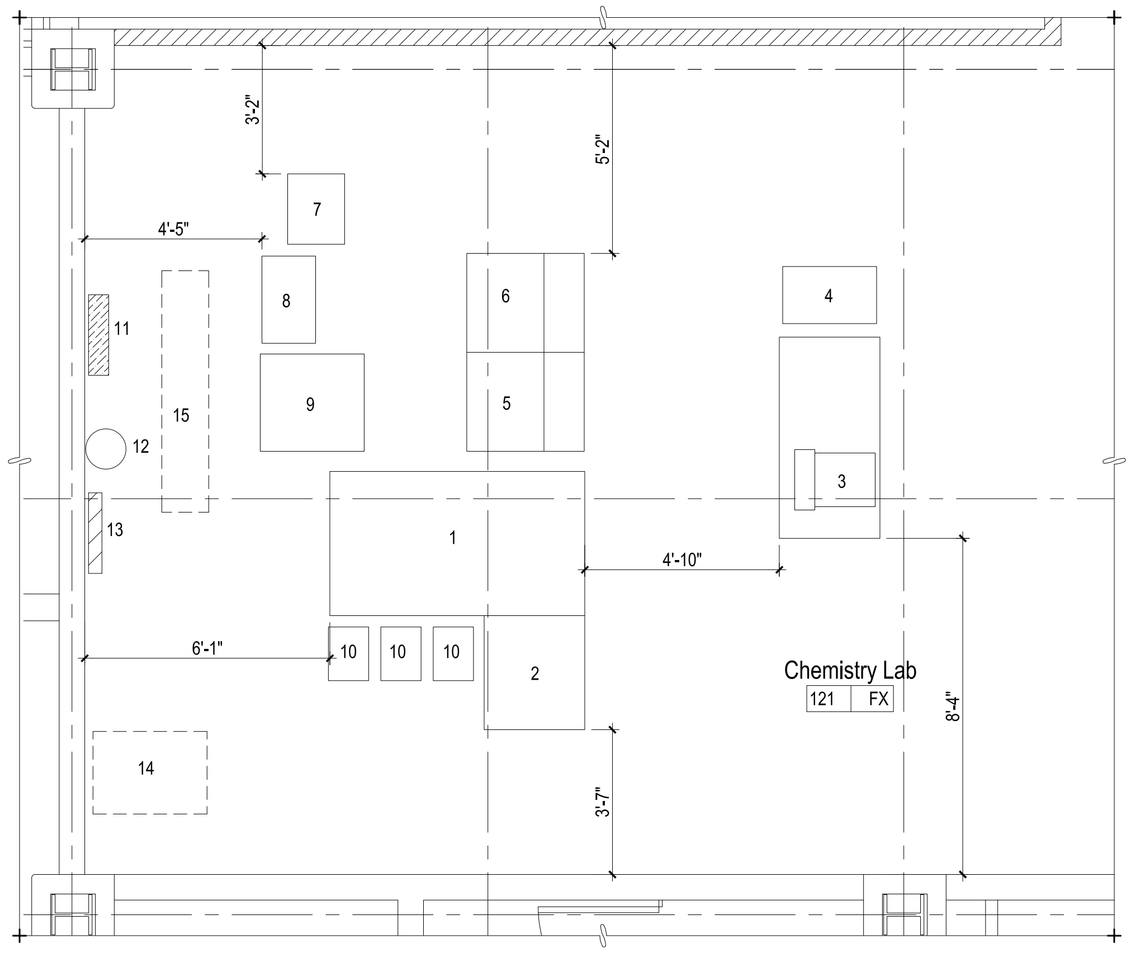


Enlarged Plan: Mass Spectrometer Equipment

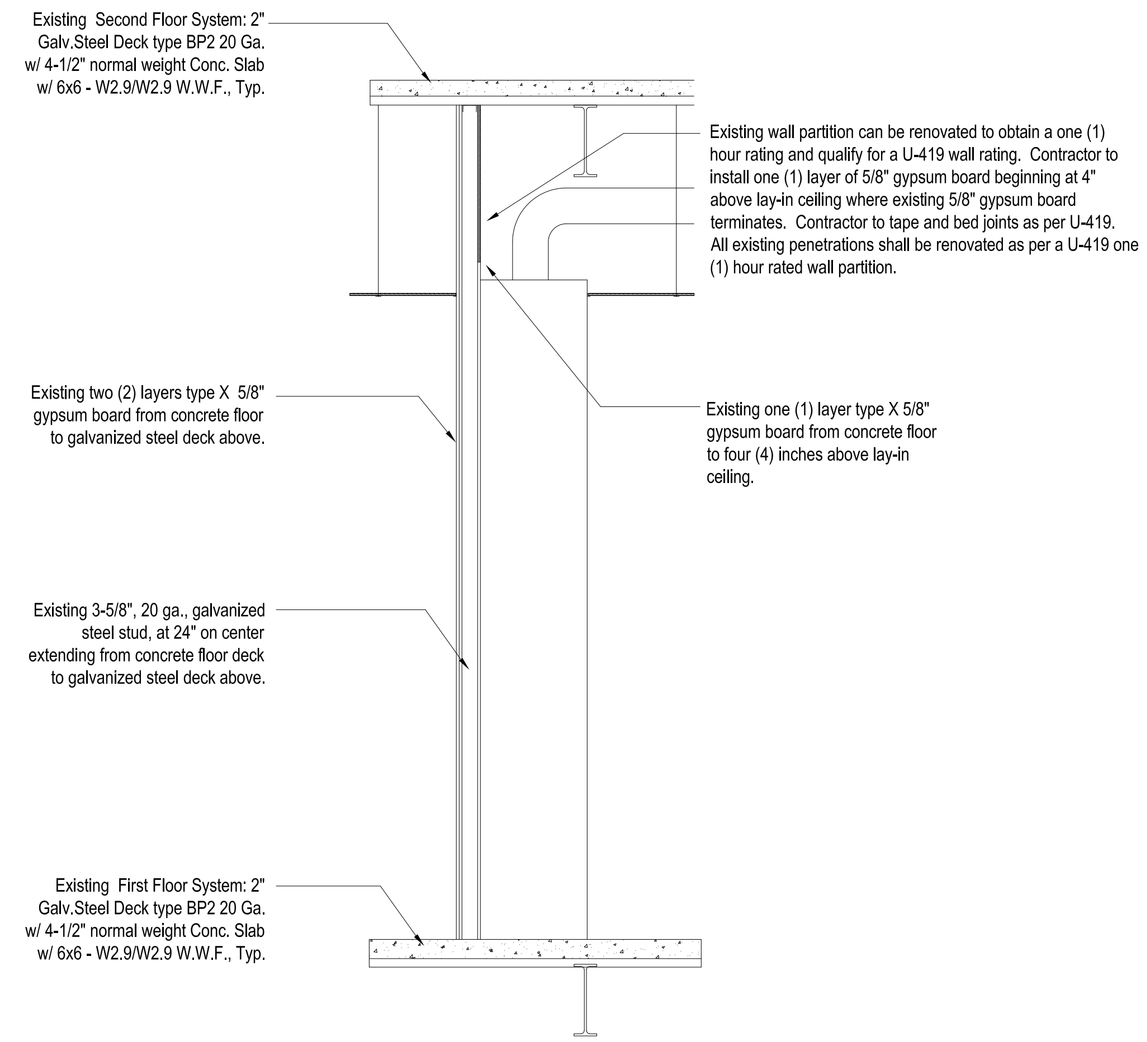
B

Owner Furnished Equipment will remain on site during construction.

3/8" = 1'-0"

Mass Spectrometer Equipment Schedule

1. Mass Spectrometer (Optics Bench)
2. Temperature Control & GC Table
3. Video Terminal
4. Data System
5. Ion Source Operation Console
6. Analyzer Operation Control
7. ACQ Processor
8. MF Power Supply
9. Magnetic Field Control
10. Rotary Pump
11. Water Distribution Panel
12. Compressor
13. Power Cutoff Switch
14. Optional Water Conditioner
15. (2) Pumps, Portable



Typical Section

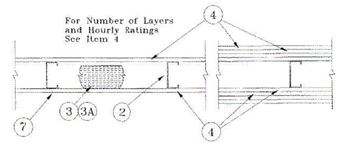
C

1/2"=1'-0"

Design No. U419

October 09, 2003

Nonbearing Wall Ratings – 1, 2, 3 or 4 Hr (See Items 3 & 4)



1. Floor and Ceiling Runners – (Not shown) – Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min width to accommodate stud size, with min 1 in, long legs, attached to floor and ceiling with fasteners 24 in. OC max.

2. Steel Studs – Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min width as indicated under Item 4, min 1-1/4 in. flanges and 1/4 in. return, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.

3. Batts and Blankets* – (Required as indicated under Item 4) – Mineral wool batts, friction fitted between studs and runners. Min nom thickness as indicated under Item 4. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies.

3A. Batts and Blankets* – (Optional) – Placed in stud cavities, any glass fiber or mineral wool insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies.

4. Gypsum Board* – Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. The thickness and number of layers for the 1 hr, 2 hr, 3 hr and 4 hr ratings are as follows:

Wallboard Protection on Each Side of Wall

Rating	Min. Stud Depth	No. of Layers & Thkns of Panel	Min. Thkns of Insulation (Item 3)
1	3-1/2	1 Layer, 5/8 in. thick	Optional
1	3-1/2	1 Layer, 1/2 in. thick	1-1/2"
1	1-5/8	1 Layer, 3/4 in. thick	Optional
2	1-5/8	2 Layers, 1/2 in. thick	Optional
2	1-5/8	2 Layers, 5/8 in. thick	Optional
2	3-1/2	1 Layer, 3/4 in. thick	3 in.
3	1-5/8	3 Layers, 1/2 in. thick	Optional
3	1-5/8	2 Layers, 3/4 in. thick	Optional
3	1-5/8	3 Layers, 5/8 in. thick	Optional
4	1-5/8	4 Layers, 5/8 in. thick	Optional
4	1-5/8	4 Layers, 1/2 in. thick	Optional
4	2-1/2	2 Layers, 3/4 in. thick	2 in.

CANADIAN GYPSUM COMPANY – 1/2 in. thick Type C, IP-X2 or IPC-AR; WRC, 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX or WRC; 3/4 in. thick Type IP-X3, ULTRACODE, ULTRACODE SHC or ULTRACODE WRC.

UNITED STATES GYPSUM CO – 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type SCX, SHX, WRX, IPAX1, AR, C, WRC, FRX-G, IP-AR, IP-X2, IPC-AR; 3/4 in. thick Type IP-X3, ULTRACODE, ULTRACODE SHC or ULTRACODE WRC.

USG MEXICO S A DE C V – 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type AR, C, IP-AR, IPAX1, IP-X2, IPC-AR, SCX, SHX, WRX, WRC or; 3/4 in. thick Type IP-X3, ULTRACODE, ULTRACODE SHC or ULTRACODE WRC.

4A. Gypsum Board* – (As an alternate to Item 4) – 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 5. Joint covering (Item 7) not required.

CANADIAN GYPSUM COMPANY – Type SHX.

UNITED STATES GYPSUM CO – Type SHX.

USG MEXICO S A DE C V – Type SHX.

5. Fasteners – (Not shown) – Type S or S-12 steel screws used to attach panels to studs (Item 2) or furring channels (Item 6). Single layer systems: 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 8 in. OC when panels are applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically. Two layer systems: First layer- 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC with screws offset 8 in. from first layer. Three-layer systems: First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in., 5/8 in. thick panels or 2-5/8 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below. Four-layer systems: First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in. thick panels or 2-5/8 in. long for 5/8 in. thick panels, spaced 24 in. OC. Fourth layer- 2-5/8 in. long for 1/2 in. thick panels or 3 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below.

6. Furring Channels – (Optional, not shown, for single or double layer systems) – Resilient furring channels fabricated from min 25 MSG corrosion-protected steel, spaced vertically a max of 24 in. OC. Flange portion attached to each intersecting stud with 1/2 in. long Type S-12 steel screws. Not for use with Item 4A.

6A. Steel Framing Members (Not Shown)* – (Optional on one or both sides, not shown, for single or double layer systems) – As an alternate to Item 6, furring channels and Steel Framing Members as described below:

a. Furring Channels – Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 5. Not for use with Item 4A.

b. Steel Framing Members* – Used to attach furring channels (Item 6a) to studs (Item 2). Clips spaced max. 48 in. OC., and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.

PAC INTERNATIONAL INC – Type RSIC-1.

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

8. Siding, Brick or Stucco – (Optional, not shown) – Aluminum, vinyl or steel siding, brick veneer or stucco, meeting the requirements of local code agencies, installed over gypsum panels. Brick veneer attached to studs with corrugated metal wall ties attached to each stud with steel screws, not more than each sixth course of brick.

9. Caulking and Sealants* – (Optional, not shown) – A bead of acoustical sealant applied around the partition perimeter for sound control.

UNITED STATES GYPSUM CO – Type AS

*Bearing the UL Classification Mark

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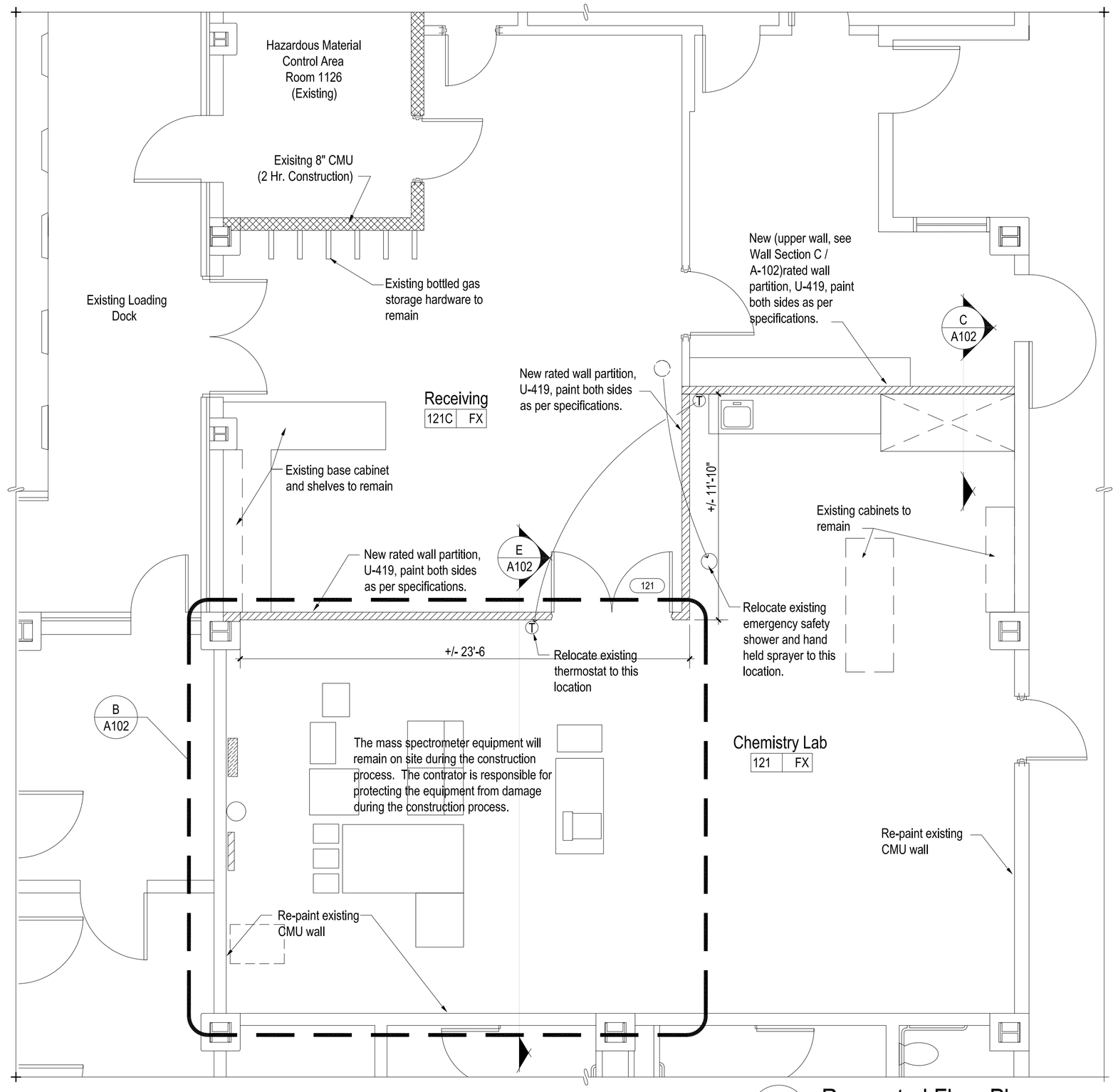
UL Detail U419 1 Hour Rated Wall

D

None



Wall Legend

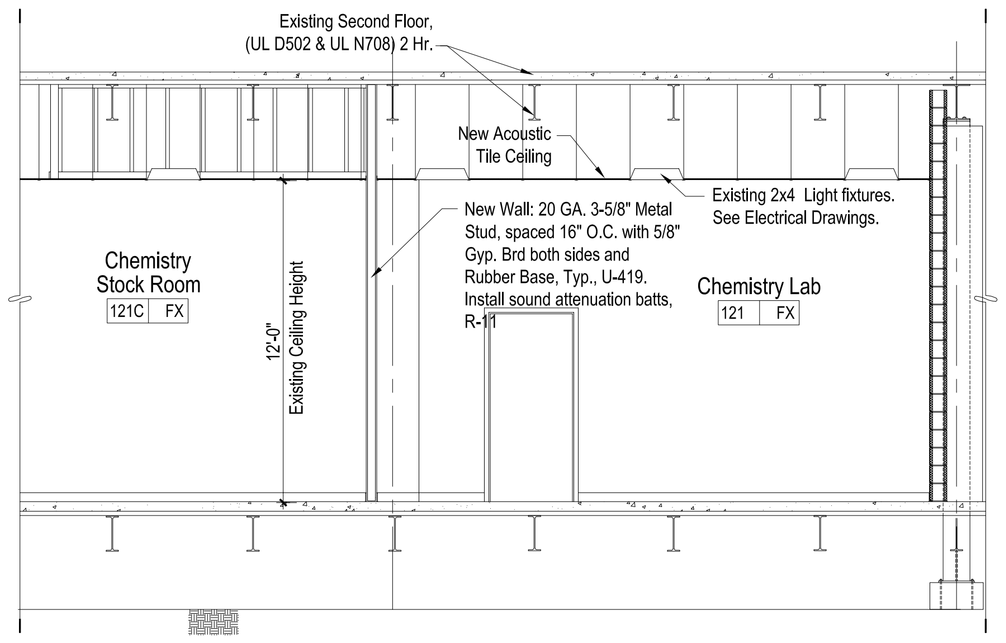
New Wall: 20 GA. 3-5/8" Metal Stud, spaced 16" O.C. with 5/8" Gyp. Brd. both sides and Rubber Base, Typ., (1) hour rated partition, U-419.

Existing Wall

Renovated Floor Plan

A

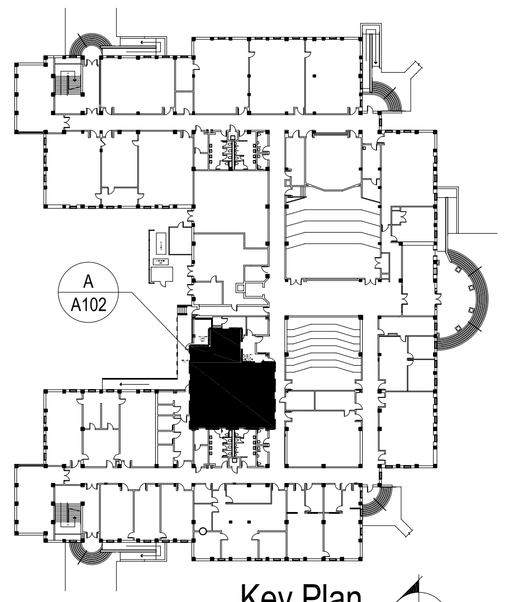
1/4"=1'-0"



Typical Section

E

1/4"=1'-0"



Key Plan

Scale: 1"=60'

NORTH

Record Drawings

These Drawings were created for the Owner's use. They represent actual installed conditions as indicated by Contractor mark-ups, Change Order's and clarification Sketches issued by the Designers. To the best of my knowledge they are correct and complete.

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UNCW

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Revisions

No.	Date
1	06/15/05 Record Drawings

Project Number 0414.MASS
Date 3/21/2005
Drawn TJC
Checked JLW
Scale As Noted
Drawing Title

Renovated Floor Plan, Enlarged Plan and Section

Sheet Number 4 of 12
Drawing Number A-102