



WALL PANEL LAYOUT

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INDUSTRIAL NOISE CONTROL, INC. (INC) OF NORTH AURORA, IL SHALL PROVIDE ALL NECESSARY DESIGN, MATERIALS, FABRICATION, DELIVERY AND FIELD INSTALLATION AS NECESSARY TO CONSTRUCT THE FOLLOWING STRUCTURE LOCATED IN THE LAWRENCE BERKELEY NATIONAL LABORATORY (LBNL) AT THE UNIVERSITY OF CALIFORNIA. ONE (1) RADIATION SHIELDING HURCH WITH LEAD LINING - DRAWING #251959-1 (V) SPECIFICATION MERS DATED 08-09-02 WITH REVISIONS 16 (REV).

NOTE: INCLUDES COMMON DIVIDING WALL BETWEEN HURCHES. THE HURCH SHALL BE CONSTRUCTED USING OUR 2" THICK MODULAR WALL AND ROOF PANELS CALLED PANEL-WALL © WITH DESIGN AND MECHANICAL PROPERTIES AS FOLLOWS:

1) DESIGN

A. COMPLETE SHOP DESIGN CAD SHOP DRAWINGS SHALL BE PREPARED AND SUBMITTED FOR LBNL APPROVAL PRIOR TO FABRICATION AND WILL INCLUDE DETAILED FLOOR PLANS, ELEVATIONS AND SECTIONS. HURCH SHALL BE DESIGNED TO SAFELY CONTAIN RADIATION IN ACCORDANCE WITH THE LBNL SPECIFICATIONS AND TO BE ASSEMBLED USING OUR MODULAR PANELS. NO LINE-OF-SIGHT OPENINGS (OTHER THAN THOSE SPECIFIED) SHALL EXIST FROM INTERIOR TO EXTERIOR. ALL PANEL JOINTS WILL BE MADE WITH OUR FORMED STEEL H-JOINERS THAT WILL PROVIDE A MINIMUM OF A 500" OVERLAP ON ALL SIDES. ALL SECTIONS OF WALLS AND ROOF INCLUDING CORNERS AND JOINTS WILL HAVE A SEPTUM LEAD BARRIER, MINIMUM LEAD THICKNESS OF 0.090".

B. THE HURCH WILL HAVE FLOOR PLAN DIMENSIONS AS SHOWN ON LBNL DRAWINGS REFERENCED HEREIN, AND SHALL HAVE A MAXIMUM OUTSIDE ROOF ELEVATION OF 120" ABOVE THE FINISHED FLOOR AND A MINIMUM INTERIOR CEILING HEIGHT OF 119". THE HURCH WILL BE A SELF-SUPPORTING STRUCTURE.

C. THE HURCH ROOF SHALL BE CAPABLE OF SUPPORTING A UNIFORM LIVE LOAD OF 40 psf OR A POINT LOAD OF 300 lbs AT ANY LOCATION ON THE ROOF.

D. SEISMIC LOAD RESISTANCE REQUIREMENTS PER SPECIFICATION WILL BE MET AND CERTIFIED DESIGN CALCULATIONS WILL BE SUBMITTED PRIOR TO SHIPMENT.

GENERAL CONSTRUCTION

A. WALL AND ROOF PANELS SHALL BE DOUBLE SKINNED COMPLETELY WELDED MODULES CONSISTING OF A19 GAUGE (0.047") EXTERIOR AND INTERIOR STEEL SKIN WELDED TO AN INTERNAL STEEL CHANNEL FRAME. THE 2" SPACE BETWEEN THE EXTERIOR AND INTERIOR SKINS SHALL BE FILLED WITH 2 lb DENSITY MINERAL WOOL INSULATION. ROOF PANELS SHALL INCLUDE ADDITIONAL INTERNAL STEEL REINFORCING MEMBERS AS NECESSARY TO ACHIEVE LOADING SPECIFICATIONS. ALL EXTERIOR AND INTERIOR SURFACES OF THE HURCH WALLS AND ROOF WILL BE SMOOTH SOLID SHEET STEEL. IN ADDITION, AN INTERNAL SEPTUM SHEET LEAD BARRIER WITH A MINIMUM THICKNESS OF 0.090" WILL BE SANDWICHED BETWEEN PANEL SKINS.

B. ALL PANELS AND OTHER COMPONENTS ARE COMPLETELY FIRE RETARDANT AND WILL NOT SUPPORT COMBUSTION MEETING ASTM E-84 CLASS 1.

C. ALL WALL AND ROOF PANEL-TO-PANEL JOINT CONNECTIONS SHALL BE MADE WITH OUR PREMIUM STYLE TWO PIECE BOLT TOGETHER H-JOINER PROVIDING AN AESTHETIC STRUCTURAL CONNECTION WITH PROPER GAP OVERLAP AND MATERIAL THICKNESS, AND ALLOWING EASY REMOVAL OF ANY PANEL.

D. HURCH WALLS SHALL BE SET IN A FORMED STEEL BASE CHANNEL WHICH WILL BE FASTENED TO THE EXISTING CONCRETE FLOOR USING THE APPROPRIATE ANCHOR.

E. ALL PANEL JOINTERS, FLASHINGS, TRIMS, MOUNTING CHANNELS, ETC. WILL BE FABRICATED WITH THE PROPER LEAD LINING. DURING INSTALLATION, ALL CORNERS WILL BE ADDITIONALLY FITTED WITH THE LEAD BARRIER UNDER THE CORNER TRIMS AND JOINTS.

F. ALL CORNERS WILL BE A ONE-PIECE FORMED CORNER PANEL AND WILL MAINTAIN THE LEAD BARRIER SHIELDING.

DOOR

A. THE HURCH SHALL INCLUDE ONE (1) 60" x 80" FRAMED DOOR OPENING. NO DOOR IS INCLUDED FOR THIS OPENING.

OPENINGS

A. THE HURCH SHALL INCLUDE FACTORY MADE AND FRAMED OPENINGS AS DESCRIBED IN THE LBNL SPECIFICATIONS WITH QUANTITY AND SIZING AS INDICATED ON THE DRAWINGS. EACH OPENING WILL BE FRAMED SMOOTH TO ALLOW PASSAGE OF CABLES, ETC., WITHOUT DAMAGE AND WILL BE FABRICATED TO MAINTAIN THE LEAD BARRIER MEMBRANE.

B. THE FOUR (4) 4' x 10" OPENING SPECIFIED FOR THE RADIATION SHIELDING HURCH SHALL BE FITTED WITH SPECIFIED LEAD LINED INTERIOR AND EXTERIOR SAFETY COVERS AS DETAILED ON LBNL DRAWING 251959-44.

FINISH

A. ALL COMPONENTS SHALL BE FABRICATED OF ELECTRO-GALVANIZED STEEL FOR EXCELLENT CORROSION RESISTANCE AND SUPERIOR ADHESION OF FINISH COATINGS.

B. ALL EXPOSED SURFACES WILL BE FACTORY PRIMED AND FINISH PAINTED USING SHIPPED INDUSTRIAL AIR DRY ENAMEL OR EQUAL MATCHED TO LBNL COLOR SPECIFICATION: "FEDERAL BEIGE" #22572.

ASSEMBLY FASTENERS

A. ALL FASTENERS USED TO ASSEMBLE THE HURCH (ON THE ACCESSIBLE FROM THE EXTERIOR) WILL BE TAMPER-PROOF OR SECURITY STYLE REQUIRING SPECIAL TOOL. ALL PANEL TO PANEL CONNECTIONS USING OUR SPECIAL H-JOINER WILL USE MACHINE BOLTS, ALL FLASHINGS, TRIMS AND OTHER CONNECTIONS REQUIRING SHEET METAL TYPE FASTENERS WILL USE TAMPER-PROOF SELF-DRILLING SHEET METAL SCREWS. SAFETY COVERS WILL BE INSTALLED WITH TAMPER-PROOF MACHINE BOLTS.

INSTALLATION

A. INC WILL PERFORM ALL SITE ASSEMBLY AND INSTALLATION USING OUR OWN NON-UNION FIELD INSTALLATION CREW. THE SCOPE OF OUR OFFER INCLUDES THE ASSEMBLY AND RECTION OF ALL COMPONENTS DESCRIBED HEREIN TO CONSTRUCT THE HURCH. ALL NECESSARY LABOR, TOOLS AND EQUIPMENT WILL BE PROVIDED BY INC WITH WORK BEING PERFORMED ON FIRST SHIFT WEEKDAYS. PLEASE NOTE THAT RECEIPT OF MATERIAL SHIPMENT AND TRANSPORT TO THE VICINITY OF THE ERECTION SITE IS TO BE PROVIDED BY LBNL AND IS NOT INCLUDE IN OUR SCOPE OF SUPPLY.

B. ADEQUATE CLEAR WORK SPACE AROUND THE ERECTION SITE MUST BE PROVIDED AS WELL AS UNENCUMBERED ACCESS TO THE SITE DURING INSTALLATION.

C. NO CUTROUTS OR PANEL MODIFICATIONS FOR INFERENCE OR PENETRATIONS OTHER THAN THOSE SHOWN ON THE LBNL DRAWINGS ARE INCLUDED IN OUR SCOPE OF WORK AND MAY REQUIRE EXTRA CHARGE IF REQUIRED.

D. OUR INSTALLATION CREW WILL CLEAN UP CONSTRUCTION DEBRIS, CRANKING MATERIALS, ETC., AND DEPOSIT THEM INTO LBNL PROVIDED DUMPSTER FOR REMOVAL FROM SITE BY OTHERS.

EXCLUSIONS

IN ACCORDANCE WITH THE SPECIFICATIONS THE FOLLOWING ITEMS ARE SPECIFICALLY EXCLUDED FROM OUR SCOPE OF SUPPLY AND ARE TO BE DESIGNED, PROVIDED AND INSTALLED BY OTHERS:

A. ANY AND ALL ELECTRICAL REQUIREMENTS INCLUDING BUT NOT LIMITED TO LIGHTING, OUTLETS, SWITCHES, WIRING, CONDUIT, RACEWAYS, ETC., AS MAY BE REQUIRED TO COMPLETE THE HURCH.

B. ALL DOORS.

C. ANY AND ALL VENTILATION REQUIREMENTS.

D. ALL VIEWING WINDOWS (FRAMED OPENINGS FOR WINDOW WILL BE INCLUDED AS SHOWN ON DRAWINGS).

2	11/01/02	ISSUED FOR INSTALLATION
1	10/11/02	INCORPORATED CUSTOMER COMMENTS AND RE-ISSUED FOR COMMENTS
0	10/09/02	ISSUED FOR COMMENTS
REV. NO.	DATE	DESCRIPTION

INC industrial noise control, inc.
 401 Airport Rd., North Aurora, IL 60542-800954-1998

CUSTOMER: U.C. LAWRENCE BERKELEY LABORATORY
 1550 CENTRON RD.
 BERKELEY, CA 94720

PROJECT: INC'S 2" PANEL-WALL RADIATION SHIELDING HURCH
 12.2.2

DWG. TITLE: INSTALLATION DRAWING - WALL PANEL LAYOUT
 PO #: 6700815 DRN. BY: MIG J05 : 2002-9751
 SCALE: 1/2" = 1'-0" SH. : 12 OF 4