



**SMALL BUILDING TELECOMMUNICATIONS ROOM**  
SCALE: NONE

**TELECOMMUNICATIONS RISER DIAGRAM**  
SCALE: NONE

- KEYED NOTES**
- 1 INSTALL CONDUITS FROM POINT OF CONNECTION TO NETWORK (AS DETERMINED BY THE LANL TELECOMMUNICATIONS GROUP). TERMINATE THE CONDUITS WITH INSULATING BUSHINGS 4" ABOVE FLOOR IN LEFT REAR CORNER OF THE ROOM AND ADJACENT TO THE LEFT WALL. INSTALL 1200 LB. TEST PULL TAPE WITH STAMPED FOOTAGE IN EACH CONDUIT AND TIE OFF AT EACH END. PROVIDE TEMPORARY CAPS TO EXCLUDE CONSTRUCTION DEBRIS FROM CONDUITS.
  - 2 INSTALL 4" X 12" X 1/4" COPPER GROUND BAR WITH INSULATED STANDOFFS AND PRE-DRILLED WITH 1/4" HOLES IN LEFT REAR CORNER OF THE ROOM. INSTALL DEDICATED, THW INSULATED 4/0 AWG GROUND CONDUCTOR FROM GROUND BAR TO MAIN ELECTRODE GROUND BAR IN MAIN ELECTRICAL ROOM. MAKE CONNECTIONS TO 4/0 AWG CABLE USING IRREVERSIBLE MECHANICAL CONNECTIONS OR EXOTHERMIC WELDS.
  - 3 LINE THREE WALLS OF THE ROOM WITH SHEETS OF 3/4" APA GRADE A-B GROUP 1 SANDED INTERIOR PLYWOOD FINISHED WITH TWO COATS OF WHITE OR LIGHT GRAY FIRE RETARDING PAINT ON ALL SURFACES.
  - 4 INSTALL 120V DUPLEX RECEPTACLES AT 6 INCHES AFF.
  - 5 INSTALL A 120 VOLT, 20 AMP TWISTLOCK ISOLATED GROUND RECEPTACLE FOR EQUIPMENT RACK; SERVE WITH A DEDICATED 20A, 120V CIRCUIT.
  - 6 PROVIDE LOCKABLE DOUBLE DOORS WITH VENTILATION LOUVERS AT TOP AND BOTTOM. LANL TELECOMMUNICATIONS GROUP WILL CORE LOCKS.
  - 7 PROVIDE MINIMUM 9'-0" CEILING HEIGHT; A FINISHED CEILING IS NOT REQUIRED. PROVIDE ILLUMINATION OF 50 FOOT-CANDLES MEASURED AT 3 FT ABOVE THE FINISHED FLOOR. MOUNT LIGHTING FIXTURES WITH LAMP GUARD A MINIMUM OF 8'-6" AFF. USE LIGHT COLORED PAINT ON WALLS AND CEILING TO ENHANCE ROOM LIGHTING. FINISH FLOOR WITH LIGHT COLORED NON-SLIP VINYL FLOOR COVERING.
  - 8 RESTORE FIRE RATING OF WALL AND FLOOR AT CABLE TRAY AND CONDUIT PENETRATIONS. USE APPROVED MATERIALS AND METHODS.
  - 9 PROVIDE A CONTINUOUS GALVANIZED STEEL FRAMING CHANNEL ABOVE THE TERMINAL BOARD. LOCATE AT 8'-9" AFF. BOND THE CHANNEL TO THE GROUND BAR USING 6 AWG MINIMUM. CLAMP CONDUITS TO THE CHANNEL.
  - 10 INSTALL A DEDICATED CONDUIT TO EACH TELECOMMUNICATIONS OUTLET, 1" MINIMUM. REFER TO SECTION 27 1000 OR FLOOR PLAN FOR SIZES.
  - 11 INSTALL 4-11/16" SQUARE, 2-1/8" DEEP BOX WITH SINGLE GANG RAISED COVER.

DESIGNER:  
EDIT TELECOMMUNICATIONS RISER DIAGRAM TO BE PROJECT-SPECIFIC. VERIFY REQUIREMENTS WITH THE LANL TELECOMMUNICATIONS GROUP. IN CONSTRUCTION DRAWINGS PUT THIS TELECOMMUNICATION ROOM PLAN(S) AND THE TELECOMMUNICATIONS RISER DIAGRAM ON SEPARATE SHEETS PER THE LANL DRAFTING MANUAL.

DRAWING DEVELOPED FOR ML-4 PROJECTS. FOR ML-1/ML-2/ML-3, ADDITIONAL REQUIREMENTS AND QA REVIEWS ARE REQUIRED. (REMOVE THIS NOTE WHEN INSERTED INTO A DRAWING PACKAGE).

NO	DATE	CLASS REV	ADC	DESCRIPTION	DWN	DSGN	CHKD	SUB	APP
<b>ENGINEERING STANDARDS PROGRAM</b>									
<b>ENGINEERING STANDARDS MANUAL</b>									
SMALL BUILDING TELECOMMUNICATIONS ROOM PLAN AND TELECOMMUNICATIONS RISER DIAGRAM					DESIGN	L. TIETJEN			
					CHECKED	D.W. POWELL			
					DATE	9-3-08			
BLDG SUBMITTED DAVID W. POWELL					APPROVED FOR RELEASE TOBIN DRUCH	TA- 9-3-08			
Los Alamos NATIONAL LABORATORY					SHEET				
PO Box 1663 Los Alamos, New Mexico 87545					1 OF 1				
CLASSIFICATION: UNC			REVIEWER: DONALD YARDMAN		DATE: 9-3-08		REV		
PROJECT ID			DRAWING NO		CHAPTER 7		ST-D5030-3		0

NOT FOR CONSTRUCTION