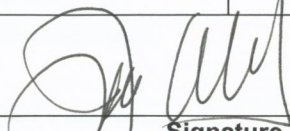
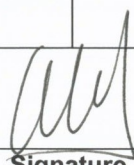


LCLS Room Data Sheet #	1.9-1008	Beam Transport Hall - Service Building #2	Revision 2
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Javier A. Sevilla
Owner / Editor

8/4/05

Signature Date


Jim Welch
System Physicist



8/15/05

Signature Date

David Saenz
Conventional Facilities System Manager



8/15/05

Signature Date


Eric Bong
Injector-Linac Manager



8/15/05

Signature Date

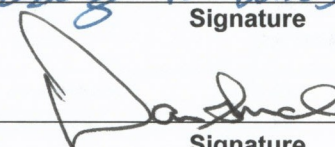
David Schultz
E-Beams System Manager

 for David Schultz

8/18/05

Signature Date

Darren Marsh
Quality Assurance Manager



8/16/05

Signature Date

REVISION INFORMATION

Rev 2. Changes to floor specs, general deletions, added electrical requirements, revised HVAC schematic and added electrical outlets. Changed lighting levels and heat rejected load by the racks. Updated applicable Standards and Codes

ROOM DATA SHEETS

System & WBS Manager: Dave Schultz/Eric Bong

FACILITY COMPONENT	BTH SERVICE BLDG#2 - ROOM DATA SHEET			
	Name of Building		BTH Service Building #2	
	Organization or Department		SLAC, Stanford University	
	Net area	55.4 sq. meters	596 sf	
	Critical dimensions	H:	3.66 m	12'
		W:	6.86 m	22'-5"
		L:	7.96 m	26'-2"
	Hours of operation		24/7/365 locked, occupied only for equipment service and maintenance	
	Users/Occupancy		Only during service and maintenance periods	
Building orientation		East/West		
FUNCTIONAL OBJECTIVE	To house rack mounted diagnostic equipment and free standing power supplies to run/monitor the ~2nd third of BTH.			
PLANNING CONSIDERATIONS & CRITICAL FACTORS	1) Building is placed on top of BTH structure. 2) Provide two (2) 24" penetrations for the building (One near the North wall of the BTH housing & another on the South wall of the BTH housing). Opening shall be centered over trays in housing below. Penetrations must conform with Radiation Physics requirements. 3) Provide stairway for access. 4) Locate access doors to allow the loading and unloading of racks from ground level.			
FINISHES	Wall	Corrugated steel, insulated, painted surface (SLAC Home Spun brown exterior)		
	Ceiling	Corrugated steel, insulated		
	Floor	Housing roof of BTH. Sealed concrete floor-Epoxy painted		
	Base	None		
	Doors	Pair of 3 ft by 7ft high insulated narrow light hollow metal equipment doors at centerline.		
	Fenestrations	NA		
	Acoustical	NA		
APPLICABLE STANDARDS	29 CFR Part 1910 Occupational Safety Health Standard Dept of Labor, 29 CFR Part 1926 Safety and Health regulations for Construction Dept of Labor. Uniform Building Code (UBC) 1997 including appendixes, National Electric Code (NEC) 2003, Uniform Mechanical Code (UMC) including appendixes, Uniform Plumbing Code (UPC) including appendixes, Uniform Fire Code (UFC) including appendixes, California Code of Regulations title 8 Industrial Safety, Title 19 Public Safety, NFPA 70 National Fire Codes, National Electrical Safety Code ANSI C2, Occupational Safety Health Act (OSHA), General Services Administration 41 CFR part 101-19, Environmental Protection Agency 40 CFR Parts 264 and 265 SLAC Environmental safety and Health Manual, General Industrial Activities Storm Water Permit (SLAC Permit), NFPA 101 Life Safety Code, Title 24, DOE Standard 10 CFR Part 435, ASHRAE/IES Standard 90.1, NFPA Standard 13 and SLAC Fire Marshal requirements, LCLS Cabling Standard, SLAC LOTO			

Figure No. 2

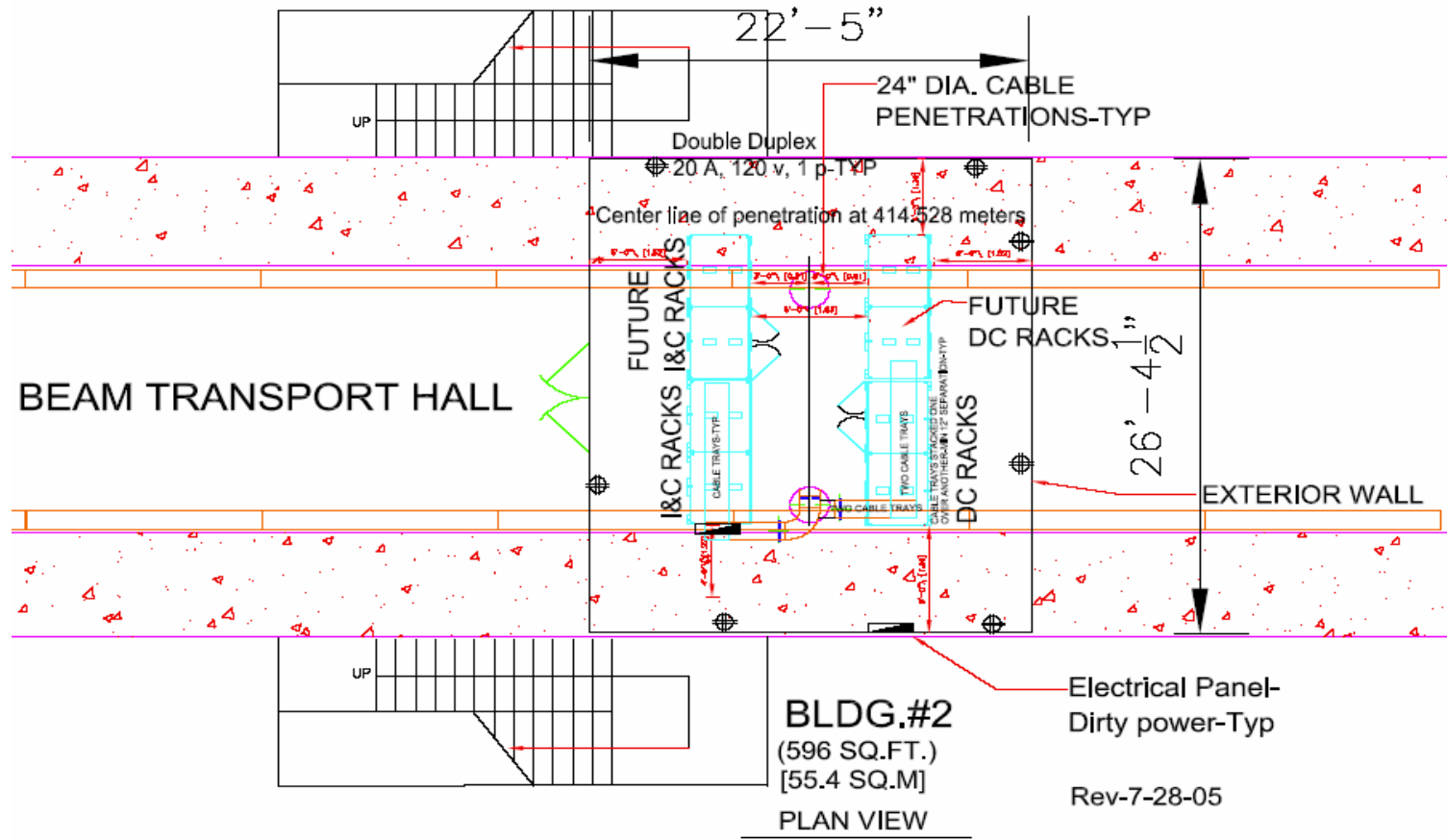
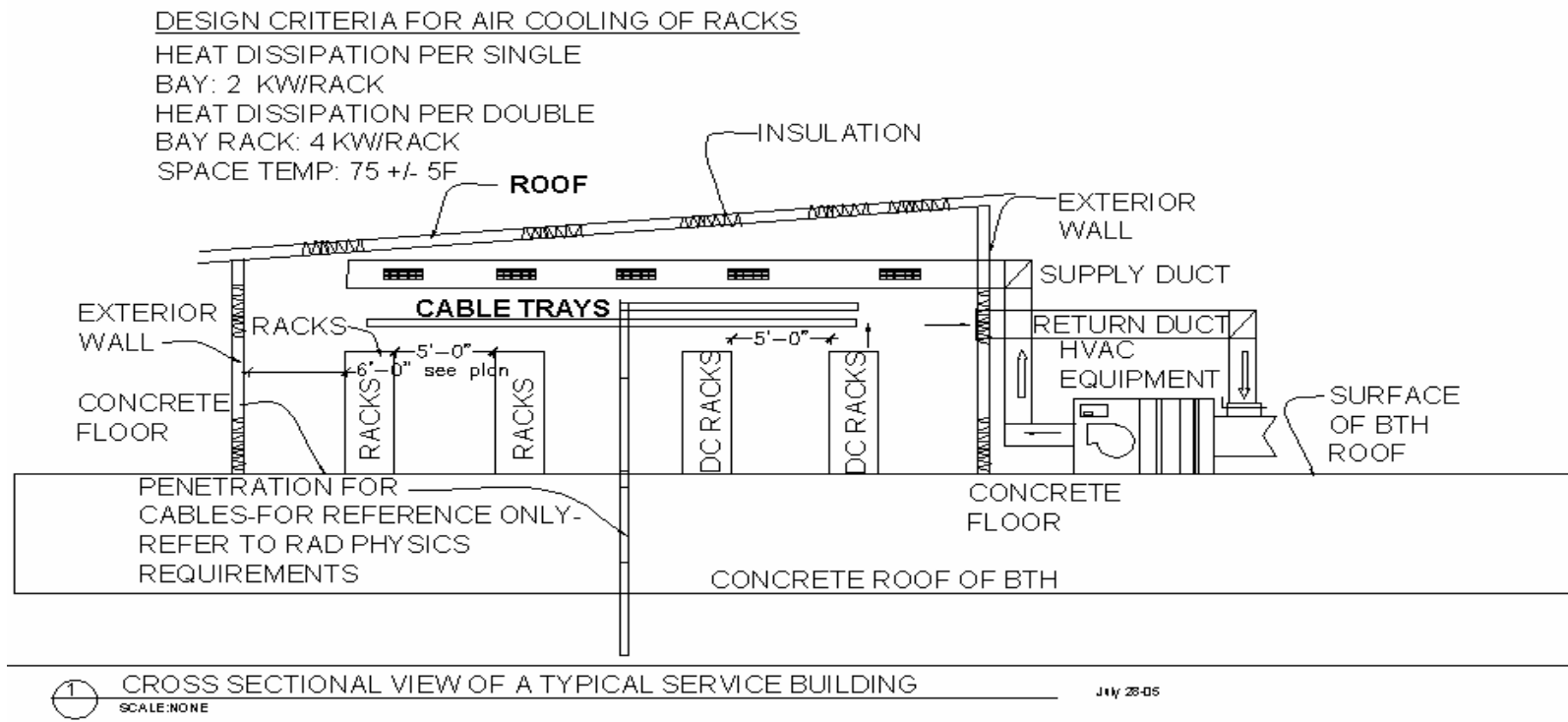


Figure No. 2



MECHANICAL REQUIREMENTS	HVAC	<input type="checkbox"/> Heating system	Temp:	<input type="checkbox"/> Mechanical humidification
		<input checked="" type="checkbox"/> Air conditioning	Temp: 75F	<input type="checkbox"/> Direct exhaust system
		<input type="checkbox"/> Direct supply		<input type="checkbox"/> Positive pressure system
		<input type="checkbox"/> Indirect supply		<input type="checkbox"/> Negative pressure system
		<input type="checkbox"/> Smoke control system		<input type="checkbox"/> Standard registers
		<input checked="" type="checkbox"/> Temperature sensors connected to SLAC DDC		<input type="checkbox"/> Requirement for gases
		Room will be air conditioned. Estimated heat rejected load per each double rack is: 4 kW		None
	Communications	<input checked="" type="checkbox"/> Telephone- a phone at one location		<input type="checkbox"/> PA speakers
		<input checked="" type="checkbox"/> Dataport- 2 outlets-one location per building		<input type="checkbox"/> PA station
		<input type="checkbox"/> Payphone		<input type="checkbox"/> CCTV camera
		<input type="checkbox"/> Fire alarm station		<input type="checkbox"/> CCTV monitor
		<input type="checkbox"/> Intercom		
		Comments: a) Provide 24" wide cable trays, 6" deep for I&C cables and control cables for DC racks, and 4" deep for cables for DC racks. b) Cable trays shall be made of galvanized steel, provide each cable tray with 1 # 4/0 bare copper wire as grounding. c) Racks to be furnished and installed by SLAC		
	Plumbing/Fire Protection	<input type="checkbox"/> Hot water system		<input type="checkbox"/> Electric watercooler
		<input type="checkbox"/> Cold water system		<input type="checkbox"/> Drinking fountain Bottled
		<input type="checkbox"/> Tempered water		<input checked="" type="checkbox"/> Smoke detection system
		<input type="checkbox"/> Waste drain		<input checked="" type="checkbox"/> Wet sprinkler heads
		<input type="checkbox"/> Floor drain		<input type="checkbox"/> Eye wash
		<input type="checkbox"/> Trench drain		
	Comments:			
ELECTRICAL REQUIREMENTS	Power supply	<input type="checkbox"/> 208 V outlets		<input type="checkbox"/> Uninterrupted power supply
		<input type="checkbox"/>		<input type="checkbox"/>
		<input checked="" type="checkbox"/> 110V outlets -20 amps distributed along walls		<input type="checkbox"/> Special electric
		Emergency power	Type:	
	Comments: a) Provide two panels, 120-208 volts, 3 ph (one panel for "clean" power and one "dirty" power-DC Racks) . Each panel shall have a main breaker with a minimum capacity of 125 amps, 70% demand. Capacity: 42 circuits, 22 KAIC All panels should have 20% spare capacity of additional breaker space. These panels shall be independent of any power panel needed for Utilities, HVAC equipment and service outlets. Panel location: Dirty power on the wall of service building and panel for "clean" power on the end of the I&C racks. All conduits and light fixtures are surface mounted.			
	Lighting	<input checked="" type="checkbox"/> Light fixtures		<input type="checkbox"/> Remote lighting control
		<input checked="" type="checkbox"/> Fixture type I: Downright		<input checked="" type="checkbox"/> Light switches
		<input type="checkbox"/> Fixture type II: Bollard (exterior)		Lighting level
		<input checked="" type="checkbox"/> Emergency lighting		FC: 30
		Comments:		

RADIATION/SEISMIC/VIBRATIONS ISSUES	Comments: 1. Comply with Radiation Physics requirements for penetrations thru floor (roof of BTH housing)	
SPECIAL REQUIREMENTS FOR EQUIPMENT	Comments:	
ENVIRONMENTAL NEEDS		Refer to cross sectional view for air conditioning system