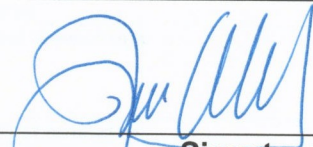

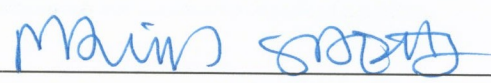
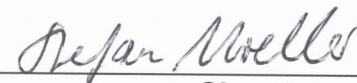




LCLS Room Data Sheet #	1.9-1035	Near Exerimental Hall - Mechanical Shop	Revision 2
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Javier A. Sevilla Owner / Editor		8/12/05
	Signature	Date
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	Signature	Date
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	Signature	Date

REVISION INFORMATION

Rev 2, Added layout figure, deleted floor drain. Added diversity factor for electrical panels

Updated Standards and Codes- Clarified water-cooling requirements

This one

ROOM DATA SHEETS

FACILITY COMPONENT	MECHANICAL SHOP (NEH) - ROOM DATA SHEET		
	Name of Building	Mechanical Shop (NEH) Sub-basement	
	Organization or Department	SLAC, Stanford University	
	Net area	60.7 sq. meters	653 sf
	Critical dimensions	H: 4.5 m	15'-0"
		W: 8.2 m	26'-11"
		L: 7.4 m	24'-4"
	Hours of operation	Operate during normal business hours	
	Users/Occupancy	Mechanical Technicians using mechanical shop tools and equipment used for the maintenance of existing and the construction of custom-designed experiment equipment used throughout the facility.	
	Building orientation	Mechanical Shop is located directly adjacent to the Open Work Area on the NEH sub-basement level.	
FUNCTIONAL OBJECTIVE	To provide a mechanical shop equipped with the appropriate shop tools necessary to support the experiment equipment maintenance and construction needs of the facility.		
PLANNING CONSIDERATIONS & CRITICAL FACTORS			
FINISHES	Walls	Painted reinforced concrete, framed gypsum board assembly	
	Ceiling	Reinforced concrete, painted surface	
	Floor	Epoxy floor coating	
	Base	Rubber base	
	Doors	Pair of 3ft wide by 7 ft high narrow light hollow metal door with access card reader	
	Fenestration	NA	
	Acoustical	Perimeter walls are to be constructed with sound attenuation insulation batts to prevent the shop noise from disturbing the adjacent labs.	
APPLICABLE STANDARDS	29 CFR Part 1910 Occupational Safety and Health Standards 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) 2002, Uniform Mechanical Code (UMC) 2003 including appendixes, Uniform Plumbing Code (UPC) 2003 including appendixes, Uniform Fire Code (UFC) 2003 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 and Health Act (OSHA), General Services Administration 41 CFR part 101-19, Environmental Protection Agency 40 CFR Parts 264 and 265, SLAC Environmental Safety & Health Manual, General Industrial Activities Storm Water Permit (SLAC Permit), NFPA 101 life Safety Code, Title 24-Energy Code, DOE standard 10 CFR Part 435, ASHRAE/IES Standards 90.1, NFPA Standard 13 and SLAC Fire Marshal requirements, LCLS Cabling Standard, SLAC LOTO		
VIEWS & SCHEMATICS (N. T. S.)	Refer to figure No. 1 below and figures in RDS NEH Overall		

	Plumbing/Fire Protection	<input checked="" type="checkbox"/> Hot water system	<input type="checkbox"/> Electric watercooler
		<input checked="" type="checkbox"/> Cold water system-stub-out at one location	<input type="checkbox"/> Drinking fountain
		<input type="checkbox"/> Tempered water	<input checked="" type="checkbox"/> Smoke detection system
		<input checked="" type="checkbox"/> Waste drain	<input checked="" type="checkbox"/> Standard sprinkler heads
		<input type="checkbox"/> Floor drain	<input type="checkbox"/> Eye wash / Safety shower
		<input type="checkbox"/> Trench drain	
	Comments: 1.- One sink-see diagram for location 2.-Process Cooling water: 10 GPM, 25 PSI(min delta pressure) at 68 F supply water-Refer to LCLS ESD Water Cooling Requirements. Terminate with shut off valve and pressure gauge. See diagram for location		
ELECTRICAL REQUIREMENTS	Power supply	<input type="checkbox"/> 208V 1ph outlets	<input type="checkbox"/> Uninterrupted power supply
		<input checked="" type="checkbox"/> 110V, 1ph Double duplex outlets, 20 amps locate at 10ft apart on all walls. Install at 15"-18" max AFF	<input type="checkbox"/> Special electric Type:
		<input type="checkbox"/> Emergency power	<input checked="" type="checkbox"/> One welding outlet, 100 amp, 480 volts, 3 phase
	Comments: 1- All conduits are surface mounted. 2- Provide two panels, 120-208 volts, 3 ph, (one "clean" and one "dirty" power). Each panel shall have a main breaker. All panels should have 20% spare capacity and additional breaker space. Capacity of each panel: 100 amps/Panel. Diversity Factor: 60%		
	Lighting	<input checked="" type="checkbox"/> Light fixtures - pendant suspended florescent shop lighting with protective cage	<input type="checkbox"/> Remote lighting control
		<input type="checkbox"/> Fixture type I: Downlight	<input checked="" type="checkbox"/> Light switches
		<input type="checkbox"/> Fixture type II: Bollard (exterior)	Lighting level FC: 75
		<input checked="" type="checkbox"/> Emergency lighting	
	Comments:		
RADIATION/SEISMIC/VIBRATIONS ISSUES	Comments: 1- All equipment (HVAC, panels, etc.) and systems are to be seismically braced and restrained per Code and SLAC seismic standards.		
SPECIAL REQUIREMENTS FOR EQUIPMENT	Comments:		
CHEMICALS / GASES	CHEMICALS		SPECIALTY GASES
	#	Chemical Type	Quantity
	#	Gas Type	Quantity
ENVIRONMENTAL NEEDS			

Figure No. 1

