

LCLS
Conventional Facilities - AE Deliverables

5/3/2004

Discipline	Schematic Design		Design Develop		Constr Doc Development				Construction		
	Title I - 50%		Title I - 100%		Title II - 50%		Title II - 100%		Title III -		
	Req'd	Date Comp	Req'd	Date Comp	Req'd	Date Comp	Req'd	Date Comp	Req'd	Date Comp	Notes
GENERAL											
Meeting Notes	√	3/12/2004	√	5/3/2004							
Project Description	√	3/12/2004	√	5/3/2004							
List of Specification Sections	√	3/12/2004	√	5/3/2004							
Technical Specifications (CSI Format)			√	5/3/2004				√			
Construction Cost Estimate (CSI Format)	√	3/12/2004	√	5/3/2004	√			√			
Value Engineering Report			√	3/31/2004				√			
Basis of Design Document Report	√	3/12/2004	√	5/3/2004							
Evaluation of Construction Bids									√		
Requests for Information (Clarifications/Supplemental Instructions)									√		
Change Orders									√		
Review of Shop Drawings									√		
Submittal Review									√		
Field Reports									√		
Review of Substitutions for Materials and Equipment									√		
Punch list									√		
Substantial Completion Certification									√		
Electronic Record of As-Built Drawings and Specifications									√		
Long Lead Equipment List					√						
Construction Schedule			√	4/13/2004	√			√			
Construction Drawings											
Project Information Sheet			√	5/3/2004							
Index of Drawings			√	5/3/2004							
SLAC Site Map			√	5/3/2004							
Site Analysis			√	5/3/2004							
Site Studies and Analysis			√	5/3/2004							
Adjacency Studies			√	5/3/2004							
Code Analysis			√	5/3/2004							
General Notes			√	5/3/2004							
Symbols			√	5/3/2004							
Abbreviations			√	5/3/2004							
CIVIL											
Evaluation of Existing Systems	√	3/12/2004									
Civil Basis of Design	√	3/12/2004									
Calculations					√						
Construction Drawings											
General Notes, Symbols, Abbreviations			√	5/3/2004							
Topographic & Boundary Survey			√	5/3/2004							
Site Demolition Plan			√	5/3/2004							
Site Grading & Drainage Plan					√						
Integrated Site Utilities Plan			√	5/3/2004							
Site Profile Sections			√	5/3/2004							
Erosion & Sediment Plan								√			
Storm Water Management Plan								√			
Road Profiles	√	3/12/2004	√	5/3/2004							
Earth Retaining Structures Plans			√	5/3/2004							
Earth Retaining Structure Elevations/Sections			√	5/3/2004							
Tunnel Geometry Plan			√	5/3/2004							
Tunnel Plan & Profile	√	3/12/2004	√	5/3/2004							
Paving Plan					√						
Paving Plan Details & Sections								√			
Storm Drain Profiles					√						
Storm Drain Details								√			
On-Site Spoils Disposal Plan					√						
Value Engineering and Feasibility Studies								√			
Life Cycle Cost Analysis								√			
LANDSCAPE											
Evaluation of Existing Conditions			√	5/3/2004							
Conceptual Landscape Plan			√	5/3/2004							
Conceptual Plant List					√						
Hydraulic Calculations					√						
Construction Drawings											
General Notes, Symbols, Abbreviations			√	5/3/2004							
Landscape Planting Plan			√	5/3/2004							
Landscape Finish Grading Plan					√						
Landscape Irrigation Plan								√			
Landscape Lighting Layout								√			
Planting Details								√			
Hardscape Details								√			
Site Accessories								√			
Irrigation Details								√			
ARCHITECTURAL											
Material Sample Board					√						
Renderings:											
Research Yard			√								
Near Experimental Hall			√								
Central Laboratory Office Complex			√	5/3/2004							
Evaluation of Existing Conditions	√	3/12/2004	√	5/3/2004							
Uniform Building Code/NFPA 101 Analyses			√	5/3/2004							
Area Calculation - Actual Gross SF			√	5/3/2004							
Assignable SF			√	5/3/2004							
Program GSF	√	3/12/2004	√	5/3/2004							
Construction Drawings											
Demolition Plans	√	3/12/2004	√	5/3/2004							
Master Site Plan	√	3/12/2004	√	5/3/2004							
Site Plans	√	3/12/2004	√	5/3/2004							
Plans:											
Fire Rating Plans			√	5/3/2004							
Floor Plans			√	5/3/2004							
Finish Schedules								√			
Roof Plans			√	5/3/2004							
Exterior Elevations			√	5/3/2004							

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	Req'd	Date Comp	Req'd	Date Comp	Req'd	Date Comp	Req'd	Date Comp	Req'd	Date Comp	
Building Sections			√	5/3/2004							
Wall Sections			√	5/3/2004							
Exterior Details:											
Wall Details							√				
(Incl Vert/Horizontal Joints)											
Window/Louver Schedule and Details							√				
Roof and Flashing Details							√				
Below Grade Waterproofing Details							√				
Roof and Drainage Details							√				
Miscellaneous Exterior Details							√				
Integrated Reflected Ceiling Plans					√						
Enlarged Plans, Sections and Elevations					√						
Enlarged Vertical Zoning Section					√						
Interior Elevations & Details:											
Interior Elevations					√						
Partition Schedule and Details					√						
Door & Hardware Schedule, Door Types and Details							√				
Ceiling & Lighting Details							√				
Casework Schedule and Details							√				
Stair & Elevator Details							√				
Miscellaneous Interior Details							√				
Color Schedule					√						
Equipment Plans, Schedules & Details							√				
Signage & Graphic Plans, Schedule & Details							√				
Value Engineering and Feasibility Studies							√				
Life Cycle Cost Analysis							√				
STRUCTURAL											
Systems Description			√	5/3/2004							
Evaluation of Existing Structures			√	5/3/2004							
Conceptual Framing Plans					√						
Conceptual Tunnel Layouts	√	3/12/2004	√	5/3/2004							
Calculations					√						
Construction Drawings											
General Notes, Symbols, Abbreviations			√	5/3/2004							
Demolition Plan			√	5/3/2004							
Foundation Plan					√						
Foundation Sections, Details, & Schedules					√						
Framing Plans					√						
Framing Elevations					√						
Retaining Walls, Concrete Sections & Details							√				
Roof Plans			√	5/3/2004							
Column Schedule					√						
Beam Schedule					√						
Other Schedules (Incl slab, rebar, etc)					√						
Enlarged Plans, Sections & Details					√						
Structural Tunnel Key Plan					√						
Temporary Structures Loads & Design Criteria							√				
Tunnel Typical Profiles			√	5/3/2004							
Tunnel Typical Details			√	5/3/2004							
Tunnel Alcove Plans			√	5/3/2004							
Tunnel Alcove Details			√	5/3/2004							
Tunnel Plans:											
Undulator Hall Tunnel Plan			√	5/3/2004							
X-Ray Transport & Diagnostics Tunnel			√	5/3/2004							
Far Experimental Hall Cavern			√	5/3/2004							
Far Experimental Hall Tunnel Access			√	5/3/2004							
Utility & Survey Shafts					√						
Value Engineering and Feasibility Studies							√				
Life Cycle Cost Analysis							√				
MECHANICAL: HVAC											
Mechanical System Basis of Design	√	3/12/2004	√	5/3/2004							
Selection of HVAC Systems	√	3/12/2004	√	5/3/2004							
HVAC Commissioning Plan							√				
Value Engineering and Feasibility Studies							√				
Life Cycle Cost Analysis							√				
Construction Drawings											
Title Sheet			√	5/3/2004							
Demolition Plans			√	5/3/2004							
Equipment Room Floor Plans			√	5/3/2004							
Floor Plans			√	5/3/2004							
Ventilation Plan					√						
Ventilation Plan Details							√				
Flow Diagrams	√	3/12/2004	√	5/3/2004	√		√				
FMCS I/O Point List					√						
FMCS Communication Riser Diagrams					√						
Riser Diagrams					√						
Details							√				
Schedules							√				
MECHANICAL: PLUMBING											
Plumbing System Basis of Design	√	3/12/2004	√	5/3/2004							
Selection of Plumbing Systems					√						
Value Engineering and Feasibility Studies							√				
Life Cycle Cost Analysis							√				
Construction Drawings											
Title Sheet			√	5/3/2004							
Demolition Plans			√	5/3/2004							
Sump Drain Diagrams	√	3/12/2004	√	5/3/2004							
Heating water System Diagram	√	3/12/2004	√	5/3/2004							
Chilled Water System Diagram	√	3/12/2004	√	5/3/2004							
Compressed Air System Diagram	√	3/12/2004	√	5/3/2004							

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Flow Diagrams			√	5/3/2004							
Riser Diagrams					√						
Enlarged Plans and Sections					√						
Foundation Drainage					√						
Details							√				
Equipment Schedules							√				
Specifications							√				
MECHANICAL: FIRE PROTECTION											
Fire Protection Basis of Design	√	3/12/2004	√	5/3/2004							
Fire Protection System Diagram	√	3/12/2004	√	5/3/2004							
Hydraulic Calculations											
Fire Protection Analysis Report					√						
Value Engineering and Feasibility Studies							√				
Life Cycle Cost Analysis							√				
Construction Drawings											
Title Sheet			√	5/3/2004							
Demolition Plan			√	5/3/2004							
Flow Diagram			√	5/3/2004							
Floor Plans			√	5/3/2004							
Riser Diagrams					√						
Enlarged Plans & Sections					√						
Details							√				
Equipment Schedules							√				
Specifications							√				
MECHANICAL: SITE UTILITIES											
Evaluation of Existing System			√	5/3/2004							
Systems Description			√	5/3/2004							
Hydraulic Calculations					√						
Construction Drawings											
Title Sheet			√	5/3/2004							
Demolition Plans			√	5/3/2004							
Site Mechanical Utilities Plan					√						
Enlarged Plans & Sections			√	5/3/2004							
Details							√				
Equipment Schedules							√				
Specifications							√				
ELECTRICAL											
Electrical System Basis of Design	√	3/12/2004	√	5/3/2004							
Evaluation of Existing Systems	√	3/12/2004	√	5/3/2004							
Value Engineering and Feasibility Studies							√				
Life Cycle Cost Analysis							√				
Electrical Load Analysis			√	5/3/2004	√						
Lighting Calculations			√								
Breakers and Protective Relays							√				
Construction Drawings											
General Notes, Symbols, Abbreviations			√	5/3/2004							
Demolition Plans:											
Site Utilities			√	5/3/2004							
Power and Grounding					√						
Integrated Communication Systems					√						
Electrical Power Distribution System:											
Single Line Diagrams	√	3/12/2004	√	5/3/2004							
Motor Control Center Single Line Diagram					√						
Panel Board Schedules					√						
Fire Detection and Alarm System:											
System Logic Diagrams					√						
Fire Alarm Panel Wiring and Connection Diagrams					√						
Transmitter Connection Diagrams							√				
Raceway and Wiring Layouts					√						
Fire Alarm Field Devices Connection Diagrams							√				
Raceway and Wiring Layouts:											
Power Distribution					√						
Grounding					√						
Lighting					√						
Landscape Lighting Plan							√				
Enlarged Plans & Sections:											
Equipment Rooms					√						
Communication Closets					√						
Equipment Controls and Connection Diagrams:											
Elementary Diagrams					√						
Connection Diagrams					√						
Control Panels and Wiring Diagrams					√						
Relay Panels and Wiring Diagrams					√						
Construction Details:											
Standard Installation Details							√				
Grounding Connections							√				
Special Equipment							√				
Energy Management											
Proposed Energy Conservation Measures					√						
Energy Conservation Report							√				
Title 24 Compliance Documentation							√				