

PCD CAPITAL PROJECTS DESIGN PROCEDURES

The lists below represent the minimum deliverable documentation PCD requires for each phase of the project. The specific deliverables required for each project shall be agreed upon by the A/E and the PCD Project Manager at or prior to the project kick-off meeting. The deliverable(s) shall include numbered pages, and tabs (if hard copy).

PCD shall review and approve the deliverable documents before the A/Es or contractors move to the next phase of work.

BASIC CONTENT REQUIREMENTS FOR PROGRAMMING DOCUMENT

1. Transmittal Letter
2. Table of Contents for entire report.
3. Executive Summary. Provide a narrative description of
 - a) User-specific goals for the project
 - b) User Mission Statement
 - c) Owner's requirements and explain the strategy to accomplish
 - d) Description of process
 - e) Assumptions
4. Project Statistics: PCD project number; Scope; programmed amount; construction cost limitations; operational need date.
5. Project Narrative: Explain the facility's purpose; types of activities it will support; major area categories (admin, conference, etc.); special relationships with other facilities.
6. Building Program: Documents the needs assessment, program, and functional relationships.
7. Attachments or Appendices (Depends on project):
 - A. Green Building Design Goal Setting Session Report (new buildings, selected building additions, or selected building renovations).
 - B. User/Owner furnished Equipment make and model numbers.
 - C. Special Sound Attenuation and/or Fire Separation requirements.
 - D. Area Development Plan: Describe the project site, its relationship to significant existing buildings, and supporting infrastructure. Any constraints impacting the site?
 - E. Infrastructure Requirements: Narrative describing known systems or subsystems necessary to and/or providing support to the facility.
 - F. Environmental concerns.
 - G. Design Guidelines: Adequate information should be provided to ensure the designer has enough information to prepare valid submittals during design, bidding, and construction phases.
 - H. References.
 - I. Meeting minutes.
 - J. Diagrams, Drawings, Tables.

BASIC CONTENT REQUIREMENTS FOR 100% SCHEMATIC DESIGN DOCUMENT

1. Transmittal Letter
2. Table of Contents for entire report.
3. Basis of Design and Narratives explaining:
 - a) Introduction/ Executive Summary of Project Narrative (from Programming Phase).
 - b) Results of Schematic Design Charrette (if applicable).
 - c) Civil Engineering Approach, Site Planning and Landscape Design.
 - d) Architectural Compatibility.
 - e) Construction Type, Building Insulation, Water and Moisture Proofing.
 - f) Security concepts.
 - g) Materials and Finishes.
 - h) Furniture, Furnishings and Equipment List.
 - i) Historic Preservation Concept and Solutions, if applicable.
 - j) Expansion Potential.
 - k) Building floor efficiency.
 - l) O&M goals (interior and exterior).
 - m) Structural System Approach.
 - n) Mechanical System Approach for the system approved and recommended from the three concepts (including calculations, energy analysis, and life cycle cost analysis).
 - o) Fire Protection System Approach.
 - p) Electrical System Approach.
 - q) Plumbing System Approach.
4. Drawings: Area Tabulation Diagram w/ gross SF shown; Plans, Sections, Elevations of Major building facades-- (showing fenestration, materials, shadows, critical dimensions, important spaces).
5. Code Compliance Analyses.
6. Cost/benefit and Life Cycle Cost Analyses.
7. PCD Green Building Design report.
8. Report feasibility of using Alternative Energy Sources.
9. Certification Requirements, including LEED Checklist, EPA's ENERGY STAR[®] Portfolio Manager report.
10. Detailed Estimate of Project Cost
11. Time Estimate for Completion of Next Phases of Work (Design, Construction Documents, Bidding, and Construction).
12. In bullet form, identify how proposed design features will support performance expectations of the project.
13. Review Comments and Marked Review Copies of previous submittal.
14. Meeting minutes.

100% Review Conference: Copies of the A/E list of issues and the review comments with the A/E's annotations shall be made available to anticipated attendees. The A/E shall distribute the conference agenda and relevant documents no less than 48 hours in advance of the scheduled meeting.

BASIC CONTENT REQUIREMENTS FOR 100% DESIGN DEVELOPMENT DOCUMENT

1. Transmittal Letter.
2. Table of Contents for entire report.
3. Drawings: Complete with drawing numbers; including demolition plans when applicable.
4. Specifications.
5. Code Analysis.
6. Basis of Design (if not revised from Schematic or Programming Phases then so state in transmittal letter) and Narratives explaining:
 - a) Civil Engineering Approach, Site Planning and Landscape Design.
 - b) Building Design Concept; Construction, Maintenance, Signage.
 - c) Historic Preservation Concept and Solutions, if applicable.
 - d) Structural Approach.
 - e) Mechanical Approach including calculations, energy analysis, and life cycle cost analysis (if not revised from Schematic Design Phase then so state in transmittal letter).
 - f) Fire Protection Approach.
 - g) Electrical Approach.
7. Design Calculations.
8. Project Cost Estimate including Value Engineering items.
9. PCD Green Building Design report.
10. Certification Requirements, including updated LEED Checklist, EPA's ENERGY STAR[®] Portfolio Manager report.
11. Furniture Layout with Dimensions for Electrical, Data, and Communications.
12. Equipment List.
13. List of Submittals Required in Project Specifications.
14. Recommendations on Special Inspections.
15. Construction Schedule.
16. Soil Investigation Report.
17. Bid Items.
18. Updated Time Estimate for Completion of Next Phases of Work (Design, Construction Documents, Bidding, and Construction).
19. Review Comments and Marked Review Copies of previous submittal.
20. Meeting minutes.

100% Review Conference: Copies of the A/E list of issues and the review comments with the A/E's annotations will be made available to anticipated attendees. The A/E shall distribute the conference agenda and relevant documents no less than 48 hours in advance of the scheduled meeting.

BASIC CONTENT REQUIREMENTS FOR 100% CONSTRUCTION DOCUMENTS

Construction Documents must be complete, coordinated between disciplines, biddable, readable, and buildable, with no room for unreasonable additional interpretation. The drawings listed below represent requirements for PCD's review, and do not constitute any

limitation on the documentation required to properly contract for the construction of the project, or limit the professional design liability for errors and omissions.

1. Transmittal Letter.
2. Table of Contents for entire report.
3. Update of Code Analysis.
4. Drawings: Complete with drawing numbers; including demolition plans when applicable.
 - a) Civil and Site Planning and Landscape Design.
 - (1) Site layout plan
 - (2) Grading and drainage plan
 - (3) Site utilities plan
 - (4) Planting plan
 - (5) Planting schedule
 - (6) Irrigation plan
 - (7) Planting construction details
 - (8) Construction phasing (if applicable)
 - (9) Survey of surrounding buildings
 - (10) Potential archeological artifacts
 - b) Architectural
 - (1) Project title sheet, drawing index
 - (2) Demolition plans
 - (3) Floor plans
 - (4) Reflected ceiling plans
 - (5) Building sections
 - (6) Roof plans
 - (7) Exterior elevations
 - (8) Wall sections
 - (9) Interior elevations
 - (10) Details
 - (11) Schedules
 - c) Structural
 - (1) Demolition
 - (2) Full set of construction drawings
 - (3) Schedules
 - (4) Structural details
 - d) Mechanical
 - (1) Demolition
 - (2) New work HVAC piping and equipment plans
 - (3) New work HVAC duct and equipment plans
 - (4) New work single line schematic flow and riser diagrams
 - (5) New work automatic temperature control diagrams
 - (6) New work schedules
 - e) Plumbing
 - (1) Demolition plans
 - (2) Piping riser diagrams

- (3) Floor plans
 - (4) Riser diagrams for waste and vent lines
 - (5) Riser diagrams for domestic cold and hot water lines
 - (6) Plumbing fixture schedule
- f) Fire Protection
- (1) Demolition plans
 - (2) Full set of fire protection construction drawings
 - (3) Typical fire protection details
 - (a) building construction
 - (b) life safety
 - (c) water supply
 - (d) water based fire extinguishing systems
 - (e) non-water r based fire extinguisher systems
 - (f) fire alarm system
- g) Electrical
- (a) demolition plans
 - (b) floor plans
 - (c) single line diagrams of primary and secondary power distribution
 - (d) single line diagram of fire alarm system
 - (e) single line drawing of telecommunications system
 - (f) circuit layout of lighting control system
 - (g) details of under floor distribution system
 - (h) site plan
 - (i) layout of electrical equipment spaces
 - (j) schedules for switch gear, switchboards, motor control centers, panel boards and unit substations
 - (k) grounding diagram
 - (l) complete phasing plan (if required) for additions and alterations
 - (m) security systems site plan
 - (n) security systems floor plans
 - (o) storage areas for electrical equipment/spare parts
5. Specifications.
- a) Include Historic Preservation
6. Code Analysis.
7. Narrative: Describing final mechanical system and equipment selection. An updated description of any deviation from the Basis of Design.
8. Design Calculations.
- a) Final drainage, parking, water/sewer, and pavement design calculations
 - b) Final structural calculations (loads, supports for nonstructural elements, steel connections)
 - c) Final electrical including illuminations, work stations, voltage drop, generator loads, etc.)
9. Final Detailed Cost Estimate including Value Engineering items, if applicable, and updated Project Schedule.
10. PCD Green Building Design report.

11. Certification Requirements, including updated LEED Checklist, and EPA's ENERGY STAR® Portfolio Manager report.
12. Furniture Layout with Dimensions for Electrical, Data, and Communications.
13. Equipment List.
14. List of Submittals Required in Project Specifications.
15. Data and Operations Manual.
16. Recommendations on Special Inspections.
17. Construction Schedule.
18. Bid Items.
19. Review Comments and Marked Review Copies of previous submittal.
20. A Record of Agency Approvals, and Signature-Approval Block on front sheet of drawings and specifications.
21. Return to Owner all Owner-provided documents and drawings.
22. Meeting minutes.

100% Review Conference: Copies of the A/E list of issues and the review comments with the A/E's annotations will be made available to anticipated attendees. The A/E shall distribute the conference agenda and relevant documents no less than 48 hours in advance of the scheduled meeting.

BASIC CONTENT REQUIREMENTS FOR BIDDING PHASE DELIVERABLES

1. Transmittal Letter.
2. Record of Questions and Answers during the bidding process.
3. Record of Addenda issued and record of owner approval of addenda.
4. Record of bid/proposal evaluation with recommendation to award contract (or not).

BASIC CONTENT REQUIREMENTS FOR CONSTRUCTION PHASE DELIVERABLES

1. Transmittal Letter.
2. List of critical inspection points based upon construction schedule furnished by contractor.
3. Periodic status reports; and meeting minutes.
4. Record of notifications of non-compliant Work.
5. Weekly field reports.
6. Certificates and recommendations for payment.
7. Responses to Submittals.
8. Record of Interpretations and Decisions made in the progress of the Work.
9. PCD Green Building Design report.
10. Record Drawings.
11. Maintenance Manuals, training videos, written warranties and related documents.

BASIC CONTENT REQUIREMENTS FOR PROJECT CLOSEOUT AND 11 MONTH WARRANTY INSPECTION PHASE DELIVERABLES

1. Transmittal Letter.
2. Warranty and Inspection report.
3. Design Process Analysis meeting minutes.

Design Process Analysis Meeting: The purpose of this meeting is to assess the State's efforts to implement sustainable design and construction requirements into the project and review any lessons learned from the overall effort. The A/E shall distribute the meeting agenda and relevant documents to anticipated attendees no less than 48 hours in advance of the scheduled meeting.