

## **DESIGN DEVELOPMENT DELIVERABLES**

The Design Development Documents shall illustrate and describe the development of the completed Schematic Design Documents and shall be refined to establish scaled relationships among the Project components. The Design Development Documents shall consist of Drawings and other documents. The Design Development Documents shall further include functional and operational descriptions for the Project commensurate with the level of design completion, and outline Specifications that identify major materials and systems and establish, in general, their quality levels.

The required information should be assembled into a complete package with full size drawing sheets supplemented with a booklet and submitted to the Owner's Representative with the minimum acceptable level of information as follows:

### **GENERAL**

1. All drawing sheets shall contain the official project title, project number, drawing revision date, scale information and indicate drawing orientation.
2. Updated code analysis with an executive summary of changes to the previous submission.
3. Updated space program information with an executive summary of any changes to the previous submission.
4. Interior finish/ Material Selection Board/s.
5. Cut-sheets for proposed mechanical, electrical and plumbing fixtures.
6. Cut-sheets for proposed equipment purchases.
7. Updated cost estimate with an executive summary of any variance to the previous submission and to the Owner's original construction cost estimate. Include a list of suggested protective alternates and their estimated costs.
8. Detailed area calculation and summary table.

### **CIVIL / SITE/ LANDSCAPE**

1. Soils report, if not provided previously.
2. Site soil retention work as needed.
3. Building excavation and fill requirements.
4. Foundation plans and sections. Waterproofing and drainage system.
5. Typical floor framing plans including slab openings, depressions.
6. Non-typical floor framing schemes.
7. Column schedule.
8. Beam & slab schedule with allowances noted for conditions to be detailed.
9. Preliminary details of special architectural features to structure.
10. Structural member sizes with preliminary details & sections to adequately indicate structural system.
11. If a remodeling project, modifications to the existing structure required.
12. Landscape general arrangement drawings including material types, boundary treatments and areas of planting, a planning plan (indicating species, size and density). The level of landscape information produced at this stage is sufficient to submit to the Local Planning Authority to clear landscape related planning conditions.

13. Access roads, walkways and parking (specify paving, i.e., concrete or asphalt, and thickness). Soil stabilization, if required.
14. Show locations of concrete curbs, ramps, stairs and handrails.
15. Building location plan, site contours and finish grades all tied dimensionally to benchmarks and datum elevations.
16. Site utilities: storm water collection, distribution of other building services including domestic water, fire lines & hydrants sanitary sewer, electric service, gas, telecommunications (general routing only).
17. Exterior lighting.

## **ARCHITECTURAL**

1. Updated life safety plan should include egress travel distances, area calculations – allowable and actual areas, exit widths – required and actual existing.
2. Updated floor plans should include key dimensions, corridor width dimensions, column lines and labels, locations of all partitions, doors and door swing, windows, plumbing fixtures, millwork, equipment, lockers, pneumatic tube stations, fire extinguisher cabinets and mechanical chases. Update special conditions such as shielding, isolation rooms, laser equipment rooms, clean rooms and automatic doors. Rooms should be labeled with name and number and include as-drawn square footage information.
3. Updated roof plans, which are to include all perimeters, roof penetrations, primary and overflow drainage devices, walkways, equipment, access points, valley and ridge lines, slopes, tapered insulation, and roof attachment enhancement zones at perimeter and corner areas. Detail drawings shall be provided showing the roof assembly cross section(s), attachment details, and flashing details at all perimeters and at major penetrations.
4. Equipment: update floor plans and schedules. Floor plan should show the location and represent the actual size. The equipment schedule should indicate equipment type, make, model, room number, dimensions and required utility connections and capacities for both new and existing equipment. Indicate Owner furnished items and contractor furnished items and installation assignments (OFCL, CFCL, etc.). Coordinate equipment locations and utility connection information with all disciplines.
5. Updated furniture layout, include selected vendor's furniture layout. Coordinate with power, lighting, and communication drawings.
6. Include preliminary manufacturer site specific drawings (reference only) for major Owner furnished equipment like imaging equipment, hydrotherapy pools, operating room equipment, etc.
7. Interior elevations for typical areas and unique situations should include furniture, fixtures, millwork, computers, plumbing fixtures, electrical outlets, nurse call, medical gas outlets and all new and existing Contractor and Owner furnished equipment.
8. Include typical wall type sections showing wall composition, materials and fire ratings.
9. Preliminary door and frame schedule indicate hardware groups, special hardware, security and electrical requirements.
10. Preliminary window schedule, include glazing, frame type and finish.
11. Preliminary finish drawing/s depicting material selections for walls, flooring, base, and ceiling. Include decorative flooring & ceiling patterns/ elements.
12. Preliminary reflected ceiling plan showing ceiling heights, bulkheads, soffits, light fixtures, diffusers, grills, access panels, patient lifts, cubical curtain track and all devices

- that penetrate or are mounted in/upon finished ceiling. Coordinate reflected ceiling plan with the mechanical and electrical drawings.
13. Preliminary interior signage locations shown on the floor plan with standard details and message schedules.
  14. Built in furniture items indicated (not detailed) - millwork and casework.
  15. Major equipment scheduled / located / service requirements. i.e. WallTalker / Writeable Walls, Food Service, Security, AV components, Computer Servers, Laundry.
  16. Key details - enlarged plans of key areas.
  17. Interior and exterior elevations.
  18. Exterior wall sections.
  19. Allowances for items requiring future definition.
  20. Plan to address existing hazardous materials, if any.

### **VERTICAL TRANSPORTATION**

1. Outline size, capacity, speed and quantity / banking of elevators.
2. Describe or provide allowance for cab finishes.
3. Rise to floor width of elevators.
4. Define handling performance for building population.
5. Pneumatic tube station location.

### **MECHANICAL / PLUMBING**

1. Preliminary mechanical room floor plans should indicate equipment location, size, and the required space for equipment maintenance and service. Plans should include all equipment including air handling units, return fans, exhaust fans, heat exchangers, pumps, humidifiers, water condition systems and the required electrical panels, disconnects, systems control panels, and variable speed drive (VSD) locations and mounting methods.
2. Updated ventilation schedule should now also include supply, return, exhaust and transfer size, quantity, type, CFM each, CRM total.
3. Updated temperature control diagram with zones and thermostat locations clearly identified.
4. Preliminary smoke damper schedule showing related smoke zones and matrix showing responsibility for power wiring, control wiring, step-down transformer placement and zoning and who provides and installs the dampers.
5. Updated roof plans showing roof perimeters, all proposed rooftop equipment and penetrations, primary and overflow drainage devices, stacks, plumbing vents, rooftop piping, and piping and equipment supports.
6. Identify, and include section drawings for areas with a potential for coordination problems such as corridors, mechanical rooms and operating rooms. Show both new and existing utility placements with dimensions. Include structural members, architectural features and all trades and utilities.
7. Updated riser diagram for plumbing, domestic water, steam and medical gasses with point of connection information.
8. Identify fire pump requirements and size and other equipment schedule/ locations.
9. Specify sprinkler system types; dry, wet, pre-action and/or chemical.
10. Specify sprinkler head type (concealed, semi-recessed, and exposed).

11. Stand pipe locations.
12. Sewer and water tap sizes and locations.

## **ELECTRICAL**

1. Load analysis and power service connection. Special connection fees, if any.
2. Further development of one line electrical distribution diagram, including normal / emergency / life safety power. Include point of connection information.
3. Light fixture layout should be shown in the reflected ceiling plan (RCP) with fixtures labeled and a fixture schedule. This should include general lighting, emergency lighting (clearly identified) and exit signs. Indicate dimming where necessary. Further development of one line electrical distribution diagram, including normal / emergency / life safety power. Include point of connection information.
4. Preliminary equipment layouts and schedules with sizes, capacities and locations. Include required chases and details if appropriate.
5. Preliminary panel schedule.
6. Any special features (under floor raceways, access flooring, etc.) should be further detailed.
7. Fire alarm and communication system requirements.
8. Power distribution equipment (schedule and locations), feeder sizes, emergency generator size / location.
9. Roof plans showing roof perimeters, all proposed rooftop electrical equipment, roof penetrations, rooftop conduits, raceways and cable trays, and support systems.

## **COMMUNICATION**

1. Communication plan shall be developed further and include telephone, data, nurse call locations, special nurse call and signal light systems, fire alarm pull stations, horn/strobes, fire alarm panels, door security, automatic door operators, cameras, and duress button locations. Include low voltage responsibility matrix on drawing showing required work and responsibilities.
2. Show telecommunication room (TR) location/s with the standard room configuration. Coordinate electrical and HVAC requirements for TR.
3. Show complete pathway for low voltage wiring including cable tray, include standard pathway detail on drawings.
4. Show communication room location/s and indicate panel mounting locations. Coordinate electrical and HVAC requirements for communication room.
5. Further develop security diagram showing locations of duress buttons, camera locations, zones of security and the level of security at each affected opening.
6. Roof plans showing roof perimeters, all proposed rooftop communication equipment, roof penetrations, rooftop conduits, raceways and cable trays, and support systems.

## **SPECIFICATIONS**

1. Preliminary outline specs with materials and systems descriptions consistent with drawings. Specification should be CSI Master Format.

*End of Document*