

## **DESIGN DEVELOPMENT REVIEW PACKAGE CHECKLIST**

Check off each item that is included within the submitted Design Development checklist.  
Provide a written explanation for any omissions.

### **CIVIL**

- SD Comments Incorporated into DD Drawings
- Site Plans
  - Site Plan Graphically Fixed and Site Geometry Fixed
  - All Site Elements Defined (Vehicular and Pedestrian Circulation, Storm Water Detention, etc.)
  - Demolition Plan (Paving, Utilities, etc.)
  - Utility Connections Shown (campus Utility Tunnel, Campus Chilled Water and Steam Piping, Campus Medium Voltage Duct Bank. Coordination with Gas Co. Ongoing)
  - Domestic and Fire Water Services Shown (Including Connections, Vaults, Meters, Backflow Prevention. Coordination with Water Company Ongoing.)
  - Temporary Power and Water Sources Identified
  - Site Detailing Initiated
  - Site Plan and Utility Connections Coordinated with Architect, Landscape Architect and MEP/FP Engineers
- Draft Specifications
  - Division 31 Earthwork
  - Division 32 Paving
  - Division 33 Site, Utilities, Including UH Master Specifications
- Proposed Variances, if any, Identified and Submitted
- Cost Estimate of Site Work

### **LANDSCAPE**

- SD Phase Comments Incorporated into DD Drawings
- Site Plans
  - Site Plan Graphically Fixed and Site Geometry Fixed
  - All Site Elements Defined (Vehicular and Pedestrian Circulation, Storm Water Detention, etc.)
  - Grading and Drainage Finalized
  - Site Detaining Initiated
  - Site Plan and Utility Connections Coordinated with Architect, Landscape Architect and MEP/FP Engineers
- Hardscape Plan
  - Paving Patterns, Materials, Paving Details and Site Lighting Delineated
  - Site Furnishings Shown (Including Seating, Trash Receptacles, Tables, Tree Grates, Drinking Fountains, etc.)
- Planting Plan
  - Planting Hierarchy Shown, Plant Schedule Complete

- Irrigation Plan
  - Scope Determined
  - Irrigation Zones Diagramed and Types of Components Identified
- Tree Protection Plan
  - Trees to be Protected Identified, Tree Protection Details Included
  - Tree Mitigation Spreadsheet Updated Showing Caliper Inches to be Removed and Caliper Inches to be Planted
- Outline Specifications
  - Tree Protection
  - Planting
  - Irrigation
  - Site Furnishings
- Proposed Variances, if any, Identified and Submitted
  - Determine Structural System

**STRUCTURE**

- SD Comments Incorporated into DD Drawings
- Plans
  - Structural Design Criteria Updated as Needed
  - Plans Generally Complete (Columns, Beams, Slabs, Lateral Design Elements Scheduled and Detailed)
  - All Column Sizes and Lateral Design Structural Elements Fixed and Included in Architectural Drawings
  - All Floor Framing Plans Drawn with Slab Thicknesses, Beams and Major Slab Openings
  - Foundation Design Complete
  - Wind Loading and/or Seismic Design Complete
  - Framing Diagrams Complete for all Miscellaneous Framing Assemblies
  - Scope of all Miscellaneous Structural Items Identified
  - Slab Depressions and Balcony Conditions Addressed
- Details
  - General CMU Reinforcing Design and Loose Lintels Shown
  - Typical Masonry Design and/or Other Cladding Interfaces Reflected in Typical Details
  - Structural/Architectural/MEP Coordination Ongoing
- Draft Specification
  - Draft Structural Sections in CSI Master Spec Format
  - UH Master Specifications Included in UH Format
- Proposed Variances, if any, Identified and Submitted

**ARCHITECTURE + INTERIORS**

- Pending Issues Report (Copy of Spreadsheet Tracking Open Design and Coordination Issues)
- SD Comments Incorporated into DD Drawings

- CFPC Presentation Complete
- General Drawings
  - Building Code Analysis (IBC, NFPA 101 and TAS/ADA)
  - Fire and Life Safety (Including Construction Type, Fire Exposure Analysis, Occupancy Type, Required Egress, Means of Egress, Transportation Systems, Required Fire and Smoke Barriers, Fire Suppression, Emergency Notification, Smoke Control, Stair Pressurization, Vertical Openings, Emergency Lighting, etc.)
  - All Partition Types and Acoustical Performance Criteria Identified
  - Space (SF) Analysis Updated
  - Written Review of Drawings by Acoustical Consultant to Include MEP Acoustical Isolation, Architectural Partitions, Floor and Deck Details and Prepares Acoustical Isolation Specifications
- Site Plan
  - Project Location with Building Footprint
  - Adjacent Structures
  - Access (Pedestrian, Vehicular and Fire)
  - Site Demolition Plan
  - Site Lighting Foot Candle Analysis
- Floor Plans
  - Room Layouts with Room Names, Room Numbers and Program ASF and Actual NSF
  - Interior and Exterior Dimension Stringers
  - Updated Furniture Layouts
  - Partition Types and Door Types Tagged
  - Enlarged Floor Plans (Restrooms, Typical Labs, Student Rooms, Classrooms, Kitchens, Other Specialty Areas, etc.)
  - Door/Frame/Hardware Schedules and Typical Door Details
  - Elevators, Elevator Cabs and Stairs Fully Dimensioned and Coordinated in Plan and Section
  - Demolition Plans for Renovation Projects
- Roof Plan
  - Drainage, Overflow and Materials Identified
  - Roof Penetrations Coordinated
  - Tie-offs, Walk Mats and Parapets Shown
- Reflected Ceiling Plans
  - All Typical and Major Areas Drawn with Light Fixtures and Diffusers Indicated
  - Structure and MEP/FP Coordination Underway
  - Representative Ceiling Details Drawn for Scope and Cost
  - Primary Building Elevation and Other Significant Facades
- Interiors
  - Preliminary Finish Plans and Schedules
  - Preliminary Finish Presentation to FP&C Complete
  - Representative Elevations with Dimensions, Notes and Sections Referenced
  - Typical Interior Details

- Finish Design of Lobbies, Amenities and Other Finish Spaces Initiated
- Proposed Donor Wall Shown, if any
- Restrooms, Kitchens, Laboratories and Other Spaces Blocked Out with Casework and Built-in Fixtures, Equipment and Appliances
- All Special Equipment Described and Scheduled
- Drawings by Laboratory, Food Service, AV, IT Security and other Specialty Consultants Included
- Exterior Elevations
  - All Major Exterior Elevations with Floor-to-Floor Dimensions
  - Ground Floor Elevation to Mean Sea Level (MSL) and 500-Year Flood Plain Elevation with Primary Materials Identified
  - All Building Sections and Wall Sections Called Out
  - Window Schedule Included
- Building Sections
  - Sections Complete and Coordinated with Structure
  - MEP/FP/IT Horizontal Collection and Distribution Zones Addressed in Building Sections
- Typical Wall Sections
  - Wall Sections at 1/2" or 3/4" Scale that Show Typical Construction with Notes and Dimensions
  - Representative Larger Scale Section Details at 1-1/2" or 3" Scale
  - Review of Typical Wall Sections and Details Submitted by Envelope Consultant
  - Foundation Sections Complete
- Renderings
  - Updated Perspective Renderings in Color
- LEED Checklist
  - Updated Annotated Checklist Required for All Projects, both "Design and Certify to LEED" and "Design to LEED"
- SECO Compliance
  - Draft Worksheets Demonstrating Compliance with SECO Building Envelope Standards
- Draft Specifications
  - Draft Sections in CSI Master Spec Format for all Component Systems, Materials and Equipment
  - UH Master Specifications Included in UH Format
- Building Maintenance Review
  - Building Maintenance, Including Window Washing, Roof Safety, and Trash Collection, reviewed in page-turn session with Facilities
- Third Party Cost Estimate
  - Opinion of Probable Construction Costs Based on Detailed Quantities and Unit Costs for all Materials, Labor, Equipment, Building Systems, General Conditions, Fees and Contingencies

- CSI Master Format
- Bid Alternates
  - Identified and Estimated
- Proposed Variances, if any, Identified and Submitted

**FURNITURE**

- Furniture Planner to Review Furniture Layout and Power, AV and IT Connections

**ELEVATORS**

- Elevator and Elevator Cabs Fully Dimensioned and Coordinated in Plan and Section
- Interior Cab Elevations with Finishes Called Out
- Power Requirements and Sequence of Control Shown for Elevator Recall System
- Sump Included in Elevator Pit
- Emergency Circuit for Sump Pump and Control/Alarm Conduit Provided to BMS Panel
- GFCI Outlet Shown in Pit and Near Elevator Controller
- A/C Provided for Elevator Shaft and Machine Room; Machine Room A/C Shown on Emergency Power if Elevator is on Emergency Power
- Security System Included for Floor Access, if Required
- Shunt Trip Provided for Elevator Power
- Surge Suppressor Provide to Protect Elevator Controller
- Fire Sprinkler System Shown in Machine Room and Shaft
- Fire Alarm Devices Included
- Draft UH Division 14 Master Spec(s) included in UH Format Maintained
- Proposed Variances, if any, Identified and Submitted

**FIRE PROTECTION**

- SD Comments Incorporated into DD Drawings
- Perform Fire Hydrant Flow Tests to Determine if Fire Pump and Break Tank are required
- Fire Pump Sized and Shown, if Required
- Fire Protection System Zoned and Hazard Classifications Defined
- Special Fire Protection System Areas Shown (Dry, Pre-action, Chemical, etc.)
- Coordination with MEP and IT Systems Underway
- Fire Protection Riser Diagram
- Hydraulic Calculations
- Typical Fire Protection Details, Control Valves, Flow Switches, etc.
- Proposed Variances, if any, Identified and Submitted

**MECHANICAL**

- SD Comments Incorporated into DD Drawings
- Preliminary Demolition Plan
- Preliminary Site Plan Showing Source of Utility Services
- Preliminary HVAC Floor Plans with Ductwork Sizes and Types Labeled, Terminal Units (e.g. Fan Powered Boxes, VAV Terminal Boxes) and Associated Thermostats Called Out and

- Supply/Return Air Grilles with Sizes and Types Labeled
- Preliminary Plan Diagram with HVAC Zoning
- Preliminary Piping Floor Plans showing Pipe Sizes and Types and Units Using Chilled water/Hot Water
- Enlarged Mechanical Room and Mechanical Yard Plans, Showing All HVAC Equipment (Pumps, Fans, AHUs, Chiller, Boiler, etc.)
- Lab Ventilation Systems
- Fire/Smoke Dampers in Fire Rated Walls
- Preliminary Equipment Schedules
- Preliminary Air and Chilled/Hot Water Flow Diagrams
- Typical Mechanical Details
- Draft Specifications in UH Master Specification Format
- Proposed Variances, if any, Identified and Submitted

### **ELECTRICAL**

- SD Comments Incorporated into DD Drawings
- Electrical Demolition Plan
- Site Plan Showing Incoming Service and Feeders and Exterior Equipment Locations
- Site Lighting Layout with Submitted Photometric Analysis to Demonstrate Compliance with UH and IENSA Standards
- Grounding System Plan and Riser Diagram, Including Lightening Protection and Grounding Details
- Single Line Diagram with Load Analysis, Main Feeder and Branch Sizing – All Conductors Must Be Copper
- Interior Lighting Plans with Photometric Analysis
- Typical Lighting Details
- Basis of Design Fixture Selection (DLC, Lighting Facts, Energy Star) and Preliminary Fixture Schedule
- Lighting Control Plans
- Floor Plans Showing Power Service and Distribution, Mechanical Equipment (Including Elevator) Requiring Power (Including Roof) and all Device Layouts (Receptacles, Switches, Data Outlets, Fire Alarm, etc.)
- Electrical Equipment Floor Plans
- Enlarged Electrical Room Plans Showing Equipment Locations and Clearances. Include Basis of Design Information for Short Circuit Rating of Equipment.
- Special Systems (UPS, Batteries, etc.), if any
- Emergency Distribution System Including Generator Location; Generator Sized for Life Safety Loads and Optional Lads Approved by UH
- Preliminary Panel Schedules
- Fire Alarm Riser and Plan
- Draft Specifications in UH Master Specification Format
- Proposed Variances, if any, Identified and Submitted

**PLUMBING**

- SD Comments Incorporated into DD Drawings
- Preliminary Demolition Plan
- Preliminary Site Plan with Utility Services and Mains Shown
- Preliminary Floor Plans with Preliminary Pipe Sizes, Floor Drains, Equipment (Pumps, Softeners, Mixing Valves, Elevator pit Sump Pumps, Heaters, Backflows, etc.) and Service Access Shown
- Roof Plan with Preliminary Drains and Overflow Drains or Scuppers, Vent Stacks and Equipment Shown
- Preliminary Plumbing Fixtures Schedule
- Preliminary Plumbing Equipment Schedules
- Typical Plumbing Details
- Natural Gas, etc.
- Equipment and Mains for Gas and Compressed Air
- Draft Specifications in UH Master Specification Format
- Proposed Variances, if any, Identified and Submitted

**BUILDING MANAGEMENT SYSTEMS**

- SD Comments Incorporated into DD Drawings
- Instrumentation and Controls General Information
- Preliminary Control Diagrams with a list of Control Points and Sequence of Operations
- Draft Specifications per UH Division 25 Master Specifications Included in UH Format
- Proposed Variances, if any, Identified and Submitted

**TELECOM-IT**

- SD Comments Incorporated into DD Drawings
- Scope Matrix Showing Division of Responsibilities among General Contractor, IT Contractor and Owner
- Telecom Site Plan Showing Location of IT Service
- Telecom Riser Diagram
- Floor Plans and Reflected Ceiling Plans with Distribution Pathways and Device Layouts (Wireless, Data Drops, Security Cameras, EAC and AV)
- Enlarged BDF, IDF Rooms and Communications Backboards
- Typical Rough-in Details
- Coordination with Architecture, MEP/FP, AV, Security, EAC and Furniture Underway
- Draft Specifications in UH Master Specification Format, Identifying Proposed Products
- Proposed Variances, if any, Identified and Submitted

**AUDIO VISUAL**

- SD Comments Incorporated into DD Drawings
- Scope Matrix Showing Division of Responsibilities among General Contractor, IT Contractor and Owner
- Floor Plans and Reflected Ceiling Plans Showing AV Equipment and AV Closets

- Typical Rough-in Details
- Enlarged Plans for Key AV Spaces, such as Lecture Halls and Auditoriums
- Coordination with Architecture, Furniture, Power and Communications Underway
- Draft Specifications in UH Master Specification Format, Identifying Proposed Products
- Proposed Variances, if any, Identified and Submitted

**SECURITY**

- SD Comments Incorporated into DD Drawings
- Scope Matrix Showing Division of Responsibilities among General Contractor, Security Contractor and Owner
- Site Plan Showing Security Cameras and Coverage and Emergency Call Boxes
- Typical Pole-Mounted and Building-Mounted Camera Details
- Floor Plans Showing Security Closets and Panels
- Coordination with Architecture, Power, Lighting, and Communications Underway
- "Points-of-Connection" for Power and Data Noted
- Draft Specifications in UH Master Specification Format, Identifying Proposed Products
- Proposed Variances, if any, Identified and Submitted

**ELECTRONIC ACCESS CONTROL**

- SD Comments Incorporated into DD Drawings
- Scope Matrix Showing Division of Responsibilities among General Contractor, EAC Contractor, Door Hardware Contractor and Owner
- Plans Showing Access Control Zones, Location of Controlled Doors and Other Wall Openings and Locations of EAC/Security Closets
- Elevations of Doors Showing Typical Locations of EAC Equipment and Other Hardware
- Elevations of EAC Equipment Back boards
- Coordination with Door and Hardware Schedule Underway
- "Points-of-Connection" for Power and Data Noted
- "Sequence of Operations" Diagrams for Each EAC Function with Status Matrix Shown
- Draft Specifications in UH Master Specification Format, Listing Specific Functions for Each Controlled Opening and Identifying Proposed Products

I confirm that the above minimum requirements are provided within the Design Development Review Package, or that I have provided an explanation for any omissions.

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Signature

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Date

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Printed Name

**- END OF DESIGN DEVELOPMENT REVIEW PACKAGE CHECKLIST -**