

UNIVERSITY of DELAWARE					
PLANNING & PROJECT DELIVERY					
DESIGNER DELIVERABLES					
PROJECT NAME: HEALTH SCIENCE RENOVATION					
LEGEND: I = Input O = Output Check box = include in design scope					Comments
GENERAL					
	1	I	X	Review and comply with UD FREAS Design Standards throughout the project, including associated standards such as EHS and NIS.	
	2	I	X	Confirm and comply with all relevant jurisdictional codes and compliance required, including but not limited to COMcheck	
	3	O	X	Maintain and post meeting minutes through the process of design	The A/E shall prepare agendas, chair the meetings, and prepare minutes of any and all conferences held relative to the project during the Pre Design, Schematic Design, Design Development and Construction Document Phases of the project. These minutes shall state all decisions reached and who made them. Minutes shall be distributed to all attendees within five (5) working days after the meeting.
1. PRE-DESIGN/PLANNING					
	1	I	X	Initial design meeting to define scope and identify stakeholders.	
	2	I	X	Present Schedule of intended Programming meetings with stakeholders	
	3	I	X	Perform assessment including site survey, existing utility survey, review existing drawings, and building information.	
	4	O		Present a planning & feasibility study for comments.	
	5	O	X	Incorporate comments / revisions and present a final report with all revisions.	
2. DESIGN & BIDDING	6	O	X	Present a preliminary construction schedule.	
2A. Schematic Design (SD)					
FOR ALL THREE BUILDINGS	1	I	X	Document presence of hazardous materials per Owner's information.	
	2	I	X	Present Schedule of intended meetings with stakeholders for reminder of design process.	
	3	O	X	Present Basis of Design Narrative for building systems. Describe the project scope, the functional criteria, the justification for the decision or selection made and any proposed deviations from the University Standards. Includes any potential issues relating to sitework or utilities.	
	4	O	X	Present SD drawings, renderings as required and basis of design specifications to stakeholders for review on eBuilder. Use UD established naming convention and standard sheet sizes for all drawings and specifications posted to eBuilder .	
	5	O	X	Present Sustainability checklist to demonstrate compliance with UD's and City of Newark's Sustainability Standards - please see attached checklist for reference	LEED Checklist can be submitted in lieu of City of Newark's.
	6	O	X	Present SD construction estimate and schedule.	
	7	I	X	Receive comments from stakeholders (allow 2 weeks).	
	8	O	X	Incorporate review comments and responses on eBuilder for UD sign-off.	
	9	O		Present SD documents to AHJ for page turn review.	
2B. Design Development (DD)					
FOR JUST ACADEMIC BUILDING	1	I	X	Determine room numbering and MAXIMO equipment identification- please see attached ASSET Management Sheet for reference.	
	2	I	X	Document presence of hazardous materials per Owner's information.	
	3	I	X	Coordinate pre reads of HVAC air balancing.	
	4	O	X	Present DD documents to stakeholders for review on eBuilder. This would include drawings, updated renderings, specification book in CSI 12 format, updated Sustainability Checklist and updated Basis of Design Report, if applicable.	
	5	O		Present Energy Model indicating the following : (details TBD per project)	
	6	O		Submit Commissioning specifications for third party commissioning	
	7	O	X	Present DD construction estimate and schedule.	
	8	I	X	Receive comments from stakeholders (allow 2 weeks).	
	9	O	X	Incorporate review comments and responses on eBuilder for UD sign-off.	
2C. Construction Documents (CD)					
50% CDs	1	O	X	Present 50% CDs to stakeholders for review on eBuilder. This would include Drawings, specification book in CSI 12 format, updated Sustainability Checklist and updated Basis of Design Report.	
	2	O		Present updated Energy Model	
	3	O	X	Present 50% CD construction estimate and schedule.	
	4	I	X	Receive comments from stakeholders (allow 2 weeks).	
	5	O	X	Incorporate review comments and responses on eBuilder for UD sign-off.	
	6	O	X	Present 50% CD to AHJ for page turn review.	
	7	I	X	Receive comments from AHJ (allow ___ weeks).	
	8	O	X	Incorporate review comments and present revised 50% CD for UD sign-off.	

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90% CDs	9	O	X	Present 90% CD to stakeholders for review on eBuilder. This would include Drawings, specification book in CSI 12 format including Div 0 and 1, closeout procedures, updated Sustainability Checklist and updated Basis of Design Report.	
	10		X	Present updated commissioning specification for third party commissioning	
	11	O	X	Present 90% CD construction estimate and schedule.	
	12	I	X	Receive comments from stakeholders (allow 2 weeks).	
	13	O	X	Incorporate review comments and responses on eBuilder for UD sign-off.	
	14	O	X	Present 90% CD to AHJ for page turn review.	
	15	I	X	Receive comments from AHJ (allow ____ weeks).	
	16	O	X	Incorporate 90% review comments and present 100% CD and updated renderings, if required, for UD sign-off.	
	17	I	X	Confirm approval from City of Newark.	
	18	O	X	Prepare list of bid alternates, if required.	
2D. Fixtures, Furnishings & Equipment					
	1	O	X	Present furniture and finishes plan to stakeholders for approval.	
2E. Signage					
	1	O	X	Present interior signage schedule to stakeholders for approval.	
	2	O	X	Present exterior signage renderings to University Architect for approval.	
2F. Bidding					
	1	O	X	Provide electronic bid documents to UD Project Manager	
	2	O	X	Provide electronic bid documents to UD Space Manager.	
	3	O	X	Attend the pre-bid meeting(s).	
	4	O	X	Issue addenda.	

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	5	O	X	Issue RFI response(s)	
	6	O		Review bids- cost, scope, substitutions, schedule of values, subcontractors.	
	7	O	X	Review budget to reduce scope and/or value engineer if required.	
	8	O	X	Present changes/substitutions for UD sign-off.	
	9	O	X	Compile updated documents if applicable with Bid RFI responses and submit a Permit Set of documents	
3. PRE-CONSTRUCTION					
	1	O	X	Attend pre-construction meeting.	
	2	O	X	Review contract documents with prime contractor, including addenda & RFI's.	
4. CONSTRUCTION					
4A. Schedule & Cost Control					
	1	O	X	Present progress meeting schedule.	
	2	O	X	Present project inspection schedule.	
	3	O	X	Process change order requests.	
	4	O	X	Process requests for retainage reduction.	
4B. Submittals, Shop Drawings, Inspections & Test Reports					
	1	O	X	Provide and administer electronic document management platform.	
	2	O	X	Process submittals, shop drawings and samples in a timely manner	
	3	O	X	Process all inspections & test reports.	
4C. Close-out					
	1	I	X	Confirm substantial completion and Certificate of Occupancy with contractor.	
	2	O	X	Prepare punch lists with contractor.	
	3	O	X	Review and approve Operation & Maintenance Manuals per close-out register.	
	4	O	X	Participate in building commissioning.	
	5	O	X	Participate in start-up of building systems.	
	6	O	X	Provide building systems orientation sessions with Facilities.	
	7	O	X	Provide electronic record documents to UD Space Manager.	
	8	O	X	Confirm completion of outstanding work, punch lists & damage repair.	
4D. Furniture					
	1	O	X	Verify furniture installation.	
4E. Signage					
	1	O	X	Verify signage installation.	
5. POST-CONSTRUCTION					
	1	O	X	Hold debriefing meeting with stakeholders.	
	2	O	X	Release final payment to contractor.	
6. UD UNITS INVOLVED for INPUT					
	1			Custodial Services	
	2			Disabilities Support	
	3			Sustainability, Engineering & Energy	
	4			Environmental Health & Safety	
	5			FM Global	
	6			Grounds and Facilities Maintenance	

Schematic Design Deliverables

During schematic design (SD), the architect typically works with the client and other project team members to explore alternative concepts for addressing the client's needs. A preferred design direction is selected for further exploration from these alternatives, and schematic design typically ends with a presentation of the proposed design including:

Item #	Description	Check (X)	Date
1	Programming requirements- stated design objectives, recommendations/options for review, any and other information needed to clearly describe how the design meets the client's project program and goals		
2	Cover Sheet including project description		
3	Site Plan including evaluation and comprehensive survey of the proposed project site		
4	Code Compliance Plan indicating, at a minimum, building type, fire separations, occupancy type and loads and egress information		
5	Floor plans of each level indicating room names and areas		
6	Documentation and confirmation of existing conditions including District utility survey		
7	All major elevations, including design options, if applicable		
8	Building Sections that indicate design intent		
9	Provide an analysis of the proposed building mechanical, plumbing, fire protection and electrical systems, including energy conservation and load management strategy and LCA.		
10	Provide preliminary system flow and/or riser diagrams showing critical major systems, including, but not limited to HVAC, chilled water and steam distribution, service voltage, electrical alterations and estimated size of emergency power system (if applicable)		
11	Provide sketches of main equipment room locations and major shaft/riser locations coordinated with other disciplines. Review emergency power requirements – life safety, legally required and optional standby		
12	Outline specifications, including Provide outline system description of recommended systems or alternations to existing, including, but not limited to estimated system capacities		

Design Development Deliverables

Design Development documents are an interim development phase of the Construction Documents but are also an end in itself. Design Development documents may be part of approval processes such as foundation building permit or any other partial permit application and/or cost estimate used for fund raising/construction scheduling. The documents should clearly indicate the buildings systems and materials and generally how they coordinate. Design Development drawings should be able to serve as the basis of an estimate of the Cost of the Work which would generally be a trade breakdown estimate. Design Development documents are also a significant milestone toward the completion of Construction Documents and should include the following:

Item #	Description	Check (X)	Date
1	Cover Sheet including project description		
2	Site Plan including utility mapping		
3	Code compliance plans indicating life safety systems including but not limited to : - compliance with occupant load requirements in terms of exits and facilities required - compliance with travel distance, egress widths and common path of egress travel requirements - location of exit signs, - locations of emergency lighting, - locations of FE/FA locations, - location of command center if required.		
4	Floor plans of each level with dimensions, roomnames, numbers and areas and wall types		
5	Roof Plan(s) indicating proposed drainage/slopes/equipment and accessories		
6	Reflected Ceiling Plans coordinated with MEP/Interiors		
7	Room Finish Plans and Schedule		
8	Door Schedule with door and frame types and hardware function noted		
9	All major exterior and interior elevations		
10	Building Sections		
11	Wall Sections of wall types proposed		
12	Present BOD furniture and at least two price comparison products		
13	Updated BOD Report. Indication and Specifications of all MEP/FP systems. Specifications will be in CSI format		
14	Energy Model, if applicable. Requirements to be determined by UD PM/SEE engineer		
15	Electrical panel and lighting schedules, mechanical and plumbing schedules.		
16	Utility single line diagram for 12KV/medium voltage and Building single line for life safety, legally required and optional standby power requirements		
17	Lighting fixture specifications and photometric plan		
18	Provide utility metering requirements on MEP drawings		
19	Commissioning Plan- requirements to be coordinated with UD PM/SEE engineer		
20	If replacing roof top equipment, consider replacing the entire roof system to be compliant with current energy codes.		

Construction Documentation Deliverables

Once the design of the project is approved by the University, the construction documentation (CD) set is started. The CD comprises of a comprehensive set of sequential drawings in the order of their occurrence during construction process and focuses on adding information to the project documentation to fully describe the proposed design through drawings and details that can be used to guide the construction process.

Every feature of the building assemblies, the connection details, and the components that will be installed must be documented in the CD set and presented on drawings sheets and masterspec format specifications for distribution to the project delivery team. At a minimum the architectural CD set should include the following:

Item #	Description	Check (X)	Date
1	Cover Sheet including project description		
2	Site Plan including utility mapping		
3	Complete Code compliance plans indicating responses to AHJ comments from SD and/or DD review.		
4	Floor plans of each level with roomnames and numbers, dimensions, wall/door/signage types, floor level indications, identification of floor cores, if applicable		
5	Roof Plan(s) indicating proposed drainage/slopes/equipment and accessories. Indicate details of every installation type including coordination with existing, if applicable.		
6	Reflected Ceiling Plans coordinated with MEP/Interiors. Provide dimensions of all relevant lighting and fixture types as relevant. Provide ceiling details		
7	Room Finish Plans and Schedules including finish details, threshold types etc.		
8	Door/Window / Louver Schedule indicating opening and frame types, Head, Sill and Jamb details, Hardware Schedule		
9	All major exterior elevations indicating: <ul style="list-style-type: none"> o all glazing/opening types o elevation wide changes on details such as insulation type etc. as appropriate o locations of control joints and expansion joints 		
10	Building Sections		
11	Wall Sections of every wall type proposed		
12	Interior Elevations indicating extent of each finish as may be relevant		
13	Section Details of all relevant items including but not limited to <ul style="list-style-type: none"> o flashing/waterproofing details at foundation, grade, slab edges, parapets and openings o Material intersection o Plane/elevation changes 		
14	Signage Schedule and details		
15	Enlarged Restroom Plans and Details including Interior elevations and accessories locations and schedules		
16	Enlarged Stair/Ramp/Elevator Plans, Sections and details including railing and edge protection details		
17	MEP Floor plans, Riser Diagrams, Schedules and details (please delete details that are not applicable to the project)		
18	Updated Energy model, if applicable		
19	Airflow diagrams		
20	Details of Equipment and Systems.		
21	Indication and Specifications of all MEP/FP systems. Specifications will be in CSI format		
22	Provide electrical panel and lighting schedules, mechanical and plumbing schedules.		
23	Provide utility single line diagram for 12KV/medium voltage and Building single line for life safety, legally required		
24	Provide lighting fixture specifications and photometric plan		
25	Provide calculations for HVAC loads and Electric Service loads		
26	Provide utility metering requirements on MEP drawings		

Closeout Documentation Deliverables

<u>Item #</u>	<u>Description</u>	<u>Check (X)</u>	<u>Date</u>
1	Cad backgrounds with roomnames and sf - 2019 or newer		
2	Record set - updated project drawings and specifications - pdf		
3	Warranties / O & M manuals, finish product information and cleaning documentation		
4	Commissioning reports		

THIS CHECKLIST IS NOT REQUIRED IF ANOTHER SUSTAINABILITY STANDARD SUCH AS LEED, WELL, LBC OR OTHER STANDARD IS BEING PURSUED AND THAT CHECKLIST IS SUBMITTED IN LIEU OF THIS.

CITY OF NEWARK GREEN BUILDING CODE

Y	?	N		
0	0	0	1.a Energy Conservation - Envelope	16
			EC-1 Envelope - High Performance Windows and Doors	4
			EC-2 Envelope - Exterior Projections	2
			EC-3 Envelope - Automatic Shades	2
			EC-4 Envelope - Higher Insulation, Roof	2
			EC-5 Envelope - Higher Insulation, Walls	2
			EC-6 Envelope - Higher Insulation, Floors & Slabs	2
			EC-7 Envelope - Calculated Thermal Bridges	3
			EC-8 Envelope - Reduced Building Envelope Air Leakage	3
0	0	0	1.b Energy Conservation - Mechanical Systems	21
			EC-9 Energy Recovery Ventilation	3
			EC-10 Commissioning of the HVAC System	3
			EC-11 High-Efficiency HVAC Equipment (not including Boilers)	3
			EC-12 High-Efficiency Boilers	2
			EC-13 High-Efficiency Cooling Towers	3
			EC-14 High-Efficiency HVAC Fans	1
			EC-15 No Continuous Fan Operation	1
			EC-16 Reduced Heating and Cooling of Unoccupied Spaces	3
			EC-17 Reduced Heating and Cooling of Hotel Rooms	2
0	0	0	1.c Energy Conservation - Service Water Heating	7
			EC-18 High-Efficiency Hot Water Heaters	2
			EC-19 Reduced Water Supply Lengths	1
			EC-20 On Demand Domestic Hot Water	2
			EC-21 Preheat Incoming Cold Water	2
0	0	0	1.d Energy Conservation - Lighting & Lighting Controls	4
			EC-22 Efficient Lighting Fixtures, Interior	1
			EC-23 Daylight Responsive Controls	2
			EC-24 Efficient Lighting Fixtures, Exterior	1
0	0	0	1.e Energy Conservation - Electric Systems	3
			EC-25 Occupancy Controls for Outlets	1
			EC-26 Energy Star Certified Equipment - Commercial Kitchens	2
0	0	0	1.f Renewable Energy	13
			EC-27 Provide Future PV Solar Panel Capability	1
			EC-28 Provide PV Solar Panels	10
			EC-29 Purchase Green Power	2
0	0	0	1.g Energy Conservation Stretch Performance Option	40
			EC-30 Certified Performance 20% Better Than Code	30
			EC-31 Certified Performance 40% Better Than Code	10

Project Name: University of Delaware Building xxxxxxxxxxxxxxxx
Date: xx/xx/xxxx

0	0	0	2.a Resource Conservation - Conservation &	37
			RC-1 Divert materials away from landfills, 50%, 75	3
			RC-2 Donation of Deconstructed Materials to Reuse	5
			RC-3 Recycled Content Materials	9
			RC-4 Regional Materials	2
			RC-5 Rapidly Renewable Materials/Biobased Materials	1
			RC-6 Certified Wood	1
			RC-7 Durable Exterior Decking	1
			RC-8 Optimal Value Engineering Framing Techniques	2
			RC-9 Prefabricated Components	4
			RC-10 Engineered Lumber	1
			RC-11 Water Efficient Landscaping	2
			RC-12 Irrigation Design	2
			RC-13 Rainwater or Graywater Reuse System	2
			RC-14 Efficient HVAC Water Use	1
			RC-15 Reduced Water Use	1
0	0	0	2.b Resource Conservation - Site Selection &	34
			RC-16 Flood Zones	1
			RC-17 Protect or Restore Native Plants	1
			RC-18 Wildlife Habitat	3
			RC-19 Increase Tree Cover	5
			RC-20 Maximize Open Space	2
			RC-21 Access to Quality Transit	2
			RC-22 Bicycle Storage and Shower Rooms: Public	2
			RC-23 Bicycle Storage and Shower Rooms: Multi-F	1
			RC-24 Bicycle Storage and Shower Rooms: Retail	1
			RC-25 Bicycle Racks	1
			RC-26 Electric Vehicle Charging Facilities	3
			RC-27 Site Infiltration	5
			RC-28 Site Filtration	3
			RC-29 Heat Island Reduction, Nonroof	2
			RC-30 Heat Island Reduction, Roof	2
0	0	0	Indoor Environmental	23
			IQ-1 Ventilation Controls for Densely Populated Spaces	1
			IQ-2 Increased Ventilation	1
			IQ-3 Removal of Contaminants	2
			IQ-4 High-Efficiency Air Filtering	1
			IQ-5 UV Air Cleaning	1
			IQ-6 Construction Indoor Air Quality Management	3
			IQ-7 Low-Emitting Materials	5
			IQ-8 Low-Emitting Materials, Furniture	1
			IQ-9 Prefinished Materials	1
			IQ-10 Composite Wood Materials	1
			IQ-11 Controllability of Systems, Lighting	1
			IQ-12 Controllability of Systems, Thermal Comfort	1
			IQ-13 Thermal Comfort, Design	1
			IQ-14 Daylight & Views, Daylight	2
			IQ-15 Daylight & Views, Views	1
0	50	0	4. Alternative Compliance	50
	50		AP-1 Established Rating System (LEED Gold, Passive)	50

0	50	0	TOTALS	Possible Points: 248
Compliance: 50 points minimum (24 points min. in Energy Compliance, 8 points min. in IEQ)				