FACILITIES & OPERATIONS
ARCHITECTURE, ENGINEERING AND CONSTRUCTION
UNIVERSITY OF MICHIGAN

Pre-Design Deliverables

September 2023

As part of the deliverables for formal UM review at the end of Pre-Design, the Design Professional shall submit this "Pre-Design Deliverables" document to the University's Design Manager. On the "Pre-Design Deliverables" document, the Design Professional shall indicate the status of each required item (a check mark is interpreted to mean that an item has been included in the deliverables). On or attached to the "Pre-Design Deliverables" document, the Design Professional shall identify all items NOT included in the review package. Note Design Professional shall not contact City of Ann Arbor. Design Manager is the conduit for all communication between Design Professional and user groups, Campus Planning, City of Ann Arbor etc.

Item	Pre-Design Phase	
General Description	1	Develop program for building occupancy, including overall square footage, MBC occupancy classification etc.
	2	Document the number of new FTEs.
	3	Document that the Provost space use guidelines was reviewed.
	4	Provide square footage estimates of each major space type, e.g. wet lab, dry lab, vivarium, office.
	5	Outline Owner's Project Requirement (only include information determined during Pre-Design). Reference DG 2.1 OPR and BOD (Owner Project Requirements and Basis of Design)
	6	Identify if building is a 'High Rise'.
	7	Review the Facilities Conditions Assessment (FCA) data base and document deficient items to be picked up and funded within project scope.
Real Estate and Regulatory Review	1	Identify anticipated impacts to adjacent private property (vegetation removal or trimming, access needs, utility work) to Campus Planning Prior to proceeding with a design that requires impacts.
	2	Document deed restrictions or encumbrances that will impact site development.
	3	Identify anticipated impacts to the City Right of Way (any new or modified drive way cuts, utility installations or connections et al, tree removals?) Consult the City of Ann Arbor Preliminary Plan Review Checklist.
	4	Provide a code review to ensure compliance with applicable regulation for interior and exterior spaces.
	5	Identify Bureau of Fire Services space requirement and any impacts if applicable.
	6	Document any historically significant features that shall be protected and/ or restored.
U-M Master Plan Review	1	Use Site Planning Principles, provided by U-M, and incorporate into OPR (building setbacks, drives, walks and parking related to adjacent campus development).
	2	Document applicable State, City, U-M traffic and transportation plans with Campus Planning and incorporate as applicable.
	3	Document that there has been a meeting with Campus Planning to review the U-M Master Plan to ensure compatibility.
Environmental Review	1	Document any regulated water bodies of the State, wetland, drains and streams within the site boundary.
	2	Document if site is over an acre or within 500' of water of the State. A soil erosion and sedimentation control plan may be required.
	3	Document if a post-construction storm water management plan is required.
	4	Document Threatened and Endangered Species report if applicable.
	5	Document Phase 1 Environmental Assessment if applicable.
	6	Document information from EHS to determine the presence of contaminated soils or hazardous material.
	7	Document Tree Survey and Evaluation if applicable. Consult the U-M Tree Preservation Policy.
Site, Circulation & Utilities	1	Document information on property lines, utilities, easements, etc.
	2	Identify any existing U-M parking or loading spaces be temporarily or permanently impacted by the project. Identify any potential Downtown Development Authority (DDA) metered parking impacts, temporary or permanent, including meter number. Provide sound rationale and/ or plan for replacement parking if applicable.
	3	Docuement if Traffic Study will be required, and if so initiate a traffic survey (including vehicular and pedestrian counts).
	4	Doucment the general strategy to address multi-modal transportation requirements (Consider Bicycle Parking Needs, mopeds, scooters and motorcycles). - Identify impacts to existing transit stops. - Identify ADA egress and transportation needs. - Identify any emergency access needs, temporary and proposed.
	5	Document evaluation loading dock location including size and weight of trucks making deliveries.
	6	Site Utilities City, U of M and DTE a) Document Fire Hydrant coverage and preliminary hose lay b) Include utilities systems narrative to ensure the existing utility can support the proposed project requirements. c) Document utility capacities, power/data sources, and tunnel structural loading
Building Exterior Envelope	1	Identify proposed location of major M & E equipment, e.g. penthouse
	2	Provide overview of envelope construction, e.g. curtain wall, mass, frame. Percentage using glass.
	3	Describe envelope enhancements to reduce energy, e.g. additional insulation, overhangs, electro chromatic glass, trombe walls.
	4	For existing buildings, describe the approach planned to improve the envelope's energy performance.
Building Interior	1	Describe special occupancy environmental requirements: temperature, humidity, vibration control, acoustical separation, etc. List the specific requirements as best know at this stage.
	2	Define occupancy types.
	3	For existing buildings, describe how project will accommodate ASHRAE 90.1 energy code requirements for alterations.
HVAC	1	Identify potential system types, multiple options are acceptable.
	2	Identify utilities source: chilled water, gas, steam, etc.
	3	Identify special HVAC, hydronic, and exhaust systems: process air handlers, process CHW, smoke evacuation systems, laboratory exhaust, etc.
	4	Identify major special MEP redundancy requirements, e.g. redundant vivarium AHUs on emergency power with dedicated chiller.
Plumbing & Piping	1	Identify utilities source: domestic water, fire protection water, storm, sanitary.
	2	Identify special plumbing and process systems: RO/DI, lab gases, acid waste, etc.
Fire Protection (Mechanical)	1	Identify if fire suppression is required and if so, identify source and any special systems.
	2	Identify the fire suppression source.
	3	Identify special fire protection systems.
	4	Identify if fire pump is required.
Electrical Power Distribution	1	Conceptually, identify the approximate service size and from where will it be served (i.e.. campus loop, DTE, other?) Identify ductbank location in relationship to building.
	2	Identify location of Substation, whether it is in building or adjacent, its accessibility, and if the building needs single-ended, double-ended, or multiple substations.
	3	Note any high voltage or specialty power requirements.
	4	Note emergency and standby power requirements and if emergency generator is needed - consider location and fuel source.

Fire Alarm and Emergency Communications	1	Determine if a fire alarm system is required by code, if in place note age of system.
	2	Note if MOSCAD system will perform the functions as a Central Station Monitoring facility.
	3	Identify building entrance selected for emergency response. Note fire alarm panel location.
	4	Indicate if fire alarm system will be used as a mass notification system.
	5	Identify is toxic/ flammable gas or other special alarm systems are anticipated.
Communications (Including voice, data & video systems)	1	Identify Tele/Data service entrance point into building. BE room location and location of communication duct bank in relationship to the building.
	2	Allocate space for IT closets.
Security (including CCTV and Card Access Control Systems)	1	Identify security system needs (security cameras, card access, etc.)
LEED and Sustainability	1	Create a "simple box" energy model to estimate the Energy Use Intensity (EUI) for the building mass. Include a brief description of baseline assumptions and potential load reduction strategies.
	2	List of Document project sustainability goals, including LEED certification, maximum carbon emissions, Energy Use Intensity (EUI), energy cost savings, water reduction targets conservation measures, and storm water management.
Cost	1	Provide Preliminary Concept design cost estimate.
	2	Provide design timeline/estimated design phase durations. (if requested by UM).
Notes		