60% Design Package Deliverables

The **Project Engineer** works with the Project Team to ensures that the deliverable meets the expectations documented in this checklist, documenting all exceptions.

The **Project Manager** ensures that the Project Engineer has completed this checklist and saves it in the project files.

A. Project Information

Project Name		**Project Number**	
Project Manager			
Project Engineer			
Summary of Quality Control	**Civil Design**		
	Mechanical Design		
	Structural Design		
	Electrical Design		
	<<Other Discipline 1>>		
	<<Other Discipline 2>>		

B. Exceptions

Describe exceptions from the standard Design Package below.

C. 60% Deliverables Checklist*

Deliverable	Comments
☐ **60% Design Package Deliverable Checklist (this document) and all deliverables saved in the P:\drive project folder**	
☐ **Technical QC Review Form**	
☐ **Design Drawings** (see Section D for drawings checklist)	
☐ Basis of Design Plan Sheet	
☐ **Basis of Design Report**	
☐ **Class 2 Capital Cost Estimates. Follow Cost Estimating Guidelines.**	
☐ O&M Cost Estimates developed by the O&M Representative	
☐ **Basis of Estimate**	
☐ Draft Traffic Control Plans (if necessary)	
☐ Draft copies of specifications or catalog cut sheets of major elements not covered by city guide specifications or that originate from sources other than city guide specifications.	
☐ Geotechnical Interpretive Report (GIR)	
☐ 30% Plan Review transmittal sheet with reviewer comments addressed	
☐ Phase 2 Environmental Assessment Report (if required)	
☐ Commissioning Activities for 60% Design Complete	
☐ Asset Data File for 60% Design Complete	
☐ 60% Design Constructability Review (if warranted)	

*Items shown in **bold** are tracked as part of performance monitoring for the CIP Design Section. SPU Project Engineers must report to their supervisors on the status of these items at each major design milestone.

D. Design Drawings Checklist

Discipline	Description
General Drawings **Comments:**	☐ Title Sheet, Drawing Index, Location and Vicinity Maps essentially complete ☐ General symbols, legends, match sheet numbers, stationing, and abbreviations essentially complete ☐ Design Data and Criteria essentially complete ☐ Basis of Design Plan Sheet completed for 60% Design.
Civil/Site Work Drawings **Comments:**	**Demolition, Site Prep, and CSEC Plans** ☐ Site Plans ○ Show demolition and/or abandonment of all structures and utilities etc to be removed using standard callouts and notes. Similarly show structures and utilities that will remain to be protected, salvaged, or removed and replaced as applicable. ○ Indicate important contractor elements such as construction limits. ○ Show onsite CSEC BMPs, including silt fence, site fencing, CB protection, temporary settling tanks for site water, and proposed discharge points for site water, if applicable. **Site, Utility and Piping Plans** ☐ Site Plans ○ Proposed final location of structures, roadways and major site elements (fencing, gates, etc) are shown ○ All major structure locations and elevation are shown via stationing and offset or Northing/Easting or other survey method ○ Include proposed contractor staging, storage, access, and offsite corridors (traffic routing plans) as applicable **Site Grading** ☐ Site Plan ○ Include preliminary site grading coordinated with the geotechnical requirements and exiting grades. **Pipeline Alignments and Site Utilities** ☐ Plan and profiles of pipelines ○ Show final alignments along with other utilities and piping corridors (horizontal and vertical) that consider construction sequencing needs. ○ Address utility and pipe conflicts, and provide notes for pipe protection measures.

Discipline	Description
	○ Include details and notes for MHs, pavement and trench sections, and other civil details.
Architectural Drawings **Comments:**	**Buildings–Plan, Elevations and Sections** ☐ Architectural Plans, Sections, and Elevations ○ Depict the proposed final exterior architectural theme, materials of construction and floor plan of structures.
Landscape Drawings **Comments:**	☐ Conceptual Landscaping Plan ○ Show proposed plantings and landscape restoration including plant schedules
Structural Drawings **Comments:**	**Foundations – Plans and Sections** ☐ Structural notes, design criteria, and inspection plan (meets requirements of SDCI or Building Dept of the appropriate jurisdiction) ☐ Structural plans, sections, and details. This should be coordinated with other design disciplines. **Building – Plans, Sections and Details** ☐ Large structural penetrations should be identified and potential conflicts with mechanical and electrical features should be resolved. **Below Grade Structures –Plans and Sections** ☐ Foundation plans and floor plans should include dimensional information and structural member sizes with reinforcement detailing partially complete.
Mechanical Drawings **Comments:**	**Major Equipment and Piping Layout** ☐ Mechanical Plans and Sections ○ Show proposed final location of major equipment, piping, and appurtenances. ○ Minor piping partially complete, but adequate corridors have been identified. ○ Location of equipment maintenance features finalized.
	HVAC Plans and Sections, Schedules and Schematics ☐ HVAC Plans adequately complete to verify building code compliance. ☐ HVAC Schedules and Schematics

Discipline	Description
	○ Preliminary equipment schedules and system schematics should be sufficient to allow review of system configuration and design intent. ○ Conceptual fire protection system design (if required) should be included
	Plumbing Plans and Sections ☐ Plumbing Plans adequately complete to verify building code compliance.
Electrical Drawings **Comments:**	**One-Line Diagrams** ☐ Proposed final electrical one-line diagrams, control room layouts and panel layouts **Power Plans, Control Diagrams, and Schedules** ☐ Electrical site plan, control diagrams, and schedules adequately complete to allow review of layout and design intent. ☐ Location of handholds and equipment racks **Lighting Plans and Reflective Ceiling Plans** ☐ Proposed final lighting plan and reflective ceiling plan.
Security Drawings **Comments:**	**Security Details** ☐ Provide enough details and notes to allow for review by security SMEs
Instrumentation and Control Drawings **Comments:**	**Process and Instrumentation Diagrams** ☐ P&IDs developed to greater detail, including revisions based on proposed final equipment selection and configuration.