

30% Design Package Deliverables

The **Project Engineer** works with the Project Team to ensure 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		

B. Exceptions

Describe exceptions from the standard Design Package below.

C. 30% Deliverables Checklist*

Deliverable	Comments
<input type="checkbox"/> 30% Design Package Deliverable Checklist (this document) and all deliverables saved in the P:\drive project folder	
<input type="checkbox"/> Technical QC Review Form	
<input type="checkbox"/> Design Drawings (see Section D for drawings checklist)	
<input type="checkbox"/> Basis of Design Report	
<input type="checkbox"/> Class 3 Capital Cost Estimates. Follow Cost Estimating Guidelines.	
<input type="checkbox"/> O&M Cost Estimates developed by the O&M Representative	
<input type="checkbox"/> Basis of Estimate	
<input type="checkbox"/> Documentation of Value Engineering Study and responses, if applicable	
<input type="checkbox"/> Draft Geotechnical Interpretive Report (GIR) (for smaller projects, provide at 60% design)	
<input type="checkbox"/> Environmental Assessment (if required) that evaluates worker health and safety and identifies suspect, contaminated and hazardous materials of concern for the Project.	
<input type="checkbox"/> List of property acquisitions or known easements (temporary or permanent) required for project.	
<input type="checkbox"/> Commissioning Activities for 30% Design Complete	
<input type="checkbox"/> Preliminary equipment list that allows basic verification of equipment number, equipment size, equipment power requirements and basic controls and operating strategies.	

*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
<p>General Drawing</p> <p>Comments:</p>	<p><input type="checkbox"/> A Drawing Index that reflects the drawings anticipated for the project.</p> <p><input type="checkbox"/> Title blocks and drawing layouts that allow verification of City standards.</p> <p><input type="checkbox"/> General symbols, legends and abbreviations that allow verification of City standards.</p> <p><input type="checkbox"/> Design Data and Criteria (Process Schematic) established and depicted in an acceptable format.</p>
<p>Civil/Site Work Drawings</p> <p>Comments:</p>	<p>Existing Site and Utility Plans</p> <p><input type="checkbox"/> <u>Base Map and Vicinity Map</u> that accurately depict the existing site features and boundaries</p> <p>Include:</p> <ul style="list-style-type: none"> o Topographical data o Existing utilities and structures (above and below ground) o Coordinate system o Zoning o Geotechnical boring locations <p>Revised Site, Utility and Piping Plans</p> <p><input type="checkbox"/> <u>Site Plans</u> that accurately depict new structure footprints, locations and orientation onsite.</p> <p>Include:</p> <ul style="list-style-type: none"> o Preliminary finished floor elevations, o Site access o Parking areas o fencing and gates <p>Site Grading</p> <p><input type="checkbox"/> <u>Site Plan</u> also to include preliminary site grading coordinated with the geotechnical requirements.</p> <p>Show on the site plan all above ground utilities. Existing utilities in screened or lighter line type and proposed utilities in dark line.</p> <p>Pipeline Alignment and Site Utilities</p> <p><input type="checkbox"/> <u>Profiles of pipelines</u> that locate major utilities and piping corridors (horizontal and vertical).</p>
<p>Architectural Drawings</p> <p>Comments:</p>	<p>Buildings–Plan, Elevations and Sections</p> <p><input type="checkbox"/> <u>Architectural plans, Sections and Elevations</u></p> <p>Establish the preliminary room sizes, exterior architectural theme, materials of construction, roof type, etc. Plans</p>

Discipline	Description
	adequate for preliminary verification of space requirements, ingress and egress, materials of construction, as well as general building and fire code requirements.
Landscape Drawings Comments:	<input type="checkbox"/> Include a basic concept of the type of landscaping that is planned for the project.
Structural Drawings Comments:	Below Grade Structures–Plan and Section <input type="checkbox"/> Structural plans that establish foundation type and depict the preliminary foundation layout. <input type="checkbox"/> Foundation plans adequate to confirm approach in compliance with geotechnical requirements. <input type="checkbox"/> General arrangement floor plans and section drawings coordinated with the architectural plans.
Mechanical Drawings Comments:	Major Equipment and Piping Layout <input type="checkbox"/> <u>Mechanical Plans and Sections</u> that depict location of major equipment and major piping alignments to verify clearances and general configurations. Plans should indicate: <ul style="list-style-type: none"> ○ Proposed equipment maintenance features ○ Overhead crane and monorails ○ Hatches and pads ○ Areas requiring noise abatement
	HVAC Plans and Sections <input type="checkbox"/> <u>HVAC Plans</u> that depict location of major equipment and major piping alignments.
	Plumbing Plans and Sections <input type="checkbox"/> <u>Plumbing Plans</u> that depict location of major equipment and major piping alignments. <input type="checkbox"/> Recommendations that define the level of design for fire protection systems to be included in the final drawings. Define whether the approach will be to show details on the drawings or provide a performance specification.

Discipline	Description
<p>Electrical Drawings</p> <p>Comments:</p>	<p>One-Line Diagrams</p> <ul style="list-style-type: none"> <input type="checkbox"/> Preliminary electrical <u>one-line diagrams</u> <p>Major Equipment Layout/Electrical Room Plans</p> <ul style="list-style-type: none"> <input type="checkbox"/> Preliminary layout of electrical rooms in adequate detail to determine size requirements and clearances. <input type="checkbox"/> Identify available corridors for routing of electrical raceways and cable tray. <input type="checkbox"/> Identify area classifications per National Electrical Code.
<p>Security Drawings</p> <p>Comments:</p>	<p>Identify security and communication items and locations.</p>
<p>Instrumentation and Control Drawings</p> <p>Comments:</p>	<p>Process and Instrumentation Diagrams</p> <ul style="list-style-type: none"> <input type="checkbox"/> Preliminary <u>Process and Instrumentation Diagrams (P&IDs)</u> that depict the mechanical equipment, piping, instrumentation and control equipment interlocking.