Water Bureau Water Tanks and Pump Station Structural Condition Assessment. City of Portland, Oregon

CP provided field inspections for over 64 City's water tanks and pump stations including the Washington Park Pump Station. The tank types included reinforced concrete and steel. Tank situation included aerial and underground. Condition assessment report, short term and long term maintenance strategies and costs estimate were included in the deliverables as part of the master plan.

Water Bureau Mt. Tabor Reservoir Emergency Engine Building, City of Portland, Oregon

CP provided structural engineering design for the CIP reinforced concrete building. Designing the hillside wall functioning as a retaining wall to sustain the large earth surcharge was a challenge.

Groundwater Pump Station Electrical Improvement, City of Portland, Oregon

CP provided civil and structural engineering services to design civil site and utility plans as well as structural plans for the new transformer, utility pole and switch gear foundations. Challenges include designing foundations on liquefiable soil.

Bull Run Dam 2 Expansion, Portland, Oregon

For this City of Portland Water Bureau, flow control towers expansion project, CP provided structural condition assessment, structural design to construct a building on the top of each of the 2 control towers. Extensive egress stairways, metal grates, railings, decking and boat docks are among the scope.

Waterline Relocation Design for the Portland Mall Light Rail Project, Portland, Oregon
CP provided constructability review for the waterline relocation design from 60%, 90% to 100% level. Mr. Li's detailed review of the design plans not only making sure that the relocated waterlines were not conflicted with other existing utilities, the newly relocated utilities and the light rail utilities, but also ensuring there was no water outage to any water users at various construction stages.

Waterline Relocation Design for Portland to Milwaukie Light Rail- East Segment, Portland Oregon: CP provided waterline relocation and pipe structural support design and structural design and review of 3 bridges and over 20 retaining walls.

Joint Water Commission (JWC) Emergency Power Backup Power Facilities, Forest Grove, Oregon
CP provided design manager managing the building design including geotechnical exploration, civil and utilities, building architectural and structural design. CP actually provided civil site plan, architectural and structural design for the new power backup facility.

Bureau of Environmental Services Co-Generation Facility Buildings, City of Portland, Oregon
CP provided structural engineering services to design 2 buildings to house the engines and electrical facilities. Building types are reinforced masonry and steel frame. Aerial hot water and gas pipe support structure design was also part of the scope

I-5 Victory Blvd. – Lombard St. Improvement Project, Portland, Oregon

For this $60 ODOT project involving freeway widening, bridge widening and a new ramp bridge, Convergent Pacific is responsible for the utility conflict coordination and relocation design coordination. CP also provides structural calculation and modeling of all the bridge cross beams.

Airport Way Widening Project, Port of Portland, Oregon

For this POP improvement project, CP provided structural design for the sign bridges and an IT hut (building). Design for a 12-conduit underground communication duct bank in the median of the Airport Way was part of the scope. CP also provided utility research and conflict resolution coordination.

Port of Portland Terminal 4 Rail Yard Improvement, Portland, Oregon

CP provided water and sanitary pipe evaluations and relocation design. Structural support design under the rails for the pipes was also part of the scope.