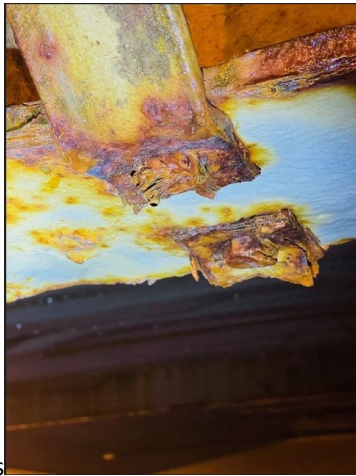


CBJ Utility General Obligation Bond Projects - 5/29/2024

JD WWTP NEW CLARIFIER BUILDING: \$14.7M The Juneau Douglas Wastewater Treatment plant is a 50-year-old treatment plant that serves Thane, Downtown, and Douglas. It processes about one-third (1/3) of CBJ's wastewater (i.e. one million gallons per day at the JDWWTP and 2 million gallons per day at the Mendenhall Wastewater Treatment Plant). The Utility believed that the clarifier building's roof and structural supports needed to be replaced and added \$7 million to the "JDTP Improvements" CIP for FY26. CBJ hired a structural engineer to assess the building and to provide a rough order of magnitude estimate. However, the structural engineer provided a worst case estimate and stated that it is clear that the structural steel that supports the clarifier building is severely corroded and that the entire building needs to be replaced. This estimate included replacing expensive concrete beam supports. The structural engineer will conduct a site visit in June to confirm the extent of the needed structural work. An initial design cost should be available in July. The clarifier building consists of a 78' wide by 160' long room that contains two 35' diameter x 16' deep settling tanks that separate solids from the wastewater effluent. Humidity and corrosive by-product gasses from this process and a lack of mechanical ventilation has created serious structural metal corrosion to the building's structural steel. The corrosion and the construction costs have increased significantly since concerns with the roof and supports was first documented in a 2016 condition report. The project cost (i.e. mobilization, demolition, site improvements, utility upgrades, construction of building and mechanical systems, and reconnection controls) is expected to total \$14.7M prior to the coming site visit. (This assumes a construction start in 2026.)

Reference Photos: Structural metal corrosion from the Jensen Yorba Lott Architects, Condition Survey Report.



1. Corrosion of steel and kicker bracing.



2. Corrosion at primary structural I-beam. Note significant corrosion at bottom flange causing delamination of the steel.



3. Corrosion of the steel beam and connection at the clarifier basin.



4. Corrosion of metal framing at the roof vent exhaust opening. Note daylight showing.



5. Numerous holes and gashes in 1973 metal siding are open to the interior of the building.



6. Mortar at concrete blocks has deteriorated. Spalling due to winter freeze-thaw cycles evident.



7. Underside view of metal roof decking. Foam insulation is saturated with water. Note algae growth.



8. Low slope metal roof missing fasteners, lacks water drainage via gutters and downspouts.



9. Switches & Conduits show heavy corrosion at exterior wall mounts.



10. Corrosion at connecting bolts. This is the central 9" diameter support column for the roof between the two effluent tanks.