



**Nitrification Clarifier Rehabilitation  
Phase 1 Project  
Construction Contingency Increase**  
TPAC: November 10, 2022

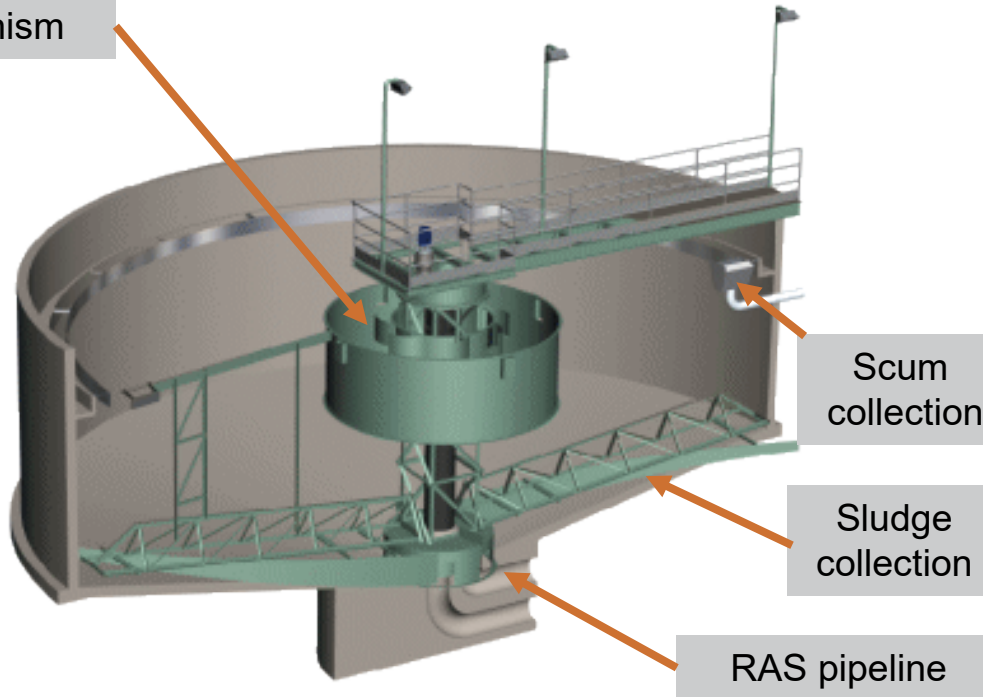
Mathew Nguyen, Deputy Director, Public Works Department



San José-  
Santa Clara  
Regional  
Wastewater  
Facility

# Project Location and Scope – Phase I

Mechanism



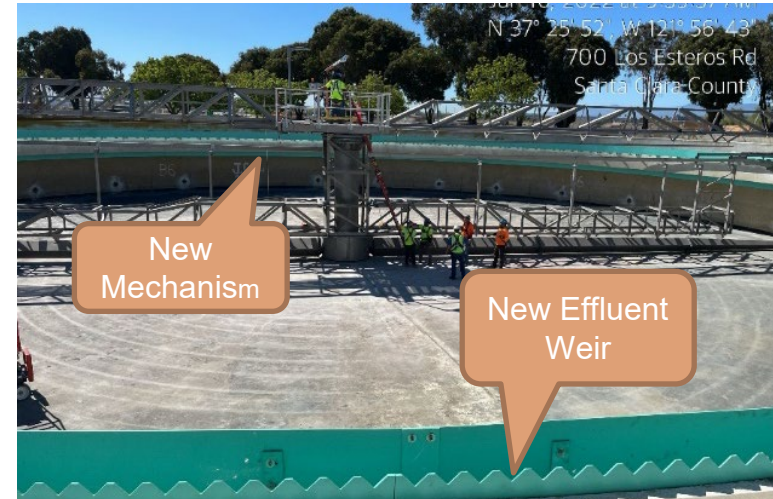
- Replace 8 clarifier mechanisms
- Rehabilitate up to 8 return activated sludge (RAS) pipelines with cured-in-place-pipe (CIPP) lining
- Repair concrete clarifier walls and slabs, replace drain valves and RAS valves, rehabilitate groundwater pressure relief valves, and replace electrical and instrumentation and control equipment for 16 clarifiers
- Project (phase I) will improve operational reliability and efficiency of the secondary treatment process to ensure continued regulatory compliance at the RWF

**Nitrification Clarifiers**



# Project History – Phase I

- **Construction Award:**
  - October 22, 2019
  - Contractor: Overaa & Co.
  - Award Amount: \$26,184,000
  - Original Contingency: \$5,237,000
- **Notice to Proceed:**
  - November 26, 2019
- **Original Substantial Completion:**
  - September 6, 2022
- **Construction Progress:**
  - 65% Complete as of September 2022



# 2019-2022 Construction Challenges Encountered

## Unforeseen Conditions due to:

- Aging Infrastructure
- Underground Utility Conflicts
- COVID-19
- Design Changes
- Hazardous Materials



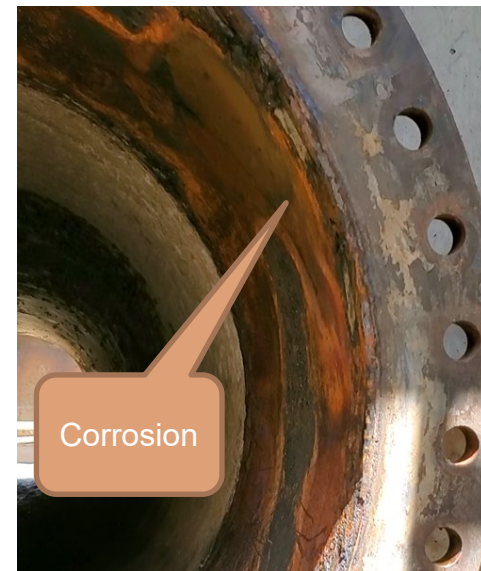
Underground Utility Conflict



Groundwater Relief Valve Wall Spool



Pipe Corrosion



# 2019-2022 Unforeseen Conditions Encountered

- Clarifier Floors Uneven and Delaminated
  - *Requires repairs to prevent damage to pumps and modification to allow the Clarifier rake arm to function as intended*
  
- Unforeseen Conduit Damage
  - *Requires alternate routing of conduits and replacement of underground conduits and conductors*
  
- Pipe Lining Damage
  - *Requires added repairs to assure long term integrity of the underground piping*
  
- MCC Support Slabs Replacement
  - *Requires replacement to allow proper routing of conduits/conductors to specific breakers to connect equipment properly to breakers*

# Delay and COVID Claim Settlement

Claim Items	Claim Amount	Settlement
Time Impact Analysis (TIA) 1 – 49 cd	\$ 186,703	
TIA 2 – 5 cd	\$ 31,287	
TIA 3R – 404 cd to Nov 2021	\$ 2,426,630	
TIA 3R Extended to April 2022	\$ 426,105	
TIA Pressure Relief Valve (PRV)	\$ 37,116	
COVID-19	\$ 1,646,276	
<b>Total Claim</b>	<b>\$ 4,754,117</b>	<b>\$ 2,050,500</b>

- Reviewed and analyzed data and claim information
- Met and negotiated with the contractor February/March 2022
- Negotiated a \$2,050,050 Settlement, contingent on Council approval
- Extended the timeline for completion of the project 218 days to August 2023

# Construction Contingency Increase

## ■ Construction Contingency Increase:

Estimated Additional Funding Required	
1. Unforeseen Site Conditions	\$4,524,080
2. Material Escalation	\$300,000
3. Design Changes	\$1,844,655
4. Equipment Changes	\$1,340,805
5. Time Impact Analysis and COVID Claim Settlement	\$2,050,500
6. Potential Delays for Work Remaining	\$300,000
<b>Total</b>	<b>\$10,360,040</b>
Current Authorized Contingency:	\$5,237,000
Additional Contingency Required:	\$5,123,040
<b>Requested Construction Contingency Increase:</b>	<b>\$5,200,000</b>

## ■ Time Extension:

- 218 Working Days
- Anticipated Substantial Completion: August 2023

# Lessons Learned

- Program Automation Requirements updated
- Closer collaboration with Operations and Maintenance to incorporate their experiences into the design
- When possible, more extensive condition assessments and excavations to locate utilities during design phase
- In-depth plan reviews to ensure accuracy and identify potential construction issues prior to bid
- Use of allowances to reflect uncertainties in “known unknowns”



# Recommendation

- Approve a \$5,200,000 increase to the construction contingency amount of \$5,237,000 for a revised total contingency amount of \$10,437,000.
- Increase the not-to-exceed amount of the contract from \$31,421,000 to a total revised contract amount not-to-exceed of \$36,621,000.
- Add a 218 working day time extension to the project substantial completion date – August 2023