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## PVSC Decant Tanks

**Project Team:**

- Stone Hill Contracting – GC Awarded Contract the contract to restore 6 Decant Tanks
- Hazen and Sawyer – Project Engineer
- Corrosion Probe – Quality Assurance Engineer
- PVSC Engineering
- Zack Painting – Sub-Contractor
- Sauereisen – Concrete Restoration & Corrosion Protection Materials



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## Specification

- CSP-6 Concrete Surface Profile (switch to CSP-5)
- pH-9
- Abrasive Blasting or Ultra High-Pressure Water Jetting/Blasting (40K unit)
- Concrete Repair
  - Shallow Restoration 1/8" - 1/4"
  - Deep Repair 1/4" - 2"
- Crack Repair
- Epoxy Lining
  - 125 Mils of Epoxy Lining
- Holiday Testing & Adhesion Testing

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## Tank Details & Completed Tanks

- Tank Size:
  - Height: 25' + trough
  - Diameter: 85'
  - Total Square Footage: 15,000 SF
- Decant Tank #6
- Decant Tank #4
- Decant Tank #5

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Decant Tank 6



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March 2022 – Heat Required



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Tarped Area

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## High Strength Substrate Repair Material

- Portland Cement-based Substrate Resurfacer
- Compressive Strength (ASTM C-109)
  - 3,900 psi in 24 hours
  - 7,000 psi in 28 days
- Pumpable / Sprayable / Trowelable
- Used in
  - Cracks
  - Deep Repair
  - Shallow Restoration

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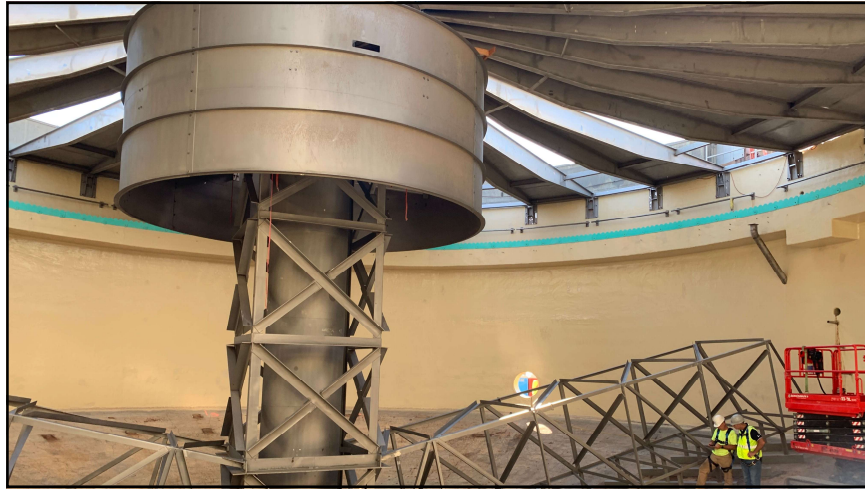


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## High Build Epoxy Lining

- 100% Solids Epoxy Polymer Lining
- Designed for municipal wastewater environments
- High strength lining that enables high build capabilities
- Plural component application
- Compressive Strength (ASTM D695) 16,000 psi
- Flexural Strength (ASTM D790) 8,000 psi
- Permeability (ASTM E96)  $8.06 \times 10^{-9}$  (g/m-s-PA)

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## Lessons Learned

- Tank 6: Completed in 1 year and 5 months
  - Many factures went into the delay.
  - The roof was removed and reinstalled.
  - The floor alone took months to resolve on best method to repair.
  - The whole project team agreed we needed to improve the turnaround.
- Modified Wall Termination Detail
- Experienced outgassing on the floor with new concrete pour.
  - Primer recommended for future applications.
- Installed 150 mils epoxy on the floor direct to concrete substrate

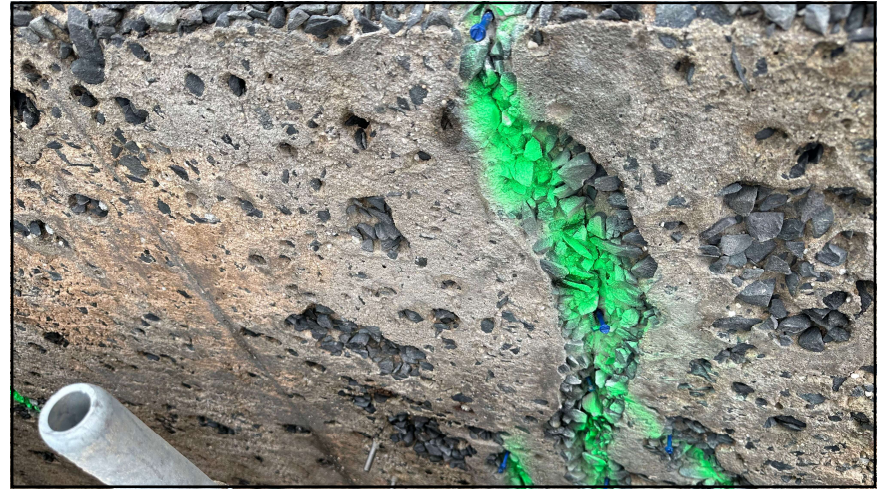
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Decant Tank 3 – Larger Repair Pockets

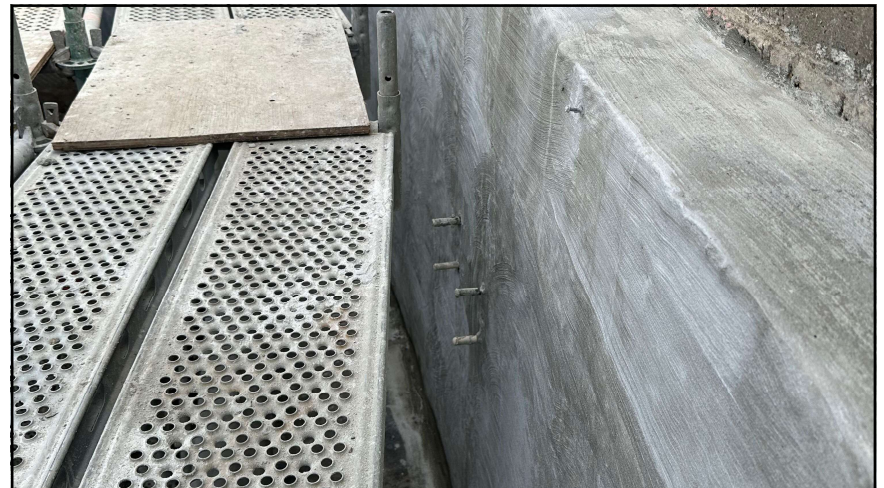
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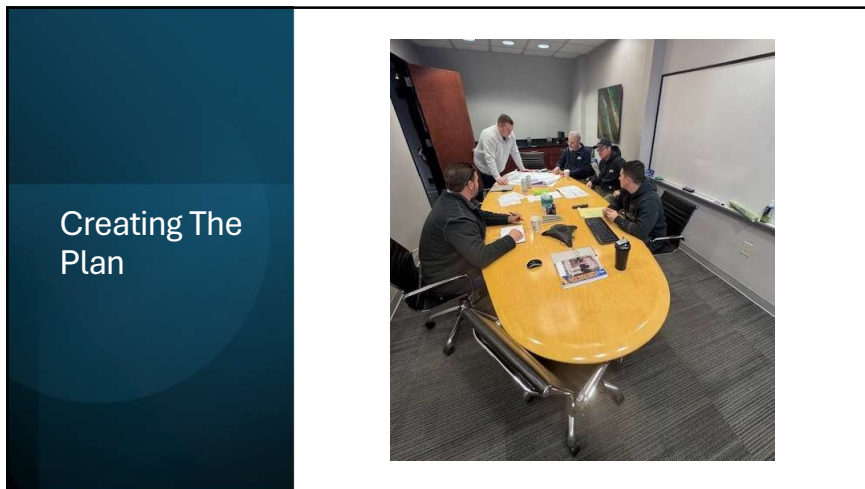
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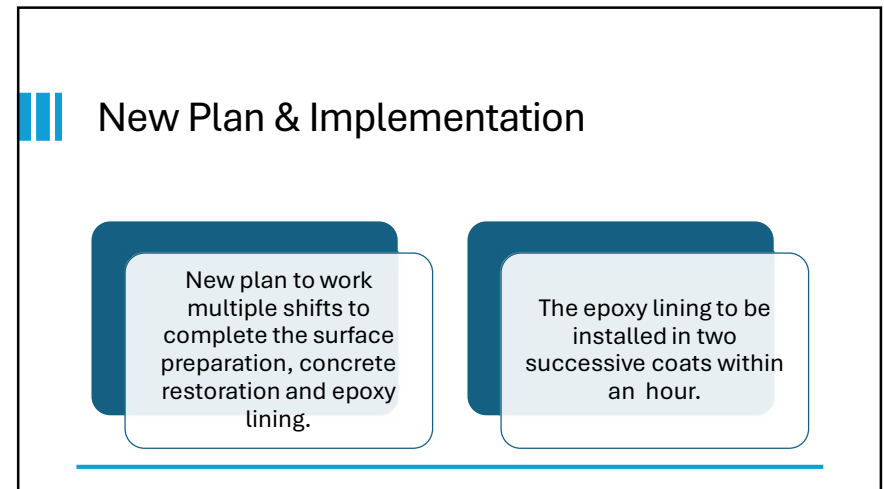
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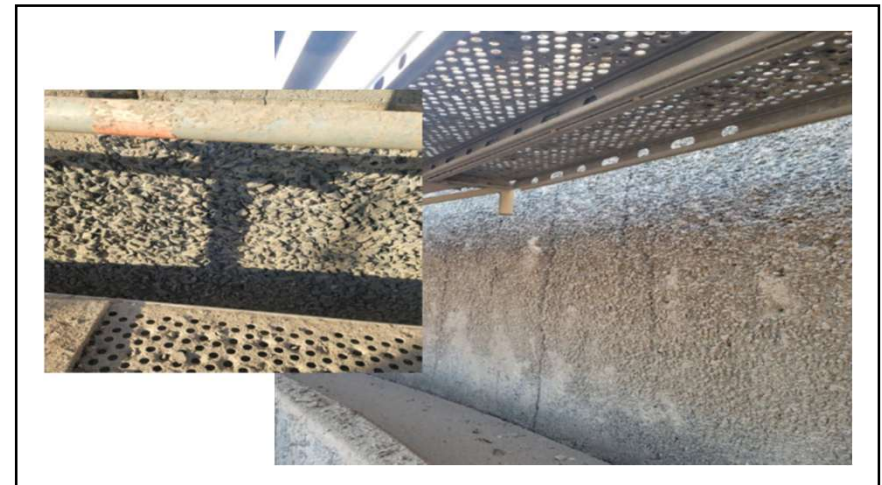


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## Maintain Temperatures



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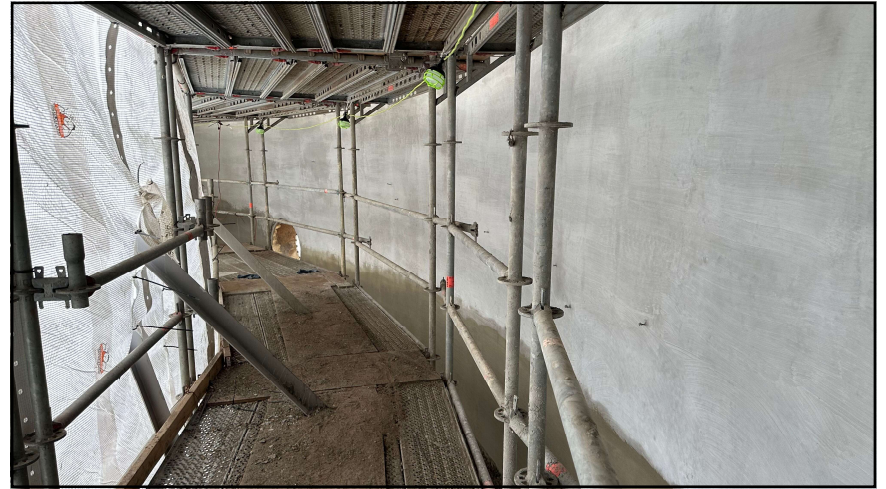


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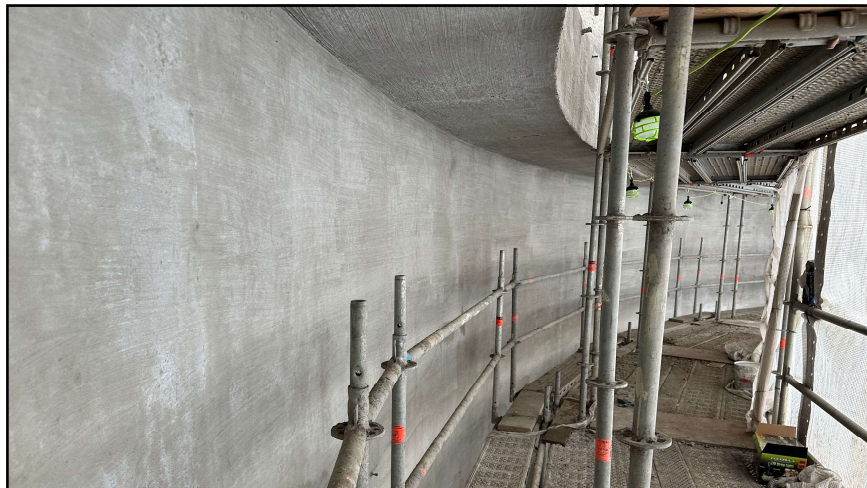
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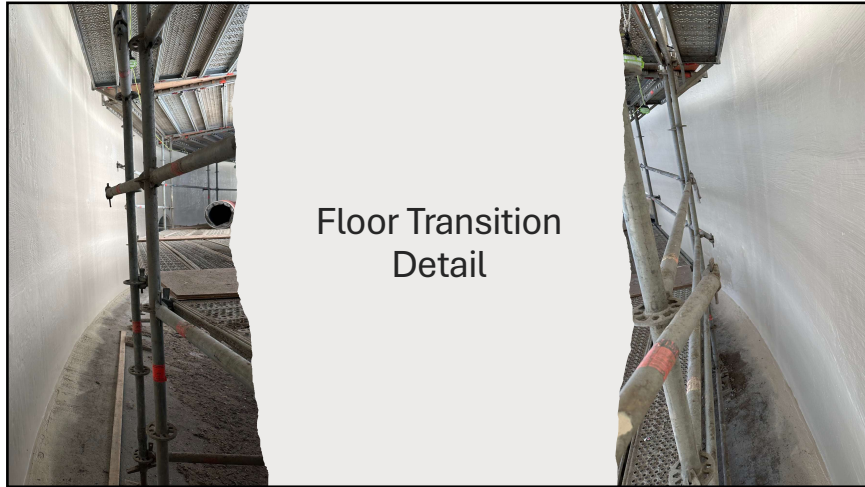


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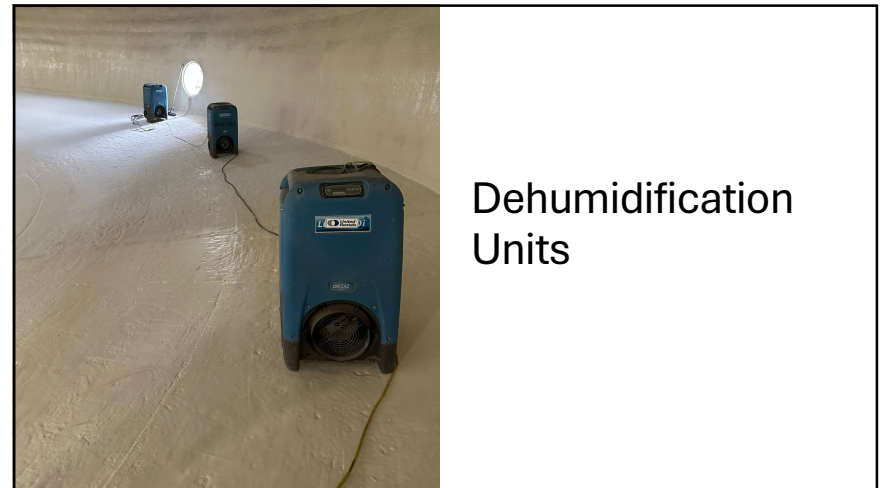
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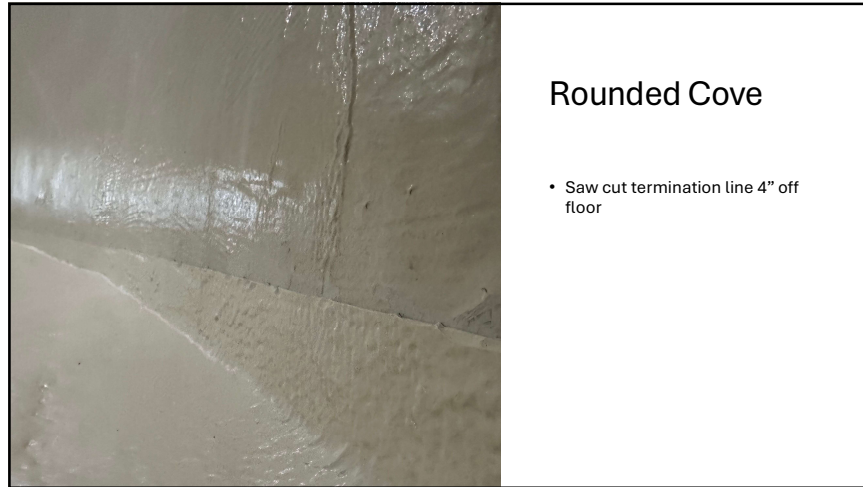
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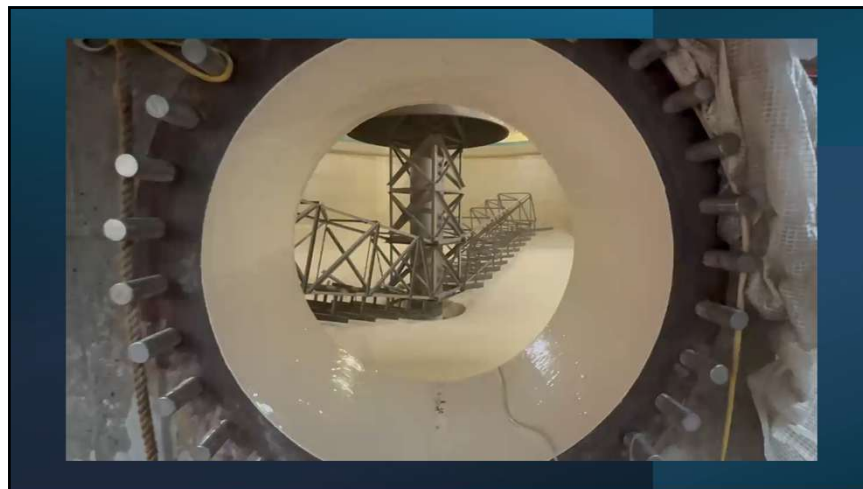
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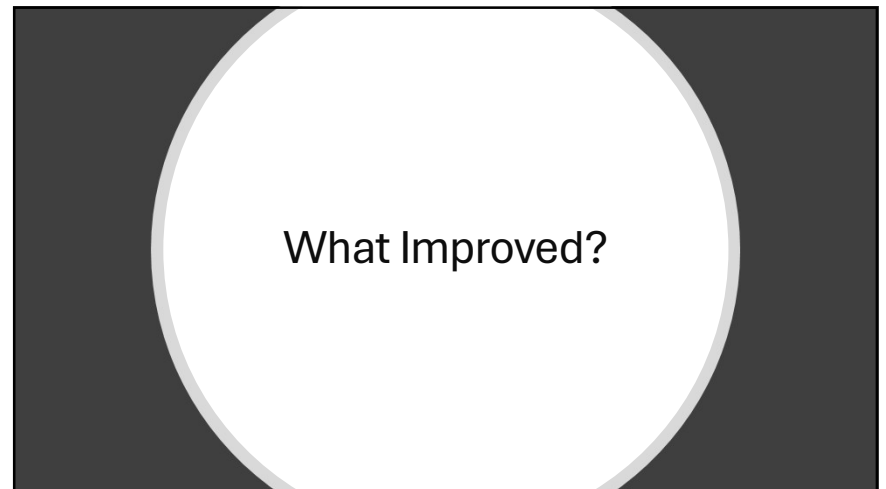
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Starting Decant Tank 3



Any Questions?



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Thanks!

Kevin S. Grega  
Sauereisen Representative  
[Kevin@ctslv.com](mailto:Kevin@ctslv.com)  
C: 609-472-9719



Adam Hileman  
Zack Painting Company, Inc.  
[ahileman@zackpainting.com](mailto:ahileman@zackpainting.com)  
C: 412-600-8332



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