



SFMTA

# Chinatown Rose Pak Station Water Mitigation Project Contract No. 1328

SFMTA Board of Directors

December 3, 2024

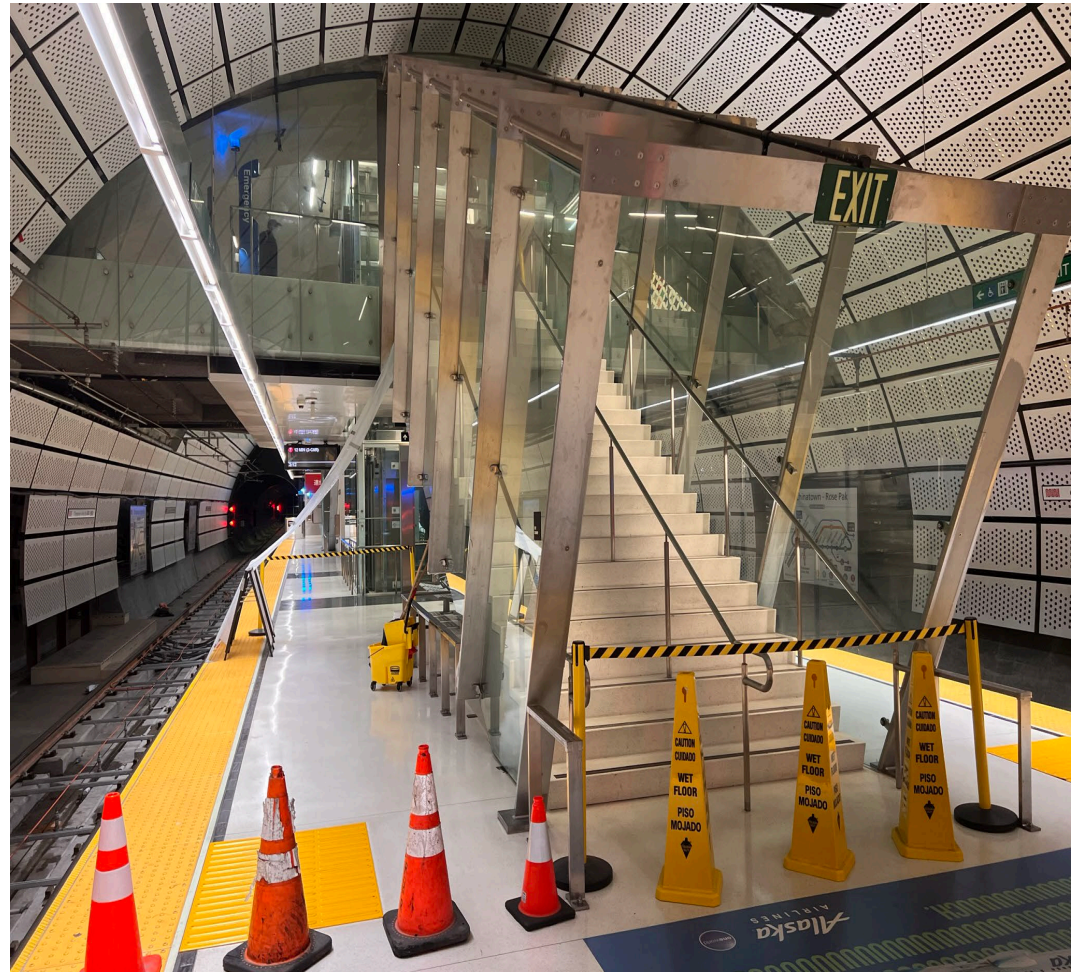
# Introduction

- Chinatown Rose Pak Station (CTS) went into Revenue Service January 2023.
- Station Entrance is located at Stockton Street and Washington Street.
- Station includes a Plaza Area above the station for community.
- Overall ridership for Central Subway has increased year on year since the January 2023.
- Chinatown Station ridership has increased by 10% in 2024.



# CTS Cavern – Water Intrusion

- Designed to be fully Tank System
- Designed with a waterproofing System
- Station is deep and below water table





# Locations of CTS Cavern - Leaks



Water On Staircase



Water Seepage at Joint



Water Damage on Panel and Fasteners



# CTS Cavern – Geo Fabric Membrane and Rebar Installation



Membrane Installation



Reinforcement Rebar Installation

# CTS Cavern – Reinforcement and Concrete Liner



Reinforcing Mat Installation



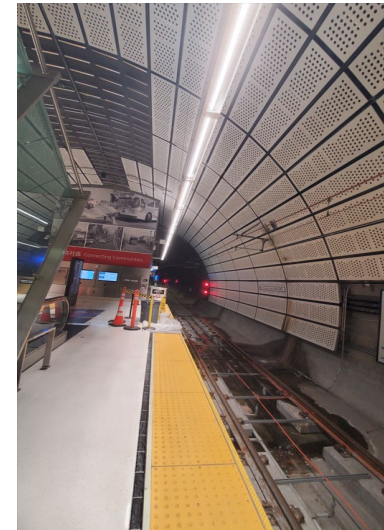
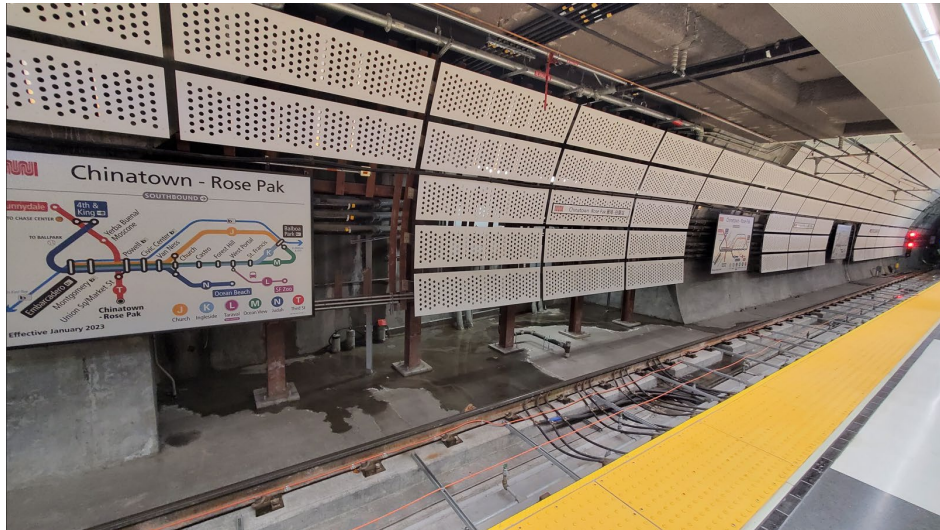
Cleaning Concrete in Preparation for Next Pour



# CTS Water Leakage Issues

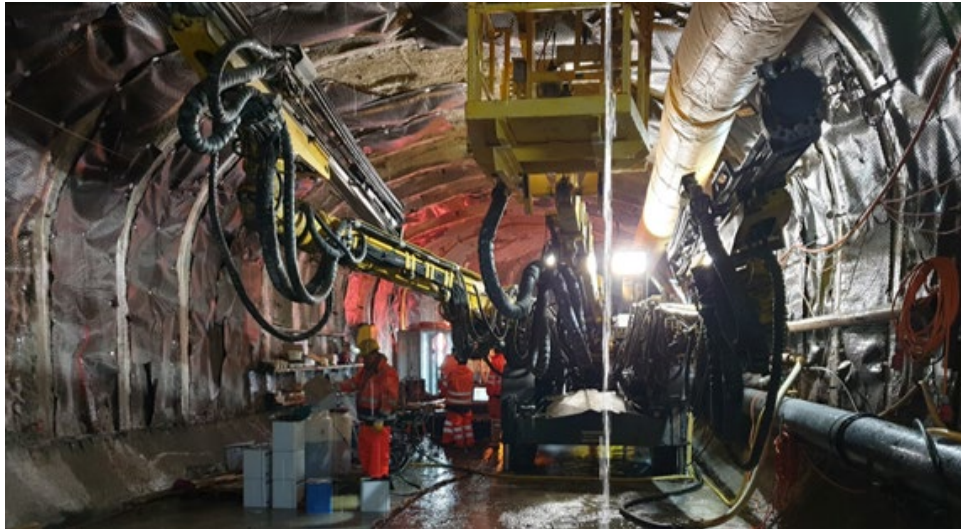
Ground water to original level:

- Water Intrusion observed during and post Construction.
- Remedial measures addressed at Crossover Section.
- Water Intrusion migrated to other areas.
- New leaks developed in the Platform Cavern section and in the Headhouse.
- Address this issue with Chemical Grouting.



# Water Leak Mitigation - Solution

- Contractor to address issue using a hybrid process.
- The method is called polyurethane resin-cement slurry hybrid.
- This process is specific to the contractor methodology as the grout type and pressure is determined for the type of opening.
- The Contractor (Renesco) has successfully used this technique in various projects to mitigate the high water ingress in such areas like:
  - Route des Nations, Geneva (CH) – Sleeve pipe injection with hybrid material
  - Pumped Storage Power Plant, Ritom – Pre Excavation Grouting



*Renesco's work at Ritom.*



# Water Leak Mitigation - Solution

The Contractor grouting process will address:

- Be used in the CTS Station Platform Cavern at the Crown.
- Displace the water inside the cavities between the waterproofing layer and the final concrete lining.
- Seal the structure against water intrusion and stop the migration of the water from a “wet” to a “dry” section.
- In headhouse area (back of house), Contractor will use another type of grouting (Stitch) to seal the joints and cracks.



# Other Work at Chinatown Station

- Public Art Installation at the Plaza Level
- Plaza Roof Gutter Installation
- Installation of Display Case for Sewing Machine
- Drainage System Restoration







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**Thank you**