

Chinatown Station San Francisco Municipal Transportation Agency

Location: San Francisco, California

Date: 2009 - 2016

Structure: Mined Underground Center Platform Stations with Ancillary Caverns

Length: 302 ft (92 m)

Cross-Section: Cross Cut Cavern:
Width: 52 ft (16 m)
Height: 59 ft (18 m)
Station Caverns:
Width: 56.5 ft (17 m)
Height: 49.5 ft (15 m)
Cross Over Cavern:
Width: 39 ft (12 m)
Height: 55 ft (17 m)

Geology: Highly Deformed Fractured Rock, (Melange, Franciscan Rock Formation), Colluvium Consisting of Very Stiff, Brown and Gray Silty Clays, Old Bay Deposits, Sedimentary Marine Deposits, Fluvial Deposits and Fill

Cost: Approximately \$1.5 Billion

Client: PB Americas / Kwon Henmi JV

Owner: San Francisco Municipal Transportation Agency (SFMTA)



Figure 1. Central Subway- Third Street Light Rail Project Phase 2 alignment. (Courtesy of SFMTA)



Figure 2. Rendering of Chinatown station. (Courtesy of SFMTA)

Expert Review Services and Site Supervision:

Phase 2 of the Central Subway - Third Street Light Rail Project includes the construction of the Chinatown Station platform, crossover and cross-cut caverns using the Sequential Excavation Method (SEM).

Gall Zeidler Consultants (GZ) provided SEM expert design review services for Chinatown Station and associated SEM caverns. The work included design review and recommendation of the design, multiple drift excavation sequencing, structural design calculations, ground improvement measures, dewatering and grouting, settlement mitigation measures, compensation grouting, instrumentation and monitoring, waterproofing, construction planning and staging, contract packaging, and SEM specifications. During construction GZ provided site supervision services. The project won project of the year award by ITA in 2020 for projects between € 50M and € 500M. It will be in operation in 2022.

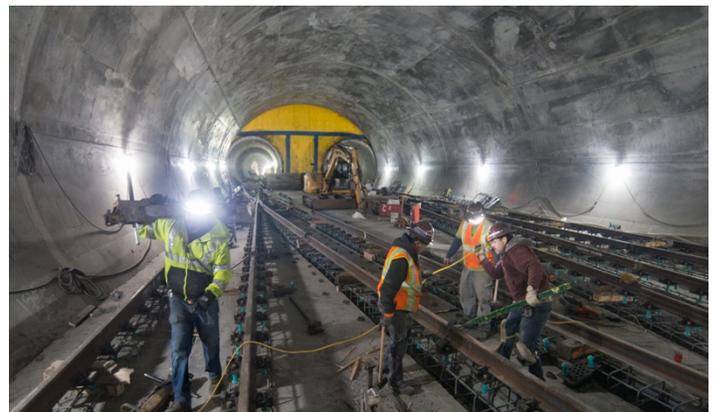


Figure 3. Crossover cavern outfitting. (Courtesy of SFMTA)