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LESSONS LEARNED, LARGE DIAMETER SANITARY SEWER PIPE BURSTING PROJECT: SOUTH SAN FRANCISCO, CA

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ABSTRACT: In 1999, the City of South San Francisco was confronted with a cease and desist order from the Regional Water Quality Control Board mandating the elimination of severe wet weather overflows within ten years. The city completed a comprehensive evaluation of their wastewater collection, conveyance, treatment, and disposal system. Locally deficient sewers, undersized pump stations, and hydraulic restrictions in the effluent outfall system were identified as the major contributors to the wet weather overflow problem. A five-phase program was developed to address these conditions.

Project Background

The pipe bursting portion of the project called for replacement of 1,800 linear feet of existing 27-inch VCP gravity sewer with new 36-inch O.D. SDR 17 HDPE pipe. Existing pipe was approx. 15 feet deep. Via this part of the project, the existing gravity sewer was converted into a sewer force main.

Many components combined to make this one of the most intricate and comprehensive pipe bursting projects ever attempted in North America. An abbreviated list includes:

- Significant upsize
- Large diameter host pipe
- Geology with high groundwater conditions and aggressive soil
- Traffic concerns
- Significant Truck traffic at all hours
- Large amount of host pipe debris
- Required contractor qualifications for pipe bursting