



Genola Rural Expansion Analysis

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Purpose

As part of the state rural expansion provision, natural gas service is proposed for the town of Genola. Two existing regulator stations are in near proximity to Genola, each with sufficient remaining capacity to service the proposed IHP system. Thus, no additional High Pressure (HP) work or regulator stations are anticipated, outside of some minor station piping modifications inside the two existing regulator stations. One regulator station on the north end (WA1582) is near the Staker Parson Keigley Quarry aggregate and asphalt pit off of HP Feeder Line (FL) 114. The other regulator station on the south end (SQ0003) is adjacent to highway US Highway 6 (US-6) off of HP FL100.

Connecting to both WA1582 on the north and SQ0003 on the south ensures a two-way feed into Genola, offering redundancy in the case of any line strikes or other emergencies which will minimize the number of affected customers. The primary feed from the north from WA1582 will follow along Utah State Highway 141 (UT-141). That feed will cross Union Pacific Railroad's (UPRR) historic Tintic Branch rail corridor in multiple locations, as well as the Strawberry High Line Canal in at least one location. The primary feed from the south from SQ0003 will follow US Highway 6 (US-6). Refer to Figure 1 below.

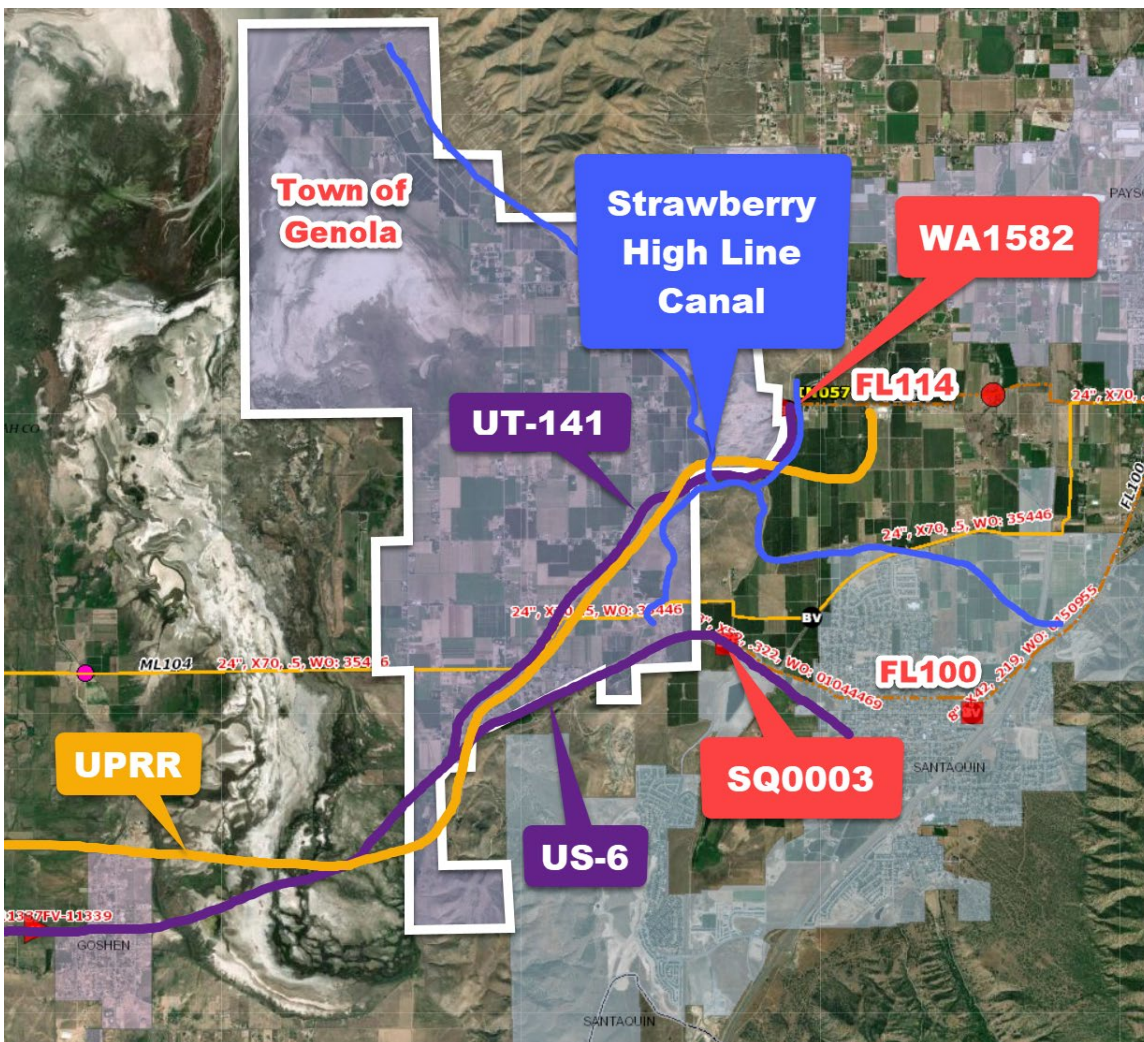


Figure 1: Overview of the Genola Subsystem Area

Analysis

A steady-state model was used to analyze minimum pressures throughout the proposed Genola subsystem. Design iterations using sizes of 4-inch, 6-inch, and 8-inch diameter primary feeds coming from the regulator stations were analyzed. The estimated peak-hour demand for the system was calculated to a minimum of 37,155 cubic feet per hour (37.155 MCFH) based solely on existing structure count as identified in Exhibit 2.04. The minimum diameter for the primary feeds using this base existing load was 4 inches, but does not allow for the significant amount of growth that the City is expecting will be encouraged following this rural expansion project. The minimum diameter for each of the primary feeds for the near-term growth will be 6 inches. However, the initial stretches of these primary feeds out of the regulator stations are within high-trafficked highways such as US-6 or will cross under multiple technically challenging crossings under the railroad and one crossing under Strawberry High Line Canal. It will be more difficult to come back a second time and install a secondary crossing in these locations to upsize the line. The overwhelming cost of these crossings is in the initial installation and



not in the incremental cost difference in pipe size. As such, the initial design recommends installing 8-inch diameter coming out of the regulator stations until the mains can get out of US-6 and across the more significant trenchless crossings. Refer to Figure 2 below. The design also includes a 4-inch diameter main loop through the town, surrounded by a distribution network of 2-inch main everywhere else.

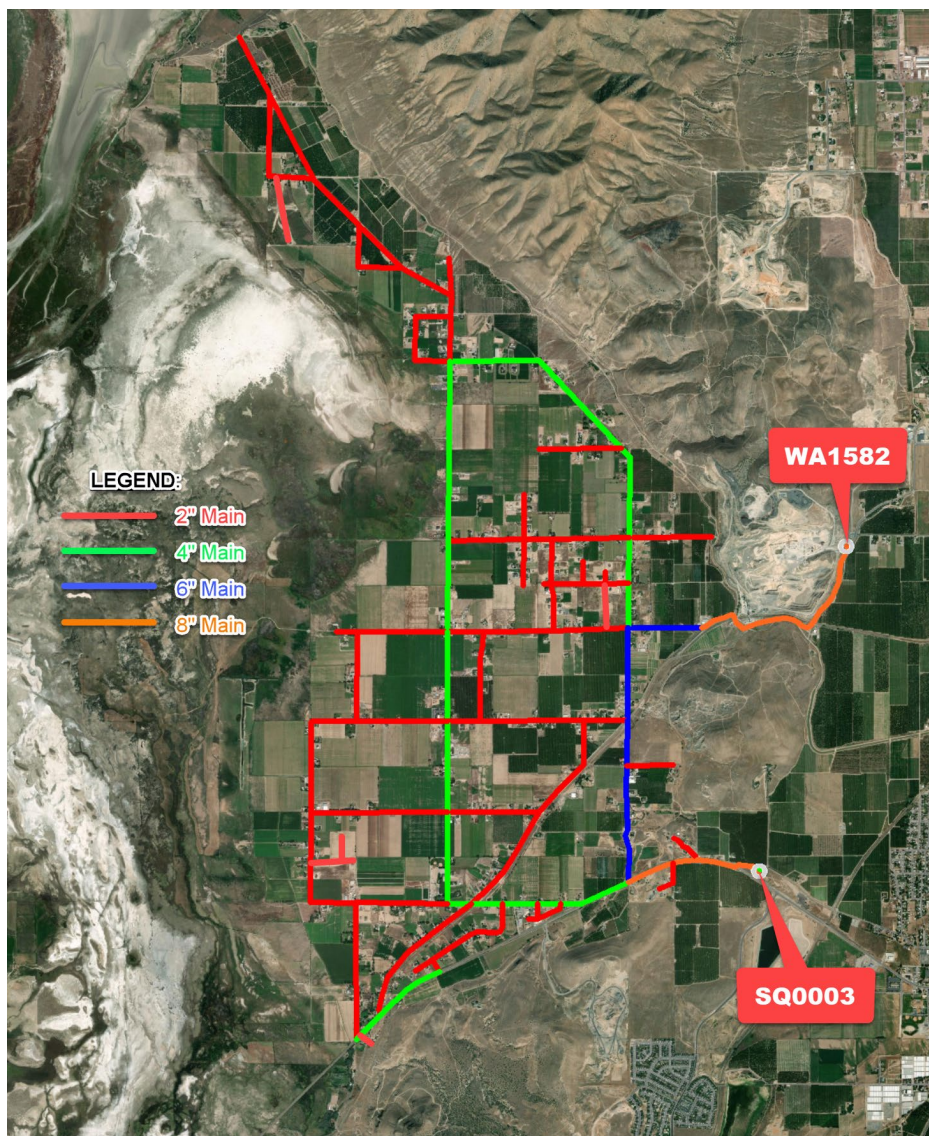


Figure 2: Proposed IHP Mains

Conclusion

The appropriate diameter size for the primary feeds from the existing regulator stations to outside the significant features to extend service to Genola under the rural expansion provision is 8-inch, whereafter it reduces in size from there. This size can be installed for approximately 40% additional cost per linear foot than the 4-inch minimum diameter but gives the Company more flexibility in serving potential future growth around Genola.