

Attachment 3

The following lists summarize the key items associated with the overhead and underground options (Option 1 and 2, respectively) for the northern Lafayette Street segment from NRS to Agnew Road.

Option 1 - Overhead Alternative along Northern Lafayette Street Segment

- Constructability considerations:
 - Segment includes 9 poles installed in the median.
 - Consistent with typical City residential design standards and installations.
 - Moderate traffic control and potential lane closures for required utility relocations outside of the median.
 - Isolated excavation and pole installation within the median.
- Existing utilities:
 - Depending on the exact location of the poles in this segment, we anticipate the need for minimal existing underground utility relocations at three locations. Utility relocation work would need to be completed prior to the anticipated construction start in Q4 2026. With Lafayette Street currently under a pavement moratorium through December 2025, the Project would have approximately 9 months to complete this work.
 - Potential Relocations of Existing Utilities:
 - PG&E-owned natural gas transmission lines – One Location
 - Sanitary Sewer – One Location
 - Water line – Two Locations
- Power delivery and line rating considerations:
 - The overhead transmission line option can deliver more power due to better heat dissipation than the underground alternative. Overhead systems can be designed to satisfy any current rating requirements by changing variables such as conductor type, structure/pole height, etc.
- Potential growth:
 - New pole locations will be able to accommodate a future underbuilt 60kV transmission line.
 - Poles will be designed to accommodate voltages of 230kV but energized for 115kV.
 - Future upgrades in voltage would allow for more power transfer through this section of the Lafayette corridor without major additional capital investment or disruptions.
- Aesthetic considerations:
 - No overhead transmission lines currently exist along this segment.
 - New overhead transmission line installed in the median of Lafayette Street (representative of typical steel poles in SVP's system, Attachment 4).
- Tree removals:
 - None are anticipated at this time however as design progresses, there may be a need for tree removal. If that is considered, trees will be replaced at a 2:1 ratio. Location and species will be determined with the City arborist.

- Additional Maintenance considerations:
 - Restoration time for an overhead transmission line is shorter and requires less resources than an underground line.
 - With poles being placed in the median, the risk for car strikes to poles is present.
 - If significant damage occurs to an overhead pole, SVP can perform emergency work to restore service in a matter of hours.
- Estimated construction cost:
 - \$36M
 - North of Agnew Road: \$9.5M (overhead)
 - Includes potential City utility relocation: \$0.25M
 - South of Agnew Road: \$26.5M (overhead – consistent with Option 2, includes easement costs)
 - Does not include PG&E costs.
- Estimated duration/schedule:
 - Anticipated Energization Q1 2028 (dependent on completion of utility relocation work).

Option 2 - Underground Alternative along Northern Lafayette Street Segment

- Constructability considerations:
 - Relocation of ~300 feet of two existing transmission natural gas lines (owned by SVP and PG&E) would be necessary to facilitate the installation of two underground vaults, each measuring 12' by 25', which are required to facilitate pulling and splicing of the underground conductor near Hope Drive. These vaults would require the relocation of:
 - SVP natural gas line that supplies Donald Von Raesfeld (DVR) Power Plant. This work would have to be coordinated to occur during off-peak times of the year, November through March.
 - PG&E natural gas line is a transmission line. It is unknown the timing that PG&E could take on the relocation of this alignment including design and construction. The impacts to the overall schedule are unknown.
 - Potential violations of the minimum vertical pipe clearances between utilities are anticipated at the duct bank crossing Lafayette south of Agnew Road. This involves traversing the majority of existing utilities within Lafayette. This utility crossing will need to be reviewed in more detail. If the minimum clearances are not met, an alternative option involves installing the duct bank below the existing sanitary sewer pipe which is ~12 feet below grade. This excavation could be up to 20 feet deep and duct bank installation would be a major disturbance to traffic with prolonged construction time frames.
 - Extended traffic control on the southbound lanes along the entire alignment on Lafayette Street which could involve completely shutting down portions of Lafayette Street.
 - Prolonged excavation and shoring along entire alignment.

- Existing utilities:
 - Multiple utility relocation and crossing will be required. Utility relocation work would need to be completed prior to the anticipated construction start in Q4 2026. With Lafayette Street currently under a pavement moratorium through December 2025, the Project would have approximately 9 months to complete all of the necessary utility relocations.
 - The Project would have an even shorter window of 3 months from January 2026 to March 2026 to complete the work for the 300' high pressured gas line relocation for DVR due to operational constraints which the Project team believes to be an infeasible schedule.
 - Required Crossings of Existing Utilities
 - Communication line – Three Locations
 - Electric line – Five Locations
 - PG&E-owned natural gas line – Four Locations, including PG&E gas transmission lines
 - SVP-owned natural gas line – Two Locations
 - Sanitary Sewer – Four Locations
 - Storm Drain – One Location
 - Water line – Three Locations
 - Required Relocations of Existing Utilities
 - PG&E-owned natural gas line – One Location (~300 feet)
 - SVP-owned natural gas line – One Location (~300 feet)
 - Attachment 5 provides a table of the potential underground utility crossings and relocations associated with the alternative underground route.
- Power delivery and line rating considerations:
 - The underground transmission line option is anticipated to be able to deliver only about 83% of the power that the overhead option would be able to provide at 115kV. This value drops to 79.9% at 230kV.
 - The cable and configuration proposed is at the maximum size for solid dielectric cable in the industry. If any additional capacity is required, a gas insulated transmission line would be required which adds significant complexity and costs to the Project.
- Potential growth:
 - The underground option will be designed to accommodate voltages of 230kV but energized for 115kV.
 - Future upgrades in voltage would allow for more power transfer through this section of the Lafayette corridor without major additional capital investment or disruptions at 79.9% of the capacity as the overhead alternative.
 - Any future 60kV lines in this corridor would necessitate a new alignment and trench, leading to additional disturbances and costs at a later date. A new alignment with separation from the existing trench would be required to accommodate the necessary heat dissipation emitted from the multiple sets of cable at the different voltage levels and may not be feasible due to the number of existing utilities and minimum vertical and horizontal clearances required.

- Aesthetic considerations:
 - A portion of this alignment will still be overhead from inside NRS to the median of Lafayette.
 - Two overhead transmission riser poles on either end of the underground segment are required to transition from overhead to underground. These riser poles typically have a larger visual impact than a typical overhead transmission pole as the conductor material transitions from bare overhead conductor to an insulated underground cable including additional hardware required for a riser pole that are not found on typical overhead poles (terminators, arrestors, and conductor shrouds). This hardware would also require additional structural appurtenances (see Attachment 4 for representation of a typical riser pole).
- Tree removals:
 - None are anticipated at this time however as design progresses, there may be a need for tree removal. If that is considered, trees will be replaced at a 2:1 ratio. Location and species will be determined with the City arborist.
- Additional Maintenance considerations:
 - Restoration time for an underground transmission line will be significantly longer and require more resources than for a comparable overhead transmission line.
 - If significant damage occurs to an underground riser pole, the work required to splice new cable and bring the line back into service could take days to complete.
 - Future access to the underground vaults for cable pulling would require a lane closure.
- Estimated construction cost:
 - \$45.5M
 - North of Agnew Road: \$19M (underground)
 - Includes potential City utility relocation: \$0.5M
 - South of Agnew Road: \$26.5M (overhead – consistent with Option 1, includes easement costs)
 - Does not include PG&E costs.
- Estimated duration/schedule:
 - Unknown.
 - This option requires extensive relocation of a PG&E gas transmission line which will not meet the Q1 2028 time frame.
 - The relocation of the DVR gas line is also limited to a 3 month schedule which the Project team believes to be infeasible.
 - The Project is required to be complete in early 2028 to support the interconnection with LS Powers transmission line.