

Agenda Date: July 11, 2024
Item Number: E2

Docket: PG-240360
Company Name: Cascade Natural Gas Corporation

Staff: Tom Green, Pipeline Safety Engineer
Dennis Ritter, Pipeline Safety Chief Engineer
Scott Rukke, Pipeline Safety Director

Recommendation

Issue an order granting Cascade Natural Gas Corporation's (Cascade or Company) request to construct and operate approximately 1,041 feet of new 4-inch diameter steel pipeline. This will connect to the existing 16" Fredonia Transmission pipeline that operates at an MAOP of 500 psig and the existing regulator station 017-R-179 which feeds the 4" Burlington HP Line at an MAOP of 249 psig. The complete route of this line is depicted on the attached aerial maps located in Appendix A.

Discussion

As described in Washington Administrative Code (WAC) 480-93-020, a gas pipeline company must receive approval from the Washington Utilities and Transportation Commission (Commission) to operate a pipeline at greater than 250 psig, up to and including 500 psig, within 100 feet of an existing building not owned by the gas pipeline company. The Commission has adopted the Code of Federal Regulations, Title 49, Part 192 and Chapter 480-93 of the WAC as minimum standards for natural gas pipeline construction and operation.

Cascade is proposing to construct and operate 1,041 feet of new 4-inch diameter steel pipeline with an MAOP of 500 psig tying into existing pipelines on the east and west sides of Interstate-5 (Appendix A). The proposed alignment of this new pipeline will be within 100 feet of 2 existing buildings along Gear Rd. in Burlington, Washington as shown in Appendix A. Cascade is performing this work to satisfy Settlement Agreement Docket PG-150120, and to maintain core customer needs.

Cascade looked at connections using alternative routes as detailed in Appendix B. These routes were not chosen because of lack of existing easements, difficulty in obtaining new easements, restrictions in place on crossing BNSF Railway tracks, and wetland disturbance that construction would have created. Commission staff (Staff) reviewed the proposed proximity request and calculations. As the pipeline will be new, there are no existing records to review. Staff notes the following facts:

- a) The proposed MAOP of the new pipeline is 500 psig.

- b) The project will use API 5L specification, X52 grade piping, and ANSI 300 fittings which are appropriate for the proposed MAOP.
- c) The Class location for the proposed pipeline is Class 1 on the west side of I-5 and class 2 on the east side of I-5.
- d) There are 2 existing structures located within 95 feet of the proposed pipeline. All other buildings along the route are greater than 100 feet from the pipeline.
- e) At the proposed MAOP of 500 psig, the stress level of the new pipe and fittings will be a maximum of 9.13% of the specified minimum yield strength (SMYS). The existing regulator station will be 13.56% of the specified minimum yield strength.
- f) As the hoop stress of the line is under 20 percent SMYS, the proposed pipeline is considered high-pressure distribution. Lines at or over 20% are considered transmission.
- g) The proposed pipeline and fittings will be pressure tested to a minimum of 750 psig (nitrogen) for 8 hours in accordance with the Company's procedures prior to operation. This test pressure is at least 1.5 times the MAOP of the pipeline, which is above the requirement for class 2. This allows for future growth in the area if the class location changes to 3.

Conclusion

A review of Cascade's proximity request indicates that it meets the pertinent requirements of Chapter 480-93 of the WAC and that the selected route of the new pipeline has the least impact on surrounding population densities.

The Commission's proximity rule, WAC 480-93-020, allows pipeline staff to review proposed high-pressure pipelines in close proximity to structures to address safety considerations. Staff's recommended conditions described below appropriately minimize the public safety risk associated with the proposed pipeline.

For these reasons, Staff recommends that the Commission issue an order approving Cascade's request to install and operate a pipeline with a MAOP of 500 psig subject to the following conditions:

- a) For underground installations, Cascade must electrically inspect (jeep) the pipe coating and repair any coating defects in accordance with Cascade's operating standards prior to backfilling.
- b) For underground installations, Cascade must apply backfill material around the pipe to protect the pipe and coating. The material around the pipe must be free of any sharp rocks

or other objects with a maximum particle size of one-half inch and must contain a large percentage of fines, such as sand, native soil, or soil-based select materials.

- c) Where feasible, Cascade must non-destructively test 100% of all welds. Cascade must remedy defects in the welds in accordance with Cascade's operating standards and procedures. Cascade must non-destructively test all repaired welds to ensure pipeline integrity and compliance with existing standards.
- d) Cascade must install cathodic protection within 90 days after the pipeline is installed.
- e) Cascade must provide notification to the Commission Pipeline Safety Division via email at least two business days prior to the beginning of the project construction. This email notification shall be sent to pipelineprogram@utc.wa.gov.
- f) Cascade must contact building occupants within 100 feet of the new pipeline prior to the Commission's open meeting and inform them of the project construction and any additional information consistent with the public awareness requirements in Title 49 CFR Part 192.61.

Appendix A



Figure 1: Overall view of the proposed 3" Burlington HP Replacement (Red) pipeline alignment.



Figure 2: Proposed pipeline showing buildings within the 100-foot proximity boundary.

Proximity Buildings

Bldg. #	Distance to HP Line (feet)	Bldg. Description
1	95	Residence
2	95	Shed

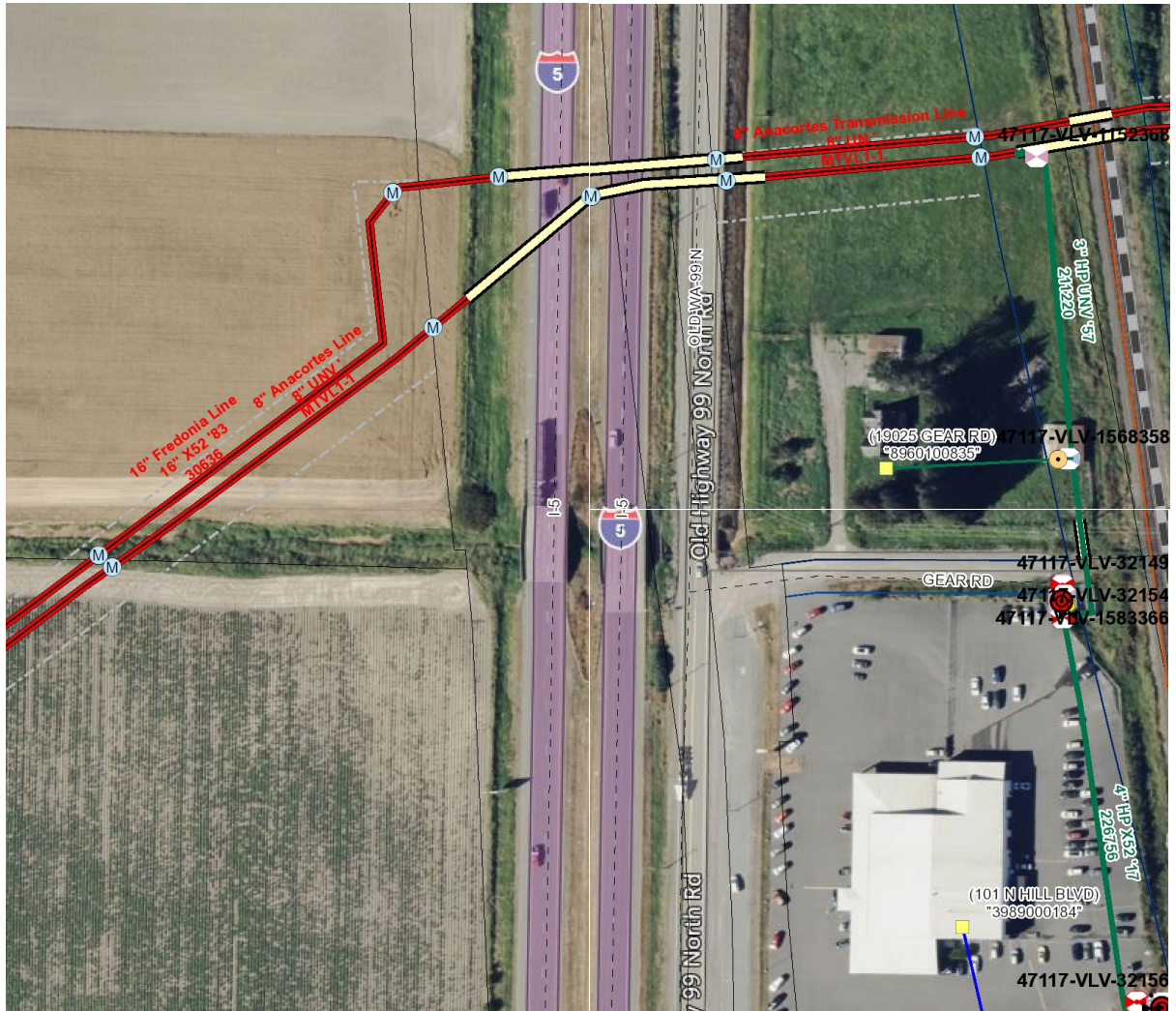


Figure 3: Overall view of the existing CNGC pipelines.

Appendix B

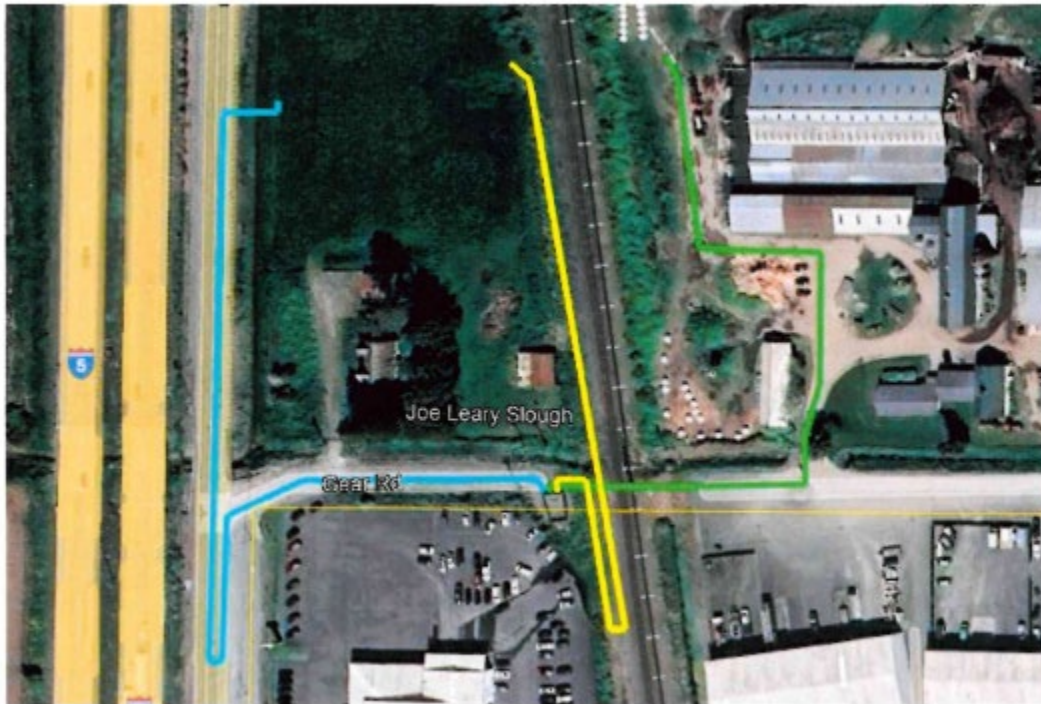


Figure 4: Route alternatives.