

Vermont Gas Systems Addison Natural Gas Project
Road Crossing Observation Report

Prepared on behalf of:



Vermont Gas Systems, Inc.

Prepared by:



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March 30th, 2021

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**Natural Gas Pipeline Stationing for the Vermont Gas Systems Addison Natural Gas Project is abbreviated in this report. For example, Natural Gas Pipeline Station 755+95 is denoted as “STA 755+95”. See Public Utility Commission Docket 7970 for more information.*



SITE

Location: Lincoln Road (STA 755+95)

Road Surface: Gravel

Road Characteristics: Crowned with no swales or ditching.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: August 2020

Weather: Sunny, 80°F

Observations:

- No visible evidence of poor roadbed performance, erosion or settlement of road above gas line.

Recommendations:

- None.

Photos:





SITE

Location: Lincoln Road (STA 755+95)

Road Surface: Gravel

Road Characteristics: Crowned with no swales or ditching.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: February 2021

Weather: Overcast, recent snow, 20°F

Observations:

- No visible evidence of poor roadbed performance, erosion or settlement of road above gas line.
- Road was plowed with small layer of snow on top.
- No heaving evident.

Recommendations:

- Revisit the site in the spring, after the final freeze-thaw cycle of the season.

Photos:





BREEZY VALLEY LANE (STA 788+10)

SITE

Location: Breezy Valley Lane (STA 788+10)

Road Surface: Gravel

Road Characteristics: No swales or ditching.

Public/Private Road: Private Road

INSPECTION SUMMARY

Date: August 2020

Weather: Sunny, 80°F

Observations:

- No visible evidence of poor roadbed performance, erosion or settlement of road above gas line.

Recommendations:

- None.

Photos:





SITE

Location: Breezy Valley Lane (STA 788+10)

Road Surface: Gravel

Road Characteristics: No swales or ditching.

Public/Private Road: Private Road

INSPECTION SUMMARY

Date: February 2021

Weather: Overcast, recent snow, 20°F

Observations:

- No visible evidence of poor roadbed performance, erosion or settlement of road above gas line.
- Road was plowed with small layer of snow on top.
- No heaving evident.

Recommendations:

- Revisit the site in the spring, after the final freeze-thaw cycle of the season.

Photos:





SITE

Location: Hickory Place (STA 947+95)

Road Surface: Gravel

Road Characteristics: Road slopes to the north. No swales or ditching.

Public/Private Road: Private Road

INSPECTION SUMMARY

Date: August 2020

Weather: Sunny, 80°F

Observations:

- 1"-2" of settlement in road above gas line.
- Settlement appeared to cause stormwater to channel and create erosion along the north side of the road.

Recommendations:

- See February 2021 recommendations.

Photos:





Photos continued:





SITE

Location: Hickory Place (STA 947+95)

Road Surface: Gravel

Road Characteristics: Road slopes to the north. No swales or ditching.

Public/Private Road: Private Road

INSPECTION SUMMARY

Date: February 2021

Weather: Overcast, recent snow, 20°F

Observations:

- No visible evidence of erosion or settlement of road above gas line or along the shoulder.
- Road was plowed with small layer of snow on top.
- No heaving evident.

Recommendations:

- Monitor during spring thaw, after final freeze-thaw cycle of the season, and during summer 2021 to see if settlement returns.

Photos:





SITE

Location: Charlotte Road (STA 1048+25)

Road Surface: Paved

Road Characteristics: Elevated paved road.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: August 2020

Weather: Sunny, 80°F

Observations:

- Paved road.
- No visible evidence of pavement degradation, erosion, or settlement of road above gas line.

Recommendations:

- None.

Photos:





SITE

Location: Charlotte Road (STA 1048+25)

Road Surface: Paved

Road Characteristics: Elevated paved road.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: February 2021

Weather: Overcast, recent snow, 20°F

Observations:

- Paved road.
- No visible evidence of pavement degradation, erosion, or settlement of road above gas line.

Recommendations:

- Revisit the site in the spring, after the final freeze-thaw cycle of the season.

Photos:





SITE

Location: Baldwin Road (STA 1114+40)

Road Surface: Gravel

Road Characteristics: Crowned with shallow swale on east edge of road.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: August 2020

Weather: Sunny, 80°F

Observations:

- No visible evidence of poor roadbed performance, erosion, or settlement of road above gas line.

Recommendations:

- None.

Photos:





SITE

Location: Baldwin Road (STA 1114+40)

Road Surface: Gravel

Road Characteristics: Crowned with shallow swale on east edge of road.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: February 2021

Weather: Overcast, recent snow, 20°F

Observations:

- No visible evidence of poor roadbed performance, erosion, or settlement of road above gas line.

Recommendations:

- Revisit the site in the spring, after the final freeze-thaw cycle of the season.

Photos:





SITE

Location: Rotax Road (STA 1293+85)

Road Surface: Gravel

Road Characteristics: Swale on north edge of road.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: August 2020

Weather: Sunny, 80°F

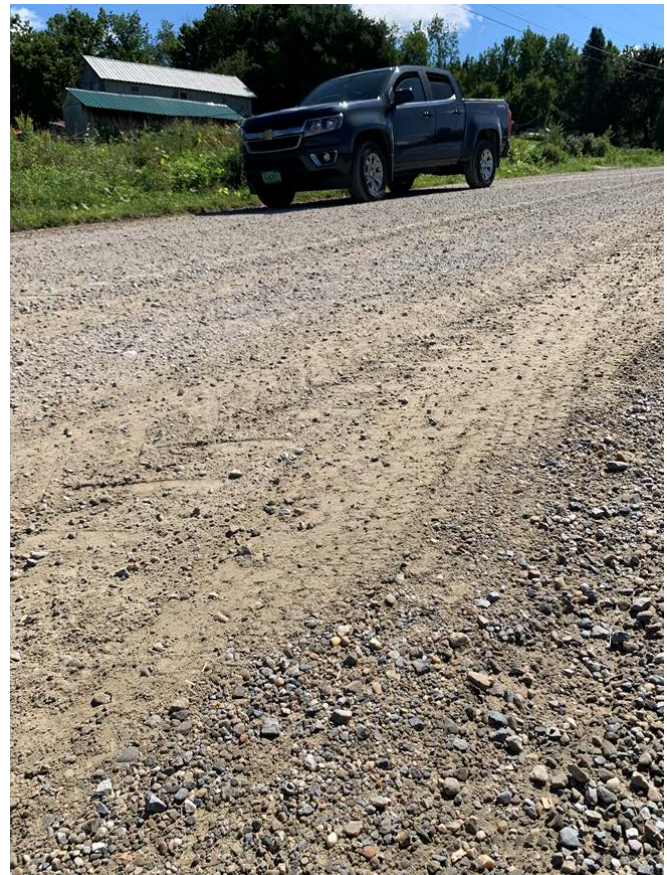
Observations:

- No visible evidence of poor roadbed performance, erosion, or settlement of road above gas line.

Recommendations:

- None.

Photos:





SITE

Location: Rotax Road (STA 1293+85)

Road Surface: Gravel

Road Characteristics: Swale on north edge of road.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: February 2021

Weather: Overcast, recent snow, 20°F

Observations:

- No visible evidence of poor roadbed performance, erosion, or settlement of road above gas line.
- Road was plowed with small layer of snow on top.
- No heaving evident.

Recommendations:

- Revisit the site in the spring, after the final freeze-thaw cycle of the season.

Photos:





SITE

Location: Stillson Road/Cedar Lane (STA 1379+10)

Road Surface: Gravel

Road Characteristics: Elevated gravel road.

Public/Private Road: Private Road

INSPECTION SUMMARY

Date: August 2020

Weather: Sunny, 80°F

Observations:

- No visible evidence of poor roadbed performance, erosion, or settlement of road above gas line.

Recommendations:

- None.

Photos:





STILLSON ROAD/CEDAR LANE (STA 1379+10)

SITE

Location: Stillson Road/Cedar Lane (STA 1379+10)

Road Surface: Gravel

Road Characteristics: Elevated gravel road.

Public/Private Road: Private Road

INSPECTION SUMMARY

Date: February 2021

Weather: Sunny, recent snow, 30°F

Observations:

- No visible evidence of poor roadbed performance, erosion, or settlement of road above gas line.
- Road was plowed with small layer of snow on top.
- No heaving evident.

Recommendations:

- Revisit the site in the spring, after the final freeze-thaw cycle of the season.

Photos:





SITE

Location: Post Road (STA 1424+25)

Road Surface: Gravel

Road Characteristics: Swale on both sides of road, steep slope to west.

Public/Private Road: Private Road

INSPECTION SUMMARY

Date: August 2020

Weather: Sunny, 80°F

Observations:

- Washout in middle of road. The washout does not appear to be caused by settlement from gas line installation, but rather from the lack of proper road surface grading.

Recommendations:

- Roadway should be regraded by Owner to force runoff to drain to one, or both, of the roadside swales.

Photos:





SITE

Location: Post Road (STA 1424+25)

Road Surface: Gravel

Road Characteristics: Swale on both sides of road, steep slope to west.

Public/Private Road: Private Road

INSPECTION SUMMARY

Date: February 2021

Weather: Overcast, recent snow, 20°F

Observations:

- No visible evidence of erosion or settlement of road above gas line.
- Road was plowed with small layer of snow on top.
- No heaving evident.

Recommendations:

- Revisit the site in the spring, after the final freeze-thaw cycle of the season.

Photos:





SITE

Location: Old Stage Road (STA 1547+60)

Road Surface: Gravel

Road Characteristics: Crowned road with shallow swale on both sides.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: August 2020

Weather: Sunny, 80°F

Observations:

- No visible evidence of poor roadbed performance, erosion, or settlement of road above gas line.

Recommendations:

- None.

Photos:





SITE

Location: Old Stage Road (STA 1547+60)

Road Surface: Gravel

Road Characteristics: Crowned road with shallow swale on both sides.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: February 2021

Weather: Overcast, recent snow, 20°F

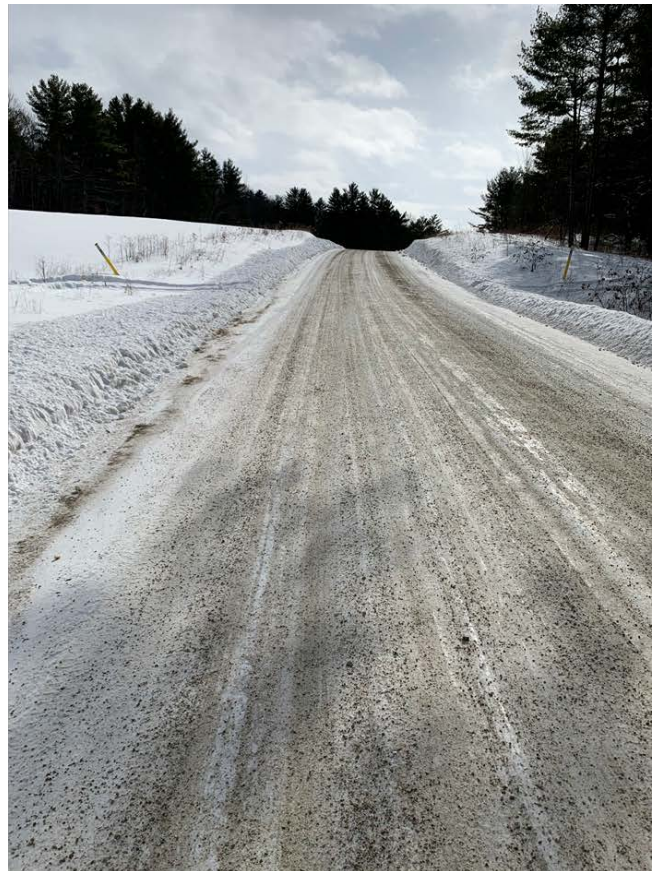
Observations:

- No visible evidence of poor roadbed performance, erosion, or settlement of road above gas line.
- Road was plowed with small layer of snow on top.
- No heaving evident.

Recommendations:

- Revisit the site in the spring, after the final freeze-thaw cycle of the season.

Photos:





SITE

Location: Old Stage Road (STA 1553+55)

Road Surface: Gravel

Road Characteristics: Swale on both sides of road, steep slope to west.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: August 2020

Weather: Sunny, 80°F

Observations:

- Visible erosion in swale on west side of the road before it enters into a small swale. The erosion starts uphill from the crossing and does not appear to be caused by the pipe line installation.

Recommendations:

- Roadway should be regraded by Town to force runoff to drain to one, or both, of the roadside swales.

Photos:





SITE

Location: Old Stage Road (STA 1553+55)

Road Surface: Gravel

Road Characteristics: Swale on both sides of road, steep slope to west.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: February 2021

Weather: Overcast, recent snow, 20°F

Observations:

- No visible evidence of poor roadbed performance, erosion, or settlement of road above gas line
- Road was plowed with small layer of snow on top.
- No heaving evident.

Recommendations:

- Revisit the site in the spring, after the final freeze-thaw cycle of the season.

Photos:





SITE

Location: Old Stage Road (STA 1565+50)

Road Surface: Gravel

Road Characteristics: Swale on both sides of road.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: August 2020

Weather: Sunny, 80°F

Observations:

- No visible evidence of poor roadbed performance, erosion, or settlement of road above gas line.

Recommendations:

- None.

Photos:





SITE

Location: Old Stage Road (STA 1565+50)

Road Surface: Gravel

Road Characteristics: Swale on both sides of road.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: February 2021

Weather: Overcast, recent snow, 20°F

Observations:

- No visible evidence of poor roadbed performance, erosion, or settlement of road above gas line.
- Road was plowed with small layer of snow on top.
- No heaving evident.

Recommendations:

- Revisit the site in the spring, after the final freeze-thaw cycle of the season.

Photos:





PARKS HURLBURT ROAD (STA 1588+45)

SITE

Location: Parks Hurlburt Road (STA 1588+45)

Road Surface: Gravel

Road Characteristics: Swale on north side of road. High bank on south side.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: August 2020

Weather: Sunny, 80°F

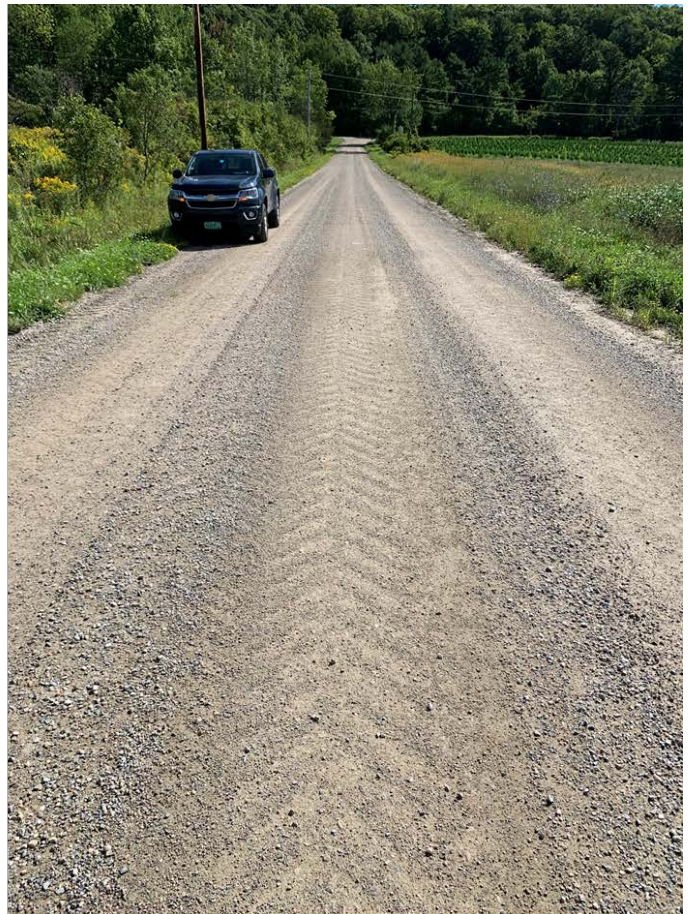
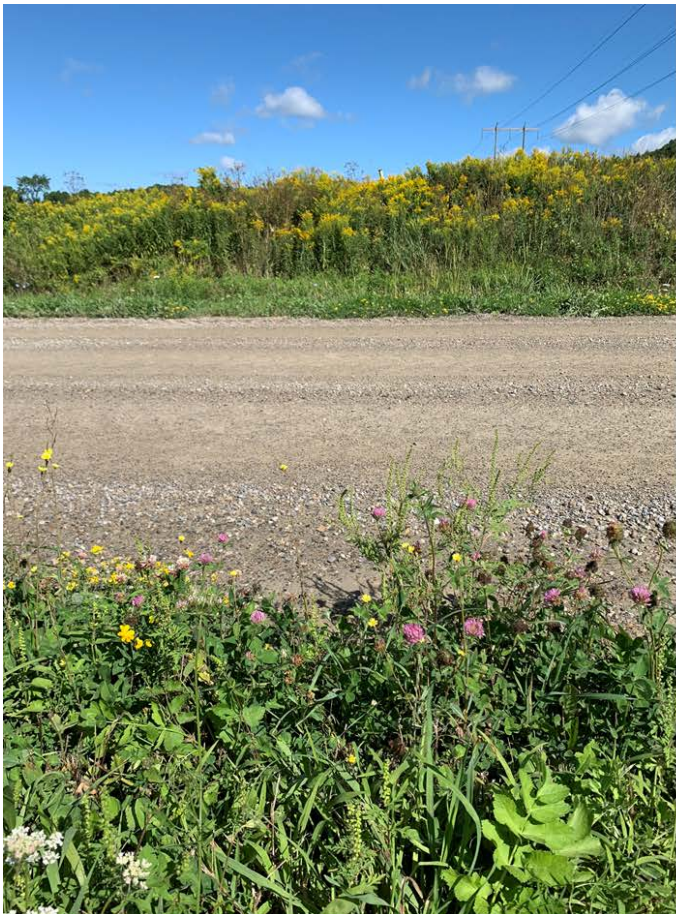
Observations:

- No visible evidence of poor roadbed performance, erosion, or settlement of road above gas line.

Recommendations:

- None.

Photos:





SITE

Location: Parks Hurlburt Road (STA 1588+45)

Road Surface: Gravel

Road Characteristics: Swale on north side of road. High bank on south side.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: February 2021

Weather: Overcast, recent snow, 20°F

Observations:

- No visible evidence of poor roadbed performance, erosion, or settlement of road above gas line.
- Road was plowed with small layer of snow on top.
- No heaving evident.

Recommendations:

- Revisit the site in the spring, after the final freeze-thaw cycle of the season.

Photos:





SITE

Location: Quarry Road (STA 1768+45)

Road Surface: Gravel

Road Characteristics: Crowned road with no swales or ditching.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: August 2020

Weather: Sunny, 80°F

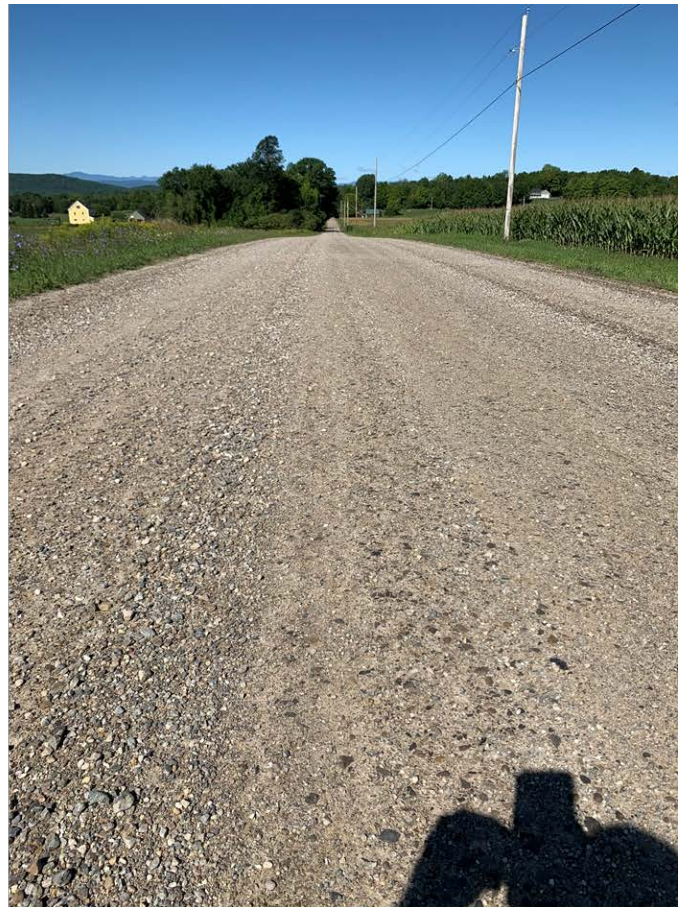
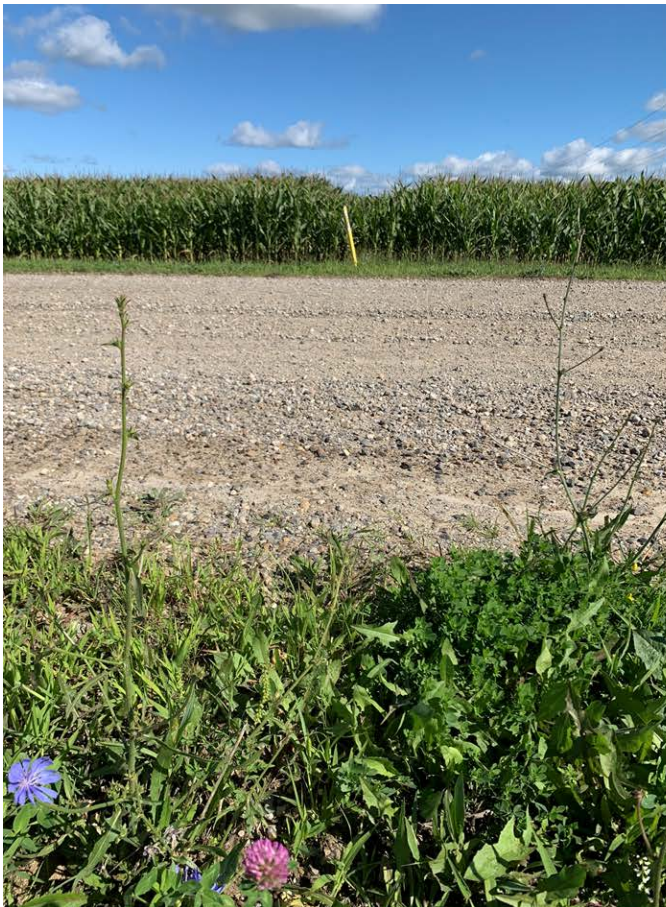
Observations:

- No visible evidence of poor roadbed performance, erosion, or settlement of road above gas line.

Recommendations:

- None.

Photos:





SITE

Location: Quarry Road (STA 1768+45)

Road Surface: Gravel

Road Characteristics: Crowned road with no swales or ditching.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: February 2021

Weather: Overcast, recent snow, 20°F

Observations:

- No visible evidence of poor roadbed performance, erosion, or settlement of road above gas line.
- Road was plowed with small layer of snow on top.
- No heaving evident.

Recommendations:

- Revisit the site in the spring, after the final freeze-thaw cycle of the season.

Photos:





SITE

Location: Hunt Road (STA 2011+60)

Road Surface: Gravel

Road Characteristics: Crowned road with swales on both sides.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: August 2020

Weather: Sunny, 80°F

Observations:

- Small washout located above gas lines at southern edge of road.

Recommendations:

- Line swale with stone.

Photos:





SITE

Location: Hunt Road (STA 2011+60)

Road Surface: Gravel

Road Characteristics: Crowned road with swales on both sides.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: February 2021

Weather: Overcast, recent snow, 20°F

Observations:

- No visible evidence of poor roadbed performance, erosion, or settlement of road above gas line.
- Road was plowed with small layer of snow on top.
- No heaving evident.

Recommendations:

- Line swale with stone.
- Revisit the site in the spring, after the final freeze-thaw cycle of the season.

Photos:





BELDEN FALLS ROAD (STA 2129+45)

SITE

Location: Belden Falls Road (STA 2129+45)

Road Surface: Gravel

Road Characteristics: Crowned road with swales on south side of road.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: August 2020

Weather: Sunny, 80°F

Observations:

- No visible evidence of poor roadbed performance, erosion, or settlement of road above gas line.

Recommendations:

- None.

Photos:





SITE

Location: Belden Falls Road (STA 2129+45)

Road Surface: Gravel

Road Characteristics: Crowned road with swales on south side of road.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: February 2021

Weather: Overcast, recent snow, 20°F

Observations:

- No visible evidence of poor roadbed performance, erosion, or settlement of road above gas line.
- Road was plowed with small layer of snow on top.
- No heaving evident.

Recommendations:

- None.

Photos:



Vermont Gas Systems Addison Natural Gas Project
Road Crossing Observation Report

ADDENDUM 1: FINAL OBSERVATIONS

Prepared on behalf of:



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Prepared by:



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June 24th, 2021

ADDENDUM 1

Addendum 1 contains site inspections conducted in June 2021, after final freeze-thaw cycle of the season.

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**Natural Gas Pipeline Stationing for the Vermont Gas Systems Addison Natural Gas Project is abbreviated in this report. For example, Natural Gas Pipeline Station 755+95 is denoted as "STA 755+95". See Public Utility Commission Docket 7970 for more information.*



SITE

Location: Lincoln Road (STA 755+95)

Road Surface: Gravel

Road Characteristics: Crowned with no swales or ditching.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: June 2021

Weather: Sunny, 80°F

Final Observations:

- No visible evidence of poor roadbed performance, erosion or settlement of road above gas line.

Photos:





SITE

Location: Breezy Valley Lane (STA 788+10)

Road Surface: Paved

Road Characteristics: No swales or ditching.

Public/Private Road: Private Road

INSPECTION SUMMARY

Date: June 2021

Weather: Sunny, 80°F

Final Observations:

- No visible evidence of poor roadbed performance, erosion, or settlement of road above gas line.
- Road has been paved.

Photos:





SITE

Location: Hickory Place (STA 947+95)

Road Surface: Gravel

Road Characteristics: Road slopes to the north. No swales or ditching.

Public/Private Road: Private Road

INSPECTION SUMMARY

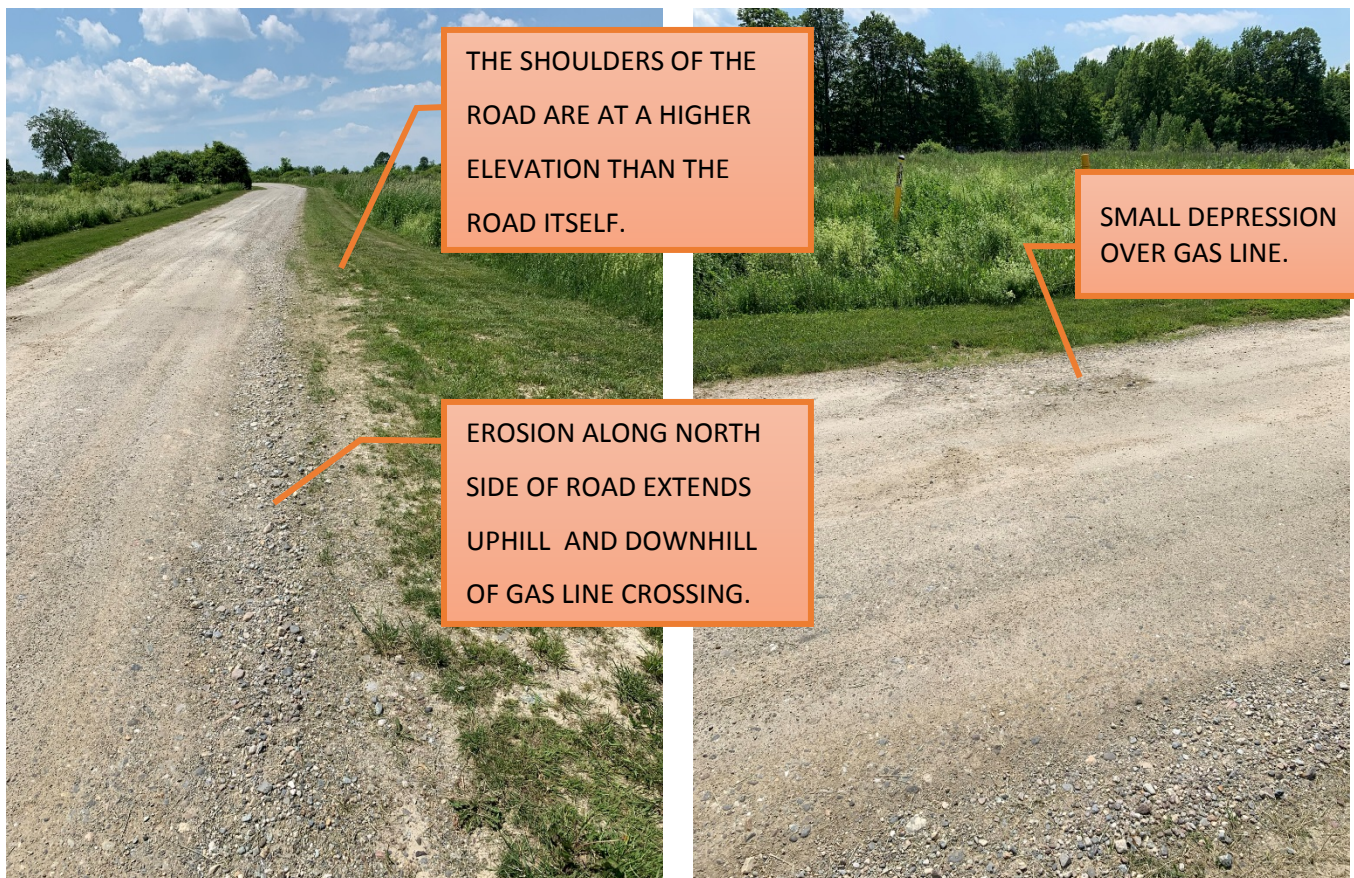
Date: June 2021

Weather: Sunny, 80°F

Final Observations:

- 1"-2" of settlement in road above gas line.
- Erosion down north side of road. The erosion is not from the gas line installation but from improper road grading.
- VGS should follow up and develop a plan for construction to address the settlement above the gas line.

Photos:





SITE

Location: Charlotte Road (STA 1048+25)

Road Surface: Paved

Road Characteristics: Elevated paved road.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: June 2021

Weather: Sunny, 80°F

Final Observations:

- No visible evidence of pavement degradation, erosion, or settlement of road above gas line.
- Paved road.

Photos:





SITE

Location: Baldwin Road (STA 1114+40)

Road Surface: Gravel

Road Characteristics: Crowned with shallow swale on east edge of road.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: June 2021

Weather: Sunny, 80°F

Final Observations:

- No visible evidence of poor roadbed performance, erosion, or settlement of road above gas line.

Photos:





SITE

Location: Rotax Road (STA 1293+85)

Road Surface: Gravel

Road Characteristics: Swale on north edge of road.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: June 2021

Weather: Sunny, 80°F

Final Observations:

- Erosion along the north side of the road which starts near driveway entrance to barn upslope from crossing and continues downslope of crossing. The erosion is not from the installation of the gas line but from the lack of a well-defined roadside swale along the north side of the road.
- No visible evidence of poor roadbed performance or settlement of road above gas line.

Photos:





SITE

Location: Stillson Road/Cedar Lane (STA 1379+10)

Road Surface: Gravel

Road Characteristics: Elevated gravel road.

Public/Private Road: Private Road

INSPECTION SUMMARY

Date: June 2021

Weather: Sunny, 80°F

Final Observations:

- No visible evidence of poor roadbed performance, erosion, or settlement of road above gas line.

Photos:





SITE

Location: Post Road (STA 1424+25)

Road Surface: Gravel

Road Characteristics: Swale on northeast side of road, steep slope to southwest.

Public/Private Road: Private Road

INSPECTION SUMMARY

Date: June 2021

Weather: Sunny, 80°F

Final Observations:

- The washout remains in the middle of the road. It extends uphill of the gas line crossing and continues downslope of the crossing. The erosion is not from the gas line installation but from improper road grading.
- No visible evidence of poor roadbed performance or settlement of road above gas line.

Photos:





SITE

Location: Old Stage Road (STA 1547+60)

Road Surface: Gravel

Road Characteristics: Crowned road with shallow swale on both sides.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: June 2021

Weather: Sunny, 80°F

Final Observations:

- No visible evidence of poor roadbed performance, erosion, or settlement of road above gas line.

Photos:





SITE

Location: Old Stage Road (STA 1553+55)

Road Surface: Gravel

Road Characteristics: Swale on east side of road, steep slope to west.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: June 2021

Weather: Sunny, 80°F

Final Observations:

- The road appears to have been regraded in the Spring. The roadside swale along the west side of the road appears to have been filled in during the road regrading. This is causing erosion down the west side of the crowned road as there is no defined area for stormwater to flow. Erosion is not from the gas line installation.
- No visible evidence of poor roadbed performance or settlement of road above gas line.

Photos:





SITE

Location: Old Stage Road (STA 1565+50)

Road Surface: Gravel

Road Characteristics: Swale on both sides of road.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: June 2021

Weather: Sunny, 80°F

Final Observations:

- No visible evidence of poor roadbed performance, erosion, or settlement of road above gas line.

Photos:





SITE

Location: Parks Hurlburt Road (STA 1588+45)

Road Surface: Gravel

Road Characteristics: Swale on north side of road. High bank on south side.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: June 2021

Weather: Sunny, 80°F

Final Observations:

- No visible evidence of poor roadbed performance, erosion, or settlement of road above gas line.

Photos:





SITE

Location: Quarry Road (STA 1768+45)

Road Surface: Gravel

Road Characteristics: Crowned road with no swales or ditching.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: June 2021

Weather: Sunny, 80°F

Final Observations:

- No visible evidence of poor roadbed performance, erosion, or settlement of road above gas line.

Photos:





SITE

Location: Hunt Road (STA 2011+60)

Road Surface: Gravel

Road Characteristics: Crowned road with swales on both sides.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: June 2021

Weather: Sunny, 80°F

Final Observations:

- Small washout located above gas line at southern edge of road.
- VGS should follow up and develop a plan for construction to address the washout above the gas line.

Photos:





SITE

Location: Belden Falls Road (STA 2129+45)

Road Surface: Gravel

Road Characteristics: Crowned road with swales on south side of road.

Public/Private Road: Public Road

INSPECTION SUMMARY

Date: June 2021

Weather: Sunny, 80°F

Final Observations:

- No visible evidence of poor roadbed performance, erosion, or settlement of road above gas line.

Photos:

