

Dakota Carbon Pipeline Project

As-Built Inspection Report

Docket Number: PU-21-150

Prepared for North Dakota Public Service Commission



September 2023

As-Built Inspection Report

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1 Executive Summary

The North Dakota Public Service Commission (PSC) retained Barr Engineering Co. (Barr) to complete site inspections for the construction of the Dakota Carbon Pipeline project in Mercer County, North Dakota, constructed by Dakota Gasification Company (DGC), a wholly-owned subsidiary of Basin Electric Power Cooperative (BEPC). The purpose of the inspections is to ensure the project is constructed in compliance with siting laws and rules and the applicable PSC Orders for the project.

A pre-construction conference call was held for the Project on 26 May 2021. Barr attended the call and reviewed project documents to become familiar with the Project and PSC Orders for the Project. Construction involving soil disturbance began 9 June 2021. A Topsoil Removal Inspection Report was previously submitted to the PSC.

As-built inspections were conducted on 13 September 2023. Seed mix review was completed once mix information was submitted to Barr by BEPC after the inspection was completed. The pipeline route was inspected, and reclamation and seeding were observed to be done according to Natural Resources Conservation Service (NRCS) recommendations. The right of way was clear of waste, and grading had been completed to restore the area affected to as near as practicable to the grade as it existed prior to construction. Overall, project construction appears to be in compliance with the applicable siting laws, rules, and PSC orders.

2 Background and Scope

2.1 Introduction

The Dakota Carbon Pipeline is a 12-inch pipeline originating at the Great Plains Synfuels plant located near Beulah, North Dakota that carries carbon dioxide (CO₂) to third-party well pads northwest of the Synfuels plant to facilitate the geologic storage or sequestration of the CO₂.

The pipe for the Project is designed to carry up to 200 million standard cubic feet per day of CO₂. The maximum allowable operating pressure for the pipeline is 2,700 pounds per square inch gauge (psig), at a design temperature of 120 degrees Fahrenheit. The Project is under the jurisdiction of the North Dakota PSC, which issued its Findings of Fact, Conclusions of Law, and Order in Case No. PU-21-150 on 28 July 2021, granting Certificates of Corridor Compatibility No. 223, and Route Permit No. 233 for the Project.

2.2 Regulatory Purpose and Need

The North Dakota Energy Conversion and Transmission Facility Act (North Dakota Century Code Chapter 49-22) charges the Public Service Commission with determining that the location, construction, and operation of jurisdictional energy conversion and transmission facilities will produce minimal adverse effects on the environment and the welfare of citizens of North Dakota. Inspections during construction ensure that such projects are built in compliance with the siting laws (North Dakota Century Code Chapter 49-22) and rules (North Dakota Administrative Code Article 69-06) and the applicable Commission Orders.

2.3 Scope of Work

The North Dakota Public Service Commission retained Barr Engineering Co. to perform as-built inspections of the Project. Barr's scope of work was to complete and document an on-site as-built inspection upon completion of the construction phase of the project to verify the project was constructed in compliance with the siting laws, rules, and applicable Commission Orders and to verify the topsoil was replaced and covered as required in compliance with the Commission's Order. This report contains site visit observations and a summary of findings and issues that should be addressed for the Project to be considered complete and in full compliance.

3 Findings of Site Inspection

3.1 Methods

Andrew Unbehaun, Project Manager/Field Inspector for Barr, visited the Project site on 13 September 2023 to conduct as-built inspections. Tyler Schilke, Project Manager for BEPC; Kelly Neameyer and Kurt Dutchuk, pipeline operations supervisors; and Mark Wallen, Coteau Mine property representative, accompanied Barr staff on the visit. Mr. Schilke oversees work by construction contractors to ensure the work is being completed according to applicable codes and approved work plans and procedures.

The site was visually inspected by driving to different access points along the right-of-way (ROW), then walking the ROW where construction activities had been conducted by Willow Creek Companies, the contractor constructing the pipeline for DGC. Contractor equipment had been removed from the site prior to the site inspection. Completed grade restoration and seeding was observed. The portion of the project inspected was completed in late 2022 so there was significant growth along the ROW. Digital photographs were taken at observation points at regular intervals along the pipeline route. Geographic coordinates were recorded at observation points using a handheld Global Navigation Satellite System (GLONASS) device (iPhone 11; <5m accuracy; WGS84 datum).

3.2 On-Site Inspection Observations

The topsoil replacement and seed placement appeared to be in compliance with NRCS guidelines (See Appendix A).

The contractors appear to have done a satisfactory job replacing subsoil and topsoil, reclaiming, and constructing the project to meet all siting laws, rules, and Commission Orders. BEPC representatives stated they have a strong relationship with the contractor and were involved in ensuring soil was restored and the area was reclaimed properly. Work areas visited during the inspection were free of debris and waste, and fences and gates had been repaired or replaced.

4 Issues to Resolve and Recommendations

As-built inspection of the Dakota Carbon Pipeline project verified that the project is constructed in compliance with the siting laws, rules, and applicable Commission Orders. No major issues were observed during the as-built inspection. However, Barr makes the following recommendations for post construction monitoring and observance:

Issues	Recommendations
Vegetation regrowth	Monitoring of native seed mix growth as other plants continue to occupy ROW
Additional potential issues	Refer to project Storm Water Pollution Prevention Plan (SWPPP) for additional postconstruction recommendations

5 Signatures

The services performed by Barr staff for this project have been conducted in a manner consistent with the technical skill and degree of care exercised by professionals currently practicing in this discipline under similar time and budget constraints. Findings and recommendations represent our professional judgement and are based on available information and accepted practices. No warranty is implied or expressed beyond this.



Andrew Unbehaun, Project Manager

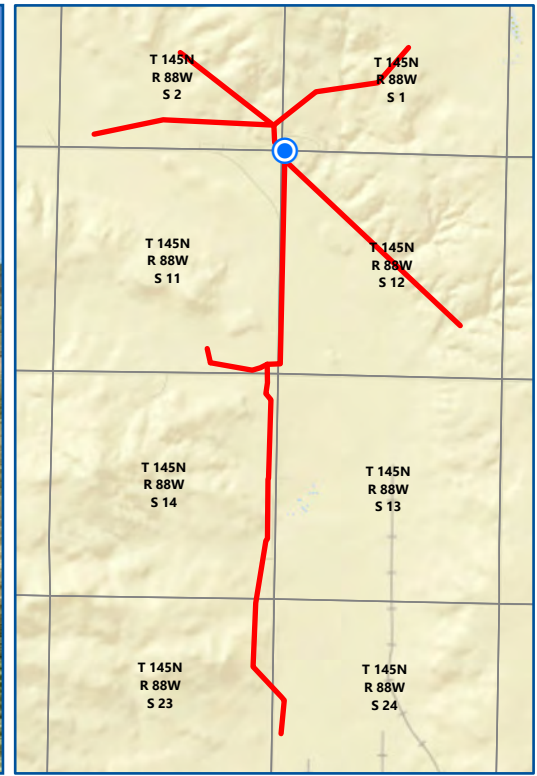
28 September 2023

Date

Appendices

Appendix A

Photo Log and Observation Maps





Map 1 of 7

DAKOTA CARBON PIPELINE RECLAMATION INSPECTION

PU-21-150

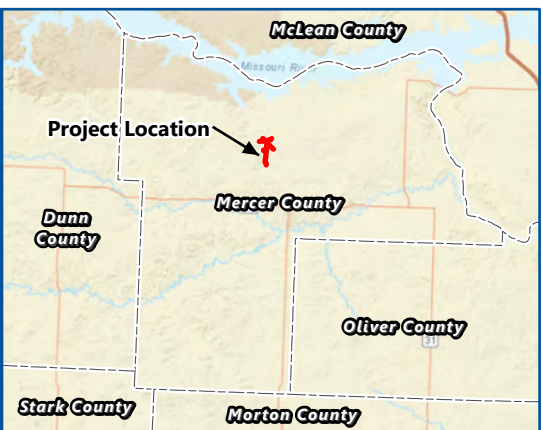
North Dakota Public Service Commission
Mercer County, North Dakota

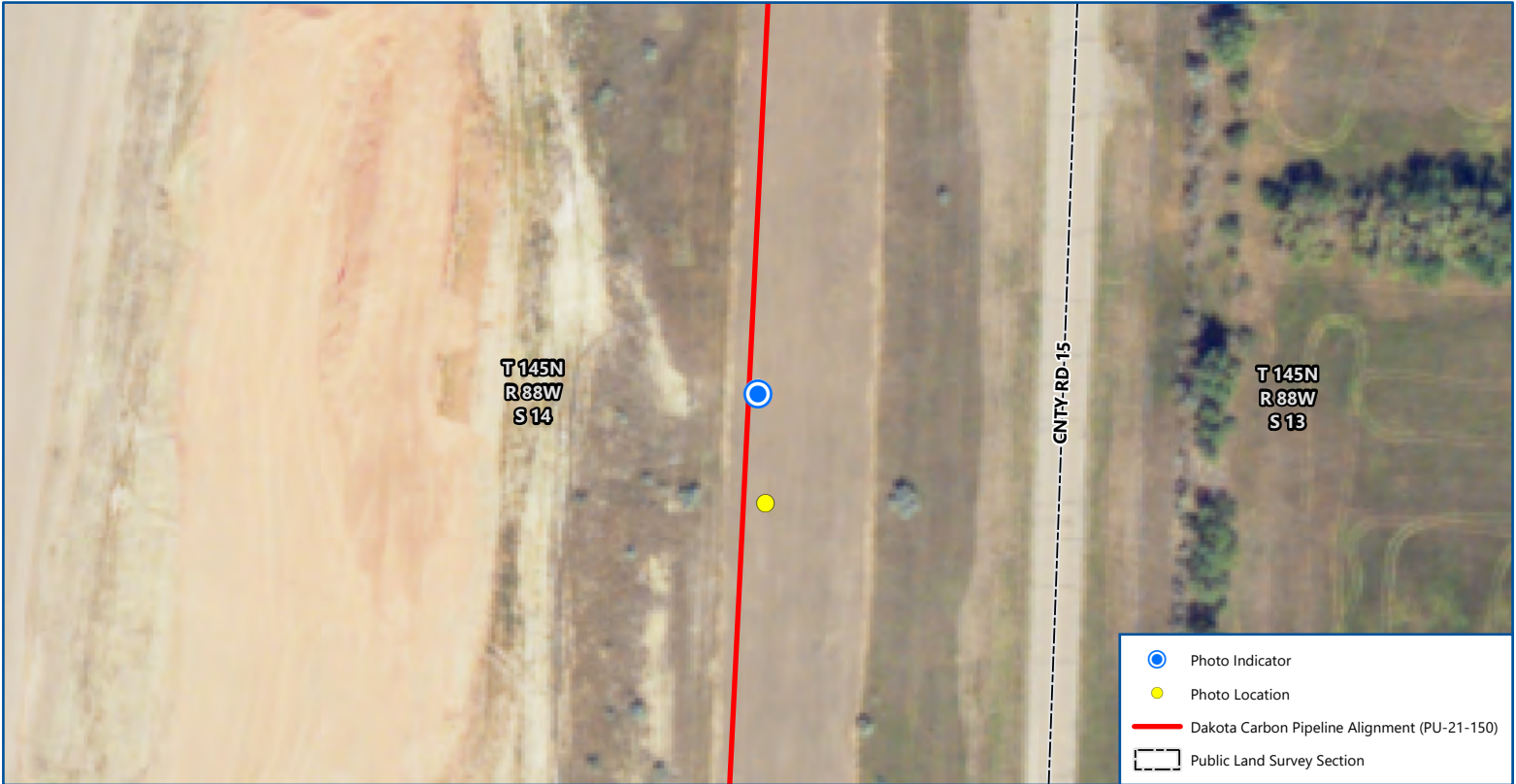
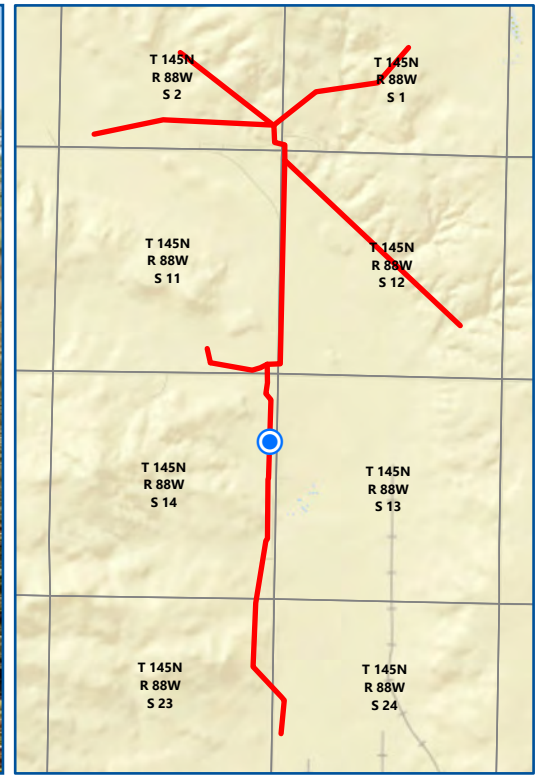




Imagery: USDA NAIP (2022)

Date: 9/13/2023
 Photo Direction: South
 Comment: Right of way at north end, looking south.
 Latitude: 47.400459
 Longitude: -101.843643
Coordinates are in the WGS84 datum.







Map 2 of 7

DAKOTA CARBON PIPELINE RECLAMATION INSPECTION

PU-21-150

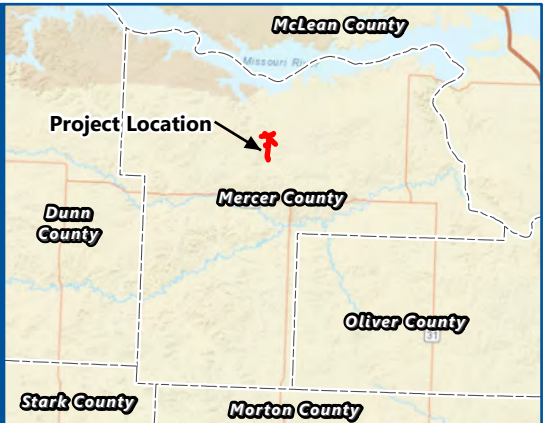
North Dakota Public Service Commission
Mercer County, North Dakota

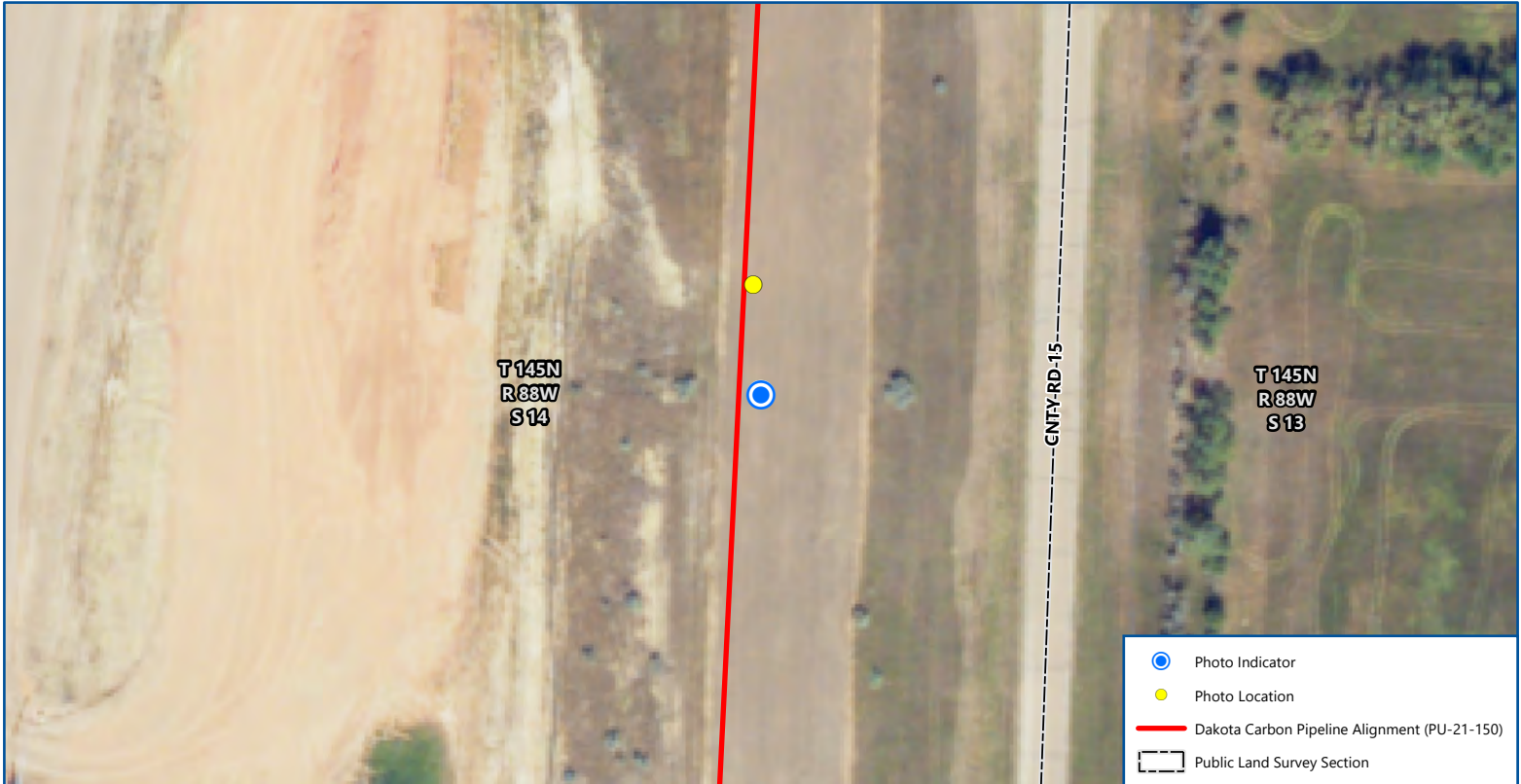
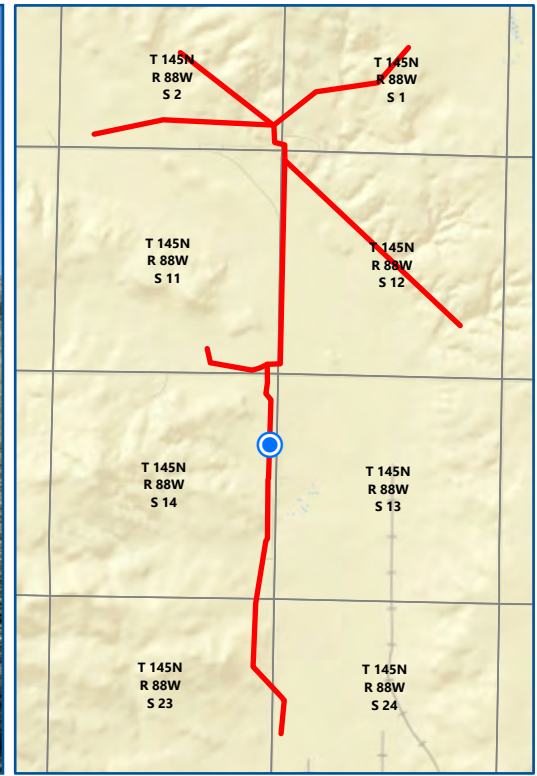




Imagery: USDA NAIP (2022)

Date: 9/13/2023
 Photo Direction: North
 Comment: Right of way
 Latitude:47.381632
 Longitude:-101.844621
Coordinates are in the WGS84 datum.





Map 3 of 7

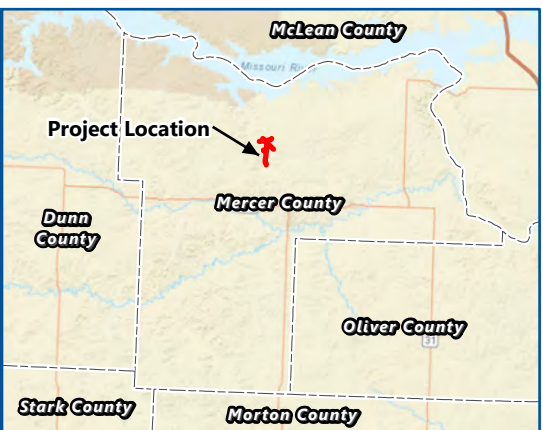
DAKOTA CARBON PIPELINE RECLAMATION INSPECTION

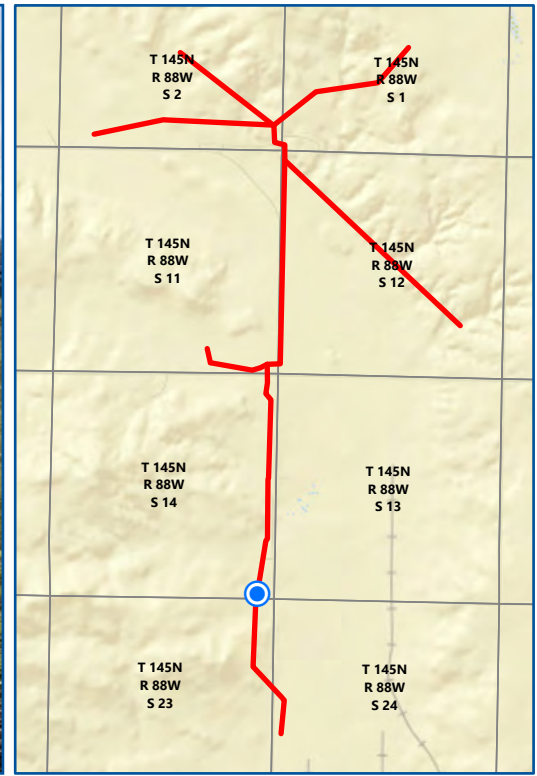
PU-21-150

North Dakota Public Service Commission
Mercer County, North Dakota

Imagery: USDA NAIP (2022)

Date: 9/13/2023
 Photo Direction: South
 Comment: Right of way
 Latitude: 47.381472
 Longitude: -101.844596
Coordinates are in the WGS84 datum.





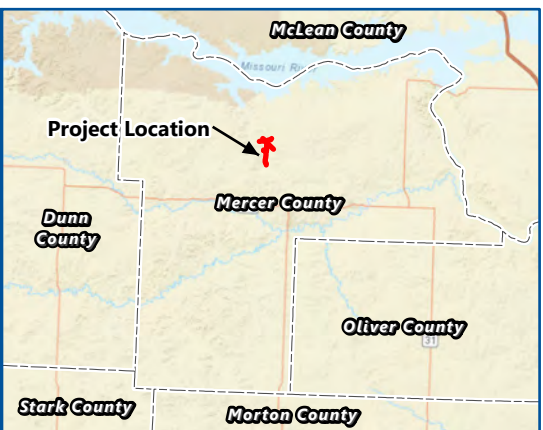
Map 4 of 7
DAKOTA CARBON PIPELINE RECLAMATION INSPECTION
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 North Dakota Public Service Commission
 Mercer County, North Dakota

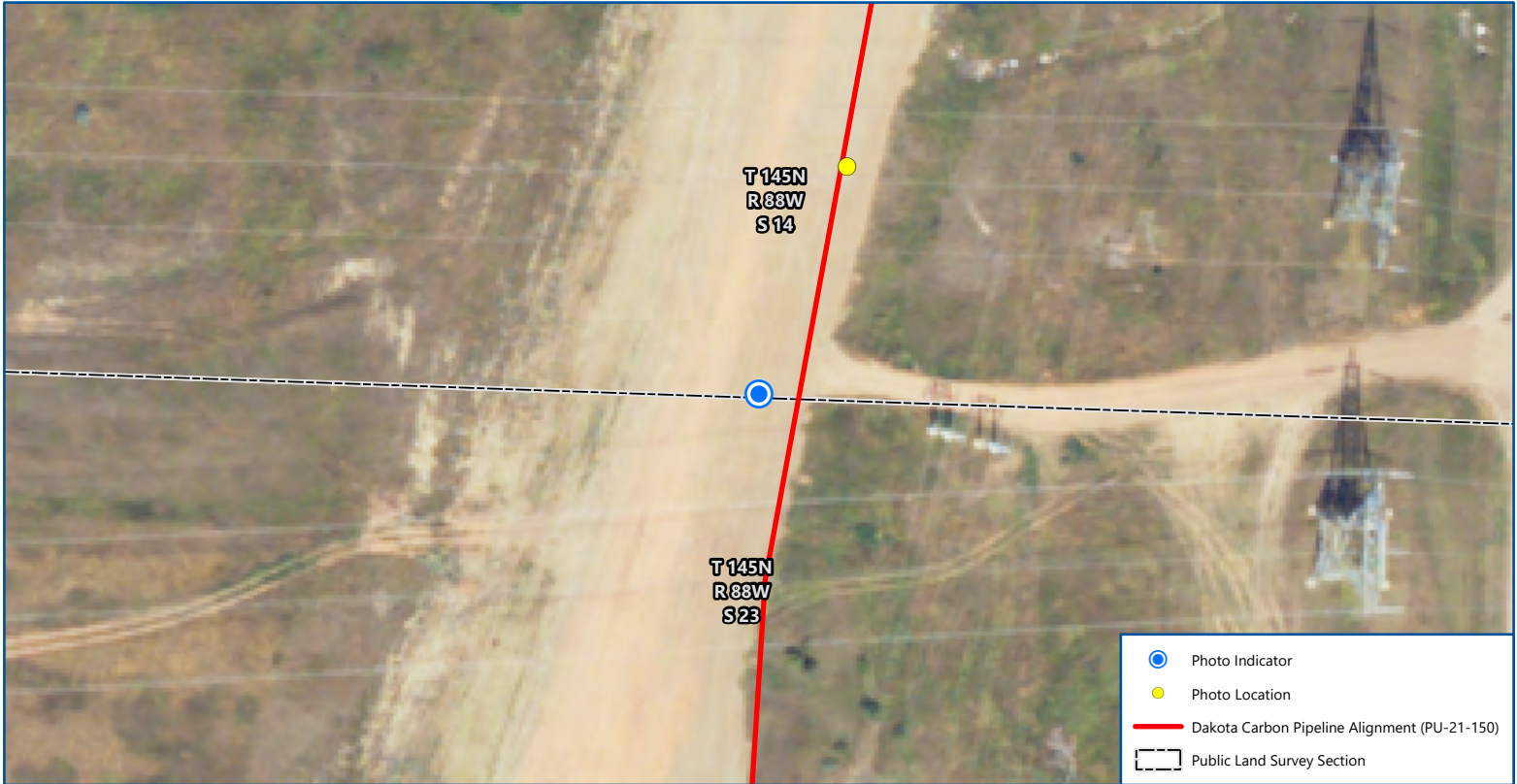
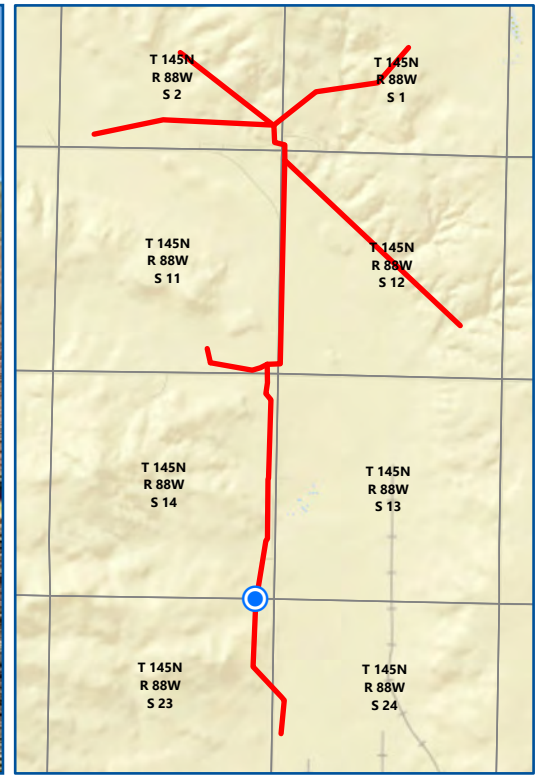
N

0 100
 Feet

Imagery: USDA NAIP (2022)

Date: 9/13/2023
 Photo Direction: North
 Comment: Right of way along edge of mine road.
 Latitude: 47.371846
 Longitude: -101.845563
 Coordinates are in the WGS84 datum.





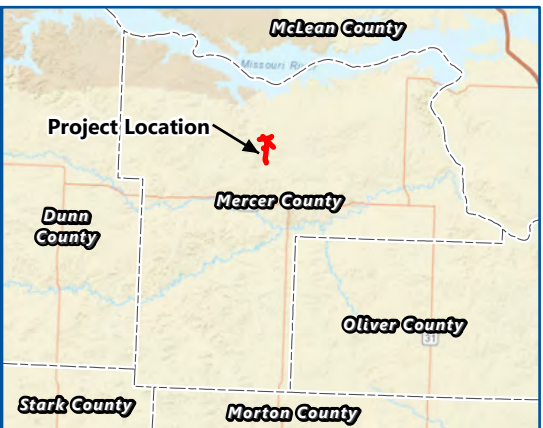
Map 5 of 7
DAKOTA CARBON PIPELINE RECLAMATION INSPECTION
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 North Dakota Public Service Commission
 Mercer County, North Dakota

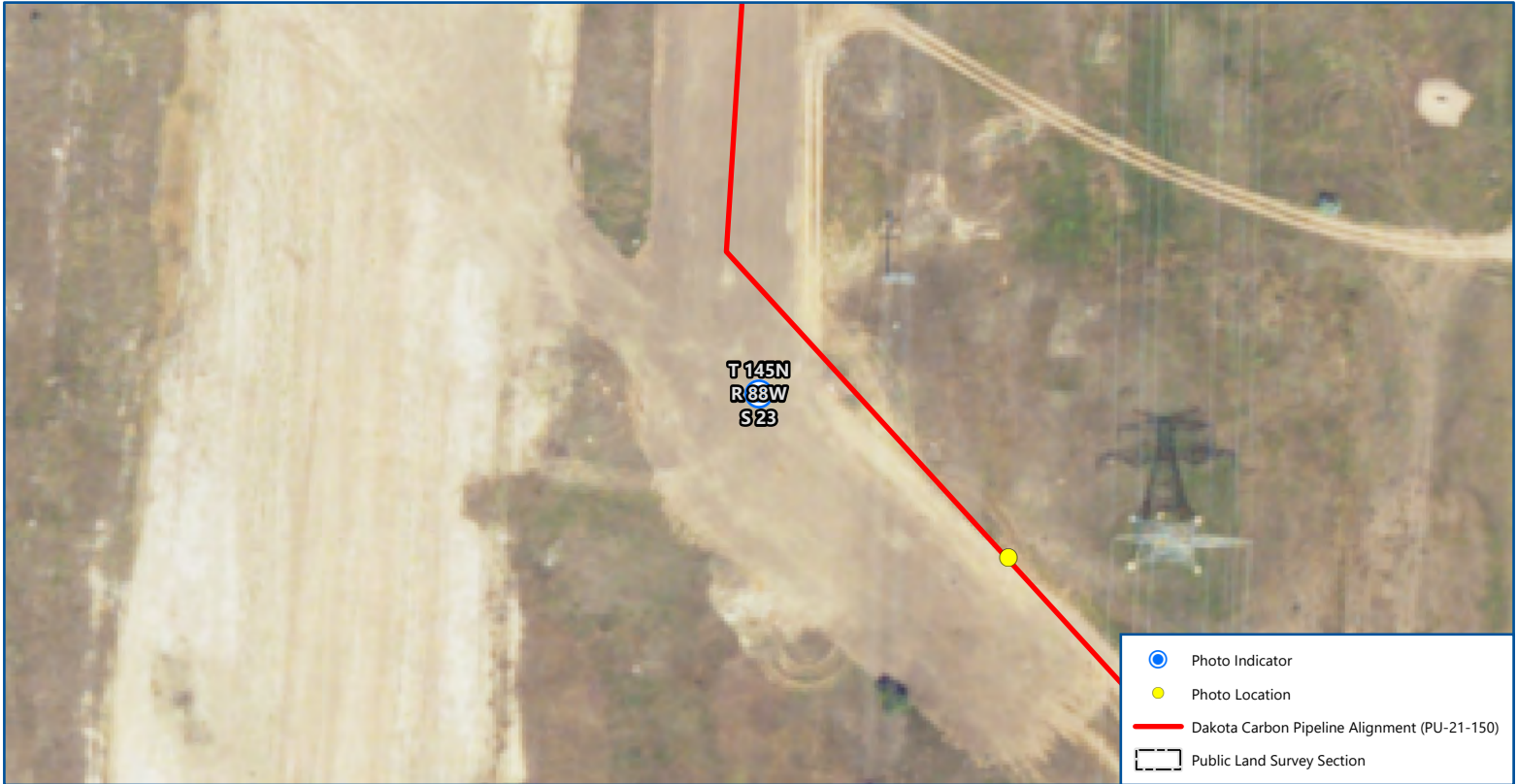
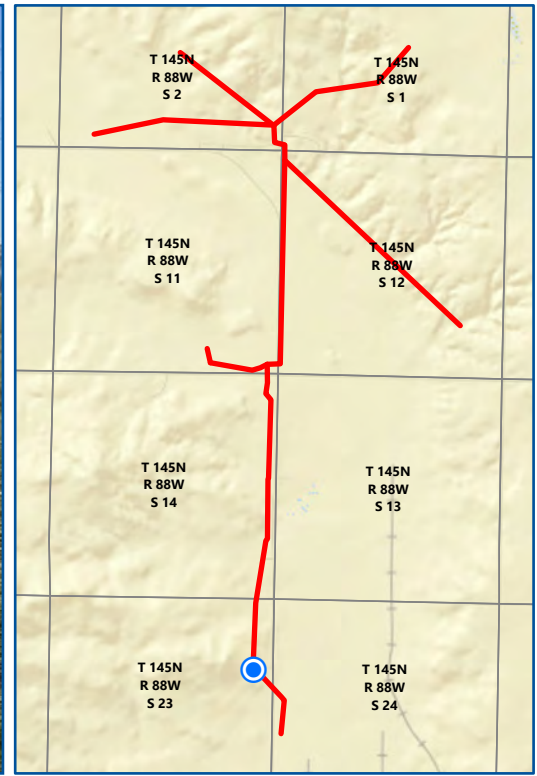
N

0 100
 Feet


Imagery: USDA NAIP (2022)

Date: 9/13/2023
 Photo Direction: South
 Comment: Right of way adjacent to haul road.
 Latitude: 47.371508
 Longitude: -101.845735
 Coordinates are in the WGS84 datum.



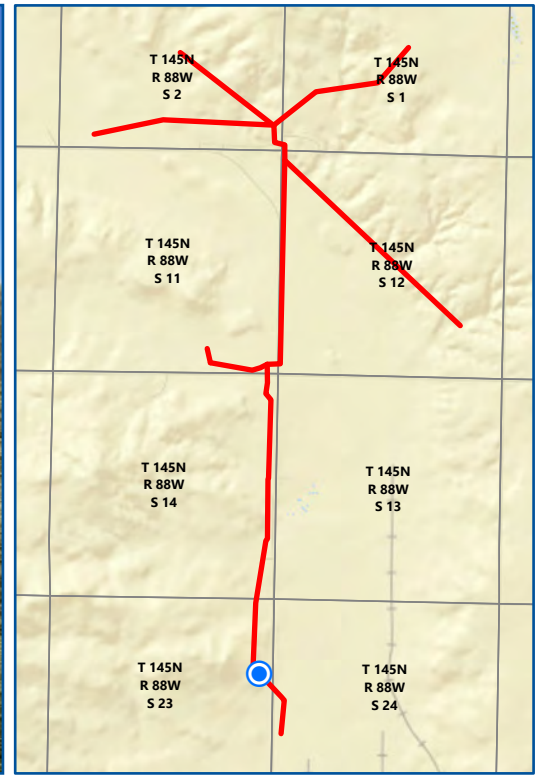


Map 6 of 7
**DAKOTA CARBON PIPELINE
 RECLAMATION INSPECTION**
PU-21-150
 North Dakota Public Service Commission
 Mercer County, North Dakota



 0 100
 Feet
 Imagery: USDA NAIP (2022)

Date: 9/13/2023
 Photo Direction: North
 Comment: Visual of right of way way extents
 Latitude: 47.366897
 Longitude: -101.845786
 Coordinates are in the WGS84 datum.





Map 7 of 7
**DAKOTA CARBON PIPELINE
 RECLAMATION INSPECTION**
PU-21-150
 North Dakota Public Service Commission
 Mercer County, North Dakota


 0 100
 Feet
 Imagery: USDA NAIP (2022)

Date: 9/13/2023
 Photo Direction: Northwest
 Comment: Southern extent of disturbed soil.
 Latitude: 47.366669
 Longitude: -101.845233
 Coordinates are in the WGS84 datum.

