Hiland Crude, LLC dba Hiland Express

a subsidiary of Kinder Morgan, Inc.

Hiland Express Spine Pipeline Project

McKenzie County, North Dakota

North Dakota Public Service Commission

Consolidated Application for Certificate of Corridor Compatibility and Route Permit

Prepared by:

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AUTHORITY	DESCRIPTION	SECTION(S)
CENTURY CODE – Title 49: ENERGY CONVERSION AND TRANSMISSION FACILITY		
49-22.1-06	Application for a Certificate for a Corridor	
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1.b	Summary of any studies of environmental impacts	5.0
1.c	Need for the facility	2.2
1.d	Site for energy conversion facility	N/A
1.e	Preferred transmission (pipeline) corridor	2.17, Exhibits B.2-B.4
1.f	Analysis of merits and detriments of facility location	4.0
1.g	Mitigating measures	9.0
1.h	Corridor evaluation pursuant to 49-22.1-09 and 49-22.1-03	7.0, 7.4, 8.0
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49-22.1-07	Application for Route Permit	
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1.c	Route evaluation relative to 49-22.1-09 and 49-22.1-03	7.0, 8.0
1.d	Mitigating measures	9.0
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1.g	Other relevant information	8.0
49-22.1-09	Factors to be considered in evaluating corridor and route applications	
1	Research and investigation into effects of the project on public health, welfare, natural resources, and the environment	5.0, 7.1- 7.4, 8.1
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11	Problems raised by federal, state, or local entities	6.0, 8.15, Exhibit D
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2.a.(7)(c)	The estimated span length for electric facilities	N/A

AUTHORITY	DESCRIPTION	SECTION(S)
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2.a.(7)(e)	The voltage for electric facilities	N/A
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AUTHORITY	DESCRIPTION	SECTION(S)
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ACRONYMS AND ABBREVIATIONS

°F	degrees Fahrenheit
API	American Petroleum Institute
BGEPA	Bald and Golden Eagle Protection Act
BLM	Bureau of Land Management
BMP	Best Management Practice
bpd	barrels per day
CFR	Code of Federal Regulations
Commission or NDPSC	North Dakota Public Service Commission
CSP	Conservation Stewardship Program
EI	Environmental Inspector
EIA	Energy Information Administration
EO	Executive Order
ETWS	Extra Temporary Workspace
FSA	U.S. Department of Agriculture's Farm Service Agency
GIS	geographic information system
HDD	Horizontal Directional Drilling
Hiland	Hiland Crude, LLC dba Hiland Express
ICBM	Intercontinental Ballistic Missile
IPaC	Information, Planning, and Conservation System
Kinder Morgan	Kinder Morgan, Inc.
LMNG	Little Missouri National Grassland
MBTA	Migratory Bird Treaty Act
MCWRD	McKenzie County Water Recourse District
Merjent	Merjent, Inc.
MMCF	million cubic feet
MMcf/d	million cubic feet per day
ND	North Dakota
NDAC	North Dakota Administrative Code
NDCC	North Dakota Century Code
NDDA	North Dakota Department of Agriculture
NDDH	North Dakota Department of Health
NDDEQ	North Dakota Department of Environmental Quality
NDDWR	North Dakota Department of Water Resources
NDGFD	North Dakota Game and Fish Department
NDIC	North Dakota Industrial Commission
NDPDES	North Dakota Pollutant Discharge Elimination System
NDPRD	North Dakota Parks and Recreation Department
NDPSC or Commission	North Dakota Public Service Commission

NDR	North Dakota Rules
NDSWC	North Dakota State Water Commission
NEPA	National Environmental Policy Act
NGL	Natural Gas Liquid
NPDES	National Pollutant Discharge Elimination System
NPS	U.S. National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWP	Nationwide Permit
NWR	National Wildlife Refuge
PCN	Pre-Construction Notification
Project	Hiland Express Spine Pipeline
psig	pounds per square inch gauge
ROW	Right-of-Way
SHPO	State Historic Preservation Office
SWPPP	Stormwater Pollution Prevention Plan
UDP	Unanticipated Discoveries Plan
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USDOD	U.S. Department of Defense
USDOT	U.S. Department of Transportation
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WAWS	Western Area Water Supply
WNS	White Nose Syndrome
WPA	Waterfowl Production Area
WRP	Wetland Reserve Program
WQC	Water Quality Certification
Y-grade NDLs	mixed natural gas liquids

INTRODUCTION

Hiland Crude, LLC dba Hiland Express (Hiland), a subsidiary of Kinder Morgan, Inc. (Kinder Morgan), owns and operates liquid natural gas well and pipeline facilities in the state of North Dakota (ND). Hiland is proposing to construct and operate the Hiland Express Spine Pipeline Project (Project), which will include approximately 28.1 miles of 10-inch steel Natural Gas Liquid (NGL) pipeline in McKenzie County, North Dakota. Apart from pipeline valves and inspection tool launchers/receivers, no above ground appurtenances are planned. This pipeline section is part of the larger Hiland Express Project, the conversion of Hiland's Double-H crude pipeline to NGLs, to increase NGL export capacity from the Bakken.

The Project has been designed to avoid sensitive social, cultural, and environmental resources as much as possible to minimize community and natural resource impacts. The pipeline route has been located on private land that is primarily in agricultural use, and much of the pipeline right-of-way (ROW) has been located within or adjacent to other existing linear facility ROWs.

The Project is regulated by the North Dakota Public Service Commission (NDPSC) and Hiland is submitting to the NDPSC this consolidated application for a Certificate of Corridor Compatibility and Route Permit for the Project. The application provides the information required by:

- North Dakota Century Code (NDCC), Energy Conversion and Transmission Facility Siting Act, Chapter 49-22.1; and

- North Dakota Administrative Code (NDAC), Article 69-06, Energy Conversion and Transmission Facility Siting.

The following is a presentation and analysis of information required under these two Codes as well as additional information on topics requested in recent NDPSC pipeline project reviews.

A number of additional authorizations and permit approvals are necessary prior to construction. Hiland intends to acquire all necessary permits by May 2025, commence construction on or near May 2025, and complete construction in October 2025, with an in-service date of October 2025. Winter construction is not anticipated. Restoration work will commence as the Project moves forward, and Hiland anticipates complete restoration of the pipeline ROW by the end of Summer 2026.

1.0 SIZE AND TYPE OF FACILITY

1.1 TYPE

This application is for the development, operation, and maintenance of a mixed natural gas liquids (Y-grade NGLs) transmission pipeline. The steel pipeline will meet applicable U.S. Department of Transportation (USDOT) regulations as outlined in 49 Code of Federal Regulations (CFR) Part 195.

1.2 SIZE

The Project pipeline specifications are the following:

- 10-inch outside diameter steel pipe
  - 0.219-inch wall thickness, Grade X-52 (main line)
  - 0.307-inch wall thickness, Grade X-52 (road crossings and HDDs)
- Maximum operating pressure: 1,440 pounds per square inch gauge (psig)
- Maximum throughput: approximately 80,000 barrels per day (bpd)
- Maximum operating temperature: 100 degrees Fahrenheit (°F)
- Normal operating conditions: 60 °F at 500 psig

1.3 LENGTH

The Project will be approximately 28.1 miles in length. There will be a 100-foot-wide temporary workspace during construction (more at road and railroad crossings and sensitive areas) and a 50-foot permanent ROW.

1.4 ABOVEGROUND FACILITIES

At this point, the Project will include two mainline block valves, one pig launcher facility, and one pig receiver facility. However, the number of block valves may change as the engineering design develops. The block valves will be installed in accordance with applicable USDOT regulations. Block valves allow for the isolation of select pipeline segments for inspection and maintenance purposes, or in the event of a system failure. The launcher and receiver facilities will facilitate the introduction of in-line tools for the performance of functions varying from cleaning to integrity monitoring. Please see Exhibit A for engineering documents.

2.0 DESIGN OF THE FACILITY

2.1 DESIGN OF PROPOSED FACILITY

The Project design includes approximately 28.1 miles of 10-inch-diameter steel pipeline and associated valves, launchers, and receivers as described in Section 1.4, above. Please see Exhibit A for engineering documents.

The pipeline will be manufactured according to American Petroleum Institute (API) Specifications API 5L Seamless Line Pipe and will meet International Organization for Standardization 3183 and applicable USDOT regulations outlined in 49 CFR part 195.

2.2 PURPOSE AND NEED OF THE FACILITY

The purpose of the Project is to provide take-away capacity for Y-grade NGLs (a mixture of ethane, propane, butanes, iso-butane mix, pentanes, and natural gasoline) produced at the Hiland Roosevelt Gas Processing Plant to the Camp Creek Injection Station, where the products will enter an existing NGL pipeline system (see Exhibits A, Engineering Documents and Exhibit B, Project Maps for details). Construction of the proposed Project would provide firm, reliable service of 80,000 barrels of NGLs per day and would provide the critical link between the Hiland Roosevelt Plant and Hiland Express NGL pipeline system(s) for delivery to facilities in the Mid-Continent and Gulf Coast for additional processing prior to distribution to various markets.

Technological advances in drilling and completion associated with horizontal wells currently employed in the Bakken Shale and Three Forks formations of the Williston Basin have dramatically increased hydrocarbon production in the area. Producers remain active in the region, creating demand for natural gas gathering infrastructure. Average 2024 daily natural gas production in North Dakota is currently estimated to be approximately 3,600 million cubic feet per day (MMcf/D; East Daley Analytics, 2024). In 2023, NGL production in North Dakota was 213,927 million cubic feet (MMCF) (EIA, 2024a). See Section 4.1.1 above for more information.

The increased production of oil and natural gas products continues to be constrained by the available infrastructure take-away capacity. While near term demands associated with increased crude oil production can be readily addressed with the installation of tankage for temporary storage coupled with additional trucking or rail capacity to bring it to market, the associated natural gas production is typically lost to flaring until the required infrastructure is placed into service.

In mid-2024 about 95 percent of the state's natural gas production was captured, which exceeded the state's 91 percent target capture rate (EIA, 2024b) and is projected to increase (NDPA, 2024a). To continue to meet gas capture goals, infrastructure needs to be added to accommodate active drilling activities in North Dakota. The requisite infrastructure includes gathering systems and gas processing to refine the raw feedstock into commercial products. The function of the gas processing plant is to separate commercial grade methane (i.e., natural gas) from NGLs such as butane, propane, and ethane, and in turn prepare these products for delivery.

A major constraint in transporting NGLs and other hydrocarbons from North Dakota to processing/distribution centers and eventual end users in the United States is the lack of pipeline capacity. To relieve the pipeline constraints, several projects have been planned to address the growing volumes of natural gas, NGLs, and other hydrocarbons. However, pipeline capacity is not expected to keep pace with production, leaving incremental volumes to find alternative transportation methods, primarily rail or other surface transportation alternatives.

2.3 GENERAL AREA TO BE SERVED

The Project will allow for the delivery of additional NGLs from the Bakken and Three Forks production areas to facilities in the in the Mid-Continent and Gulf Coast for additional processing of the raw feedstock into commercial products prior to distribution to various markets to meet the existing need for agriculture and the petrochemical and plastics industries, as well as for refining and home heating throughout the United States.

2.4 CAPACITY

The Project will have the capacity to transport up to 80,000 bpd.

2.5 TECHNOLOGY TO BE DEPLOYED/EMPLOYED

The Project will be designed, constructed, maintained, and inspected to the USDOT Pipeline and Hazardous Materials Safety Administration regulations using industry standards and company policies. The system will be monitored 24 hours a day, seven days a week, and 365 days a year by trained controls personnel. Additionally, the system is set up with a monitoring and alarm system that continuously monitors the flow and pressure of the system and readily signifies anything outside normal operating conditions.

2.6 TYPE OF PRODUCT TO BE TRANSMITTED

The Project will transport Y-grade NGLs, which are a mixture of ethane, propane, butanes, iso-butane mix, pentanes, and natural gasoline.

2.7 SOURCE OF PRODUCT TO BE TRANSMITTED

The anticipated sources of the NGLs are formations in the Williston Basin.

2.8 FINAL DESTINATION OF PRODUCT

NGLs will be shipped out of North Dakota via the Project and will connect with other NGL pipeline systems to transport the NGLs to facilities in the Mid-Continent and Gulf Coast for additional processing prior to distribution to various markets.

2.9 WIDTH OF RIGHT-OF-WAY

On private land, the temporary construction ROW would be 100 feet wide, of which 50 feet would remain as permanent ROW. Where collocated, the proposed pipeline would generally be installed 20 to 50 feet offset from existing pipelines, depending on conditions within the workspace located adjacent to the existing pipeline permanent easements (see Exhibit A).

In addition to the pipeline temporary construction ROW, extra temporary workspace (ETWS) will typically be required adjacent to: crossings of roadways, railroads, waterbodies, wetlands, or other utilities; horizontal directional drilling (HDD) pipe fabrication areas; areas requiring additional trench depth or spoil storage areas; certain pipe bend locations; locations with soil stability concerns or side slope construction, truck turnarounds or equipment passing lanes; and, hydrostatic test water withdrawal and discharge locations and water impoundment structures. Most ETWS for the Project would add 25 feet to the width of construction ROW.

Hiland will generally maintain its permanent easement along the entire length of the Project except as restricted by environmental conditions, foreign lines, and landowner agreements. This ROW will be reclaimed to near its pre-existing use once construction is complete.

2.10 REQUIREMENT FOR AND GENERAL LOCATION OF ANY NEW ASSOCIATED FACILITIES

The Project will include two mainline block valves, one pig launcher facility, and one pig receiver facility. However, the number of valves may change as the engineering design develops. The block valves would be installed in accordance with applicable USDOT regulations. Block valves allow for the isolation of select pipeline segments for inspection and maintenance purposes, or in the event of a system failure. The pig launcher and receiver facilities would facilitate the

introduction of in-line tools for the performance of functions varying from cleaning to integrity monitoring. Please see Exhibit A for engineering plans.

2.11 ESTIMATED DISTANCE BETWEEN SURFACE STRUCTURES FOR PIPELINE FACILITIES

A description of surface structures to be developed for the Project is provided in Sections 1.4 and 2.10 of this application. The location of the mainline block valves will be finalized upon evaluation of maintenance and safety requirements but are currently planned at the locations listed in Table 2.11-1 below. Approximate locations of the block valves and launcher/receivers are displayed on the figures in Exhibit A.

TABLE 2.11-1

Location and Description of Aboveground Facilities

Type	Description	Section	Township	Range
Trap[a]	Launcher	30	149N	98W
Trap[a]	Receiver	2	151N	101W
Mainline valve	10-inch valve	1	150N	99W
Mainline valve	10-inch valve	1	149N	100W

[a] Located within existing Plant Facilities

2.12 MAXIMUM DESIGN OPERATING PRESSURE AND TEMPERATURE FOR PIPELINE FACILITIES

The maximum operating pressure for the pipeline is 1,440 psig and the maximum operating temperature is 100 °F. Under normal operating conditions, the pipeline will operate at a summertime temperature of 60°F and 500 psig.

2.13 MAXIMUM DESIGN FLOW RATE FOR PIPELINE FACILITIES

The Project could transport up to 80,000 bpd. See Sections 1.2 and 2.4 above.

2.14 NUMBER AND GENERAL LOCATION FOR COMPRESSOR OR PUMPING STATIONS

No new compression or pumping stations will be required for this Project.

2.15 ESTIMATED TOTAL COST OF CONSTRUCTION

Hiland will invest approximately $37.2 million to develop this Project. Once constructed and in service, the continued costs of maintenance and operation of the proposed pipeline are relatively minimal.

2.16 PREFERRED LOCATION OF FACILITY

The Project will be located entirely in McKenzie County, North Dakota, originating at the Hiland Roosevelt Gas Processing Plant in Township 149N, Range 98W, Section 30 (McKenzie County) moving generally north to northwest, and terminating in at the Camp Creek Injection Station in Township 151N, Range 101W, Section 2, where the NGLs will be fed into the existing NGL transportation system. Project location maps that depict the pipeline route are provided in Exhibit

B. The Townships, Ranges, and Sections crossed by the Project Route in North Dakota are presented in Table 2.16-1 below.

TABLE 2.16-1

Location Summary (North Dakota)

Township	Range	Section(s) Crossed by Route
146 North	104 West	2, 3, 7-11
146 North	105 West	12-15, 22
147 North	103 West	5-7, 18
147 North	104 West	12, 13, 24-26, 35
148 North	102 West	2-6, 9
148 North	103 West	1, 12-14, 23, 26, 27, 32-34
149 North	99 West	4-6
149 North	100 West	1, 2, 8-11, 17-19
149 North	101 West	23, 24, 26-28, 32, 33
150 North	98 West	6
150 North	99 West	1, 11, 12, 14, 22, 23, 27, 28, 33
151 North	96 West	7, 17, 18, 20
151 North	97 West	12-14, 20, 21, 23, 26-30
151 North	98 West	25, 31-36336

Hiland is requesting a route construction buffer of 20 feet on each side of the designated Project Route, contingent upon not impacting an Avoidance Area without the prior approval of the NDPSC, to account for minor deviations to the designated route due to landowner concerns or constructability issues.

2.17 PREFERRED LOCATION OF CORRIDOR

Hiland and its affiliates own and operate several assets throughout the region. The operation of these assets is conducted in a manner to maximize the overall value of the NGLs, which benefits regional stakeholders (i.e., producers, royalty owners, and the State) through direct payments and tax revenues. The Project Corridor described in this application provides Hiland with the opportunity to use existing pipeline corridors and minimize landowner and environmental impacts. Hiland requests that the NDPSC issue a certificate for the Corridor described in this application.

Selection of the proposed Corridor and Route entailed a program which evaluated several geographic information system (GIS) data layers for the Project area. Information relative to high consequence areas (e.g., populated areas, wetlands, waterbodies, areas of cultural significance or high probability, public lands) and other unfavorable constructability or operational features were evaluated to avoid and minimize proximity and potential impacts to these features. Features for favorable constructability or operations, such as existing ROWs (e.g., pipelines, roads, railways, power lines), were also evaluated to maximize co-location.

After selection of a preliminary location for routing the pipeline, Hiland also developed a one-mile-wide study area for analysis and agency consultation (see Section 6.0 for more detail). The shortest route that accomplished the desired impact avoidance and minimization, while maximizing collocation efforts, served as the baseline for developing the proposed study area, corridor, and route. This baseline was then evaluated for environmental, engineering, construction, and ROW considerations for further optimization.

Hiland worked with engineering and environmental firms to develop and refine the Route and Corridor within the study area. Environmental field surveys were conducted within an approximately 300-foot-wide survey corridor, generally centered on the pipeline route, to identify sensitive resources and to further refine the route. The Corridor described in this application follows the proposed Route along a 300-foot-wide corridor where environmental surveys were conducted. Several factors went into consideration in selecting the pipeline route, including:

- Human – choosing a route that minimizes residential, commercial, and institutional impacts, and ensures public safety;
- Environmental – choosing a route that minimizes disturbances to biological and cultural resources; and
- Constructability – considering terrain and obstacles such as roads, waterbodies, and other utilities to achieve safe and efficient construction.

The location of the Project Corridor and Route is depicted on the aerial maps in Exhibits B.2 through B.4.

2.18 DESCRIPTION OF ROW PREPARATION AND CONSTRUCTION AND RECLAMATION PROCEDURES

Pipeline construction occurs in a linear fashion and, at any one time during the Project, any of the following activities may occur. The typical sequence of construction activities for the Project is as follows:

- Staking the workspace boundaries and utilities;
- Clearing of construction area;
- Installing temporary erosion and sediment controls;
- Grading and stump removal, if necessary;
- Segregation of topsoil, where necessary;
- Pipe delivery, bending, and welding;
- Trenching;
- Pipe installation;
- Backfilling excavations;
- Cleanup and final grading;
- Soil compaction treatment, where necessary;
- Stone removal, where necessary;
- Final restoration; and
- Upon final stabilization, removal of temporary erosion and sediment controls.

Rough and final grading includes restoring disturbed areas as near as practicable to pre-construction conditions, returning the topsoil where topsoil has been stripped, preparing a seedbed (where applicable) for permanent seeding, installing or repairing temporary erosion and sediment control measures, repairing/replacing fences, and installing permanent erosion and sediment controls. Pre-existing landowner soil conservation improvements and structures disturbed by pipeline construction will be restored to the approximate pre-construction line and grade.

Hiland will develop a Revegetation Plan for the Project to provide procedures to be followed during the revegetation of areas disturbed as a result of construction. In areas of cultivated cropland, the land will be returned to its original land use as soon as practical following construction. Additionally, Hiland will comply with applicable permit conditions and landowner agreements.

2.19 LANDOWNER NOTIFICATION, EASEMENT ACQUISITION, AND COMPENSATION

Prior to conducting field surveys, Hiland reviewed courthouse records for the purpose of identifying current landowners along the route. Hiland contacted landowners to introduce the Project and to obtain permission to conduct surveys. Hiland has obtained voluntary easement agreements from all landowners along the Project Route which give the company the right to construct, operate, and maintain the pipeline along a specified portion or corridor of each landowner's property in return for monetary compensation. The easements contain provisions for a permanent pipeline easement with an additional temporary easement during construction. When applicable, Hiland offered additional compensation for damages resulting from pipeline construction, such as the loss of crops.

The refinement of the route includes adjustments made per landowner request. Hiland, at all times, negotiates in good faith, and necessary easement conditions and restrictions are presented and discussed.

2.20 USE OF EMINENT DOMAIN

As set forth above, Hiland has negotiated voluntary easement agreements with every landowner along the Project Route. The intention of the routing effort is to avoid landowners who choose not to have a pipeline on their property and thereby, easement agreements have been acquired. Hiland does not anticipate the need to exercise eminent domain authority for this Project.

2.21 LANDOWNER INDEMNITY PROVISIONS

Hiland's easement agreements include indemnification clauses that protect the landowner from damage caused by Hiland and its agents during construction and operation of the pipeline. The indemnity protection includes any damages caused as a result of pipeline failures or spills and includes all reasonable expenses accrued as a result of damage.

2.22 PIPELINE INSURANCE COVERAGE

For all of the facilities across the Hiland's pipeline systems (Hiland Partners Holdings, LLC and Hiland Crude, LLC), Hiland holds umbrella liability insurance as well as other insurance coverage for Hiland staff. Hiland's insurance also provides insured status to the State of North Dakota where contracted.

3.0 SCHEDULE

3.1 OBTAINING CERTIFICATE OF CORRIDOR COMPATIBILITY

Hiland seeks a Certificate of Corridor Compatibility by or before May 2025.

3.2 OBTAINING ROUTE PERMIT

Hiland seeks a Route Permit by or before May 2025.

3.3 COMPLETING ROW ACQUISITION

Hiland completed ROW acquisition in February 2025.

3.4 STARTING CONSTRUCTION

Hiland plans to begin construction on the Project in May of 2025, subject to receipt of all regulatory approvals and applicable permits.

3.5 COMPLETING CONSTRUCTION

Completion of construction is anticipated to occur on October 2025.

3.6 TESTING OPERATIONS

Testing of the pipeline and facilities is expected to be conducted in October of 2025.

3.7 COMMENCING OPERATIONS

The in-service date for the Project is anticipated to be in October of 2025.

4.0 ALTERNATIVES

4.1 ALTERNATIVES TO THE PROPOSED FACILITY

Construction of the proposed Project will provide firm, reliable service for 80,000 bpd of NGL take-away capacity from the Hiland Roosevelt Plant. The products will be delivered to the Mid-Continent and Gulf Coast for additional processing. Hiland identified and evaluated several Project alternatives; however, none of these alternatives effectively satisfied the Project objective. These alternatives included:

- No Action Alternative;
- Trucking Transportation Alternative; and
- Rail Transportation Alternative.

4.1.1 No Action Alternative

The primary objective of the Project is to provide take-away capacity for the NGLs produced at the Hiland Roosevelt Plant. Under the No Action alternative, the Project would not be constructed, and the plant could not effectively process gas produced in the region.

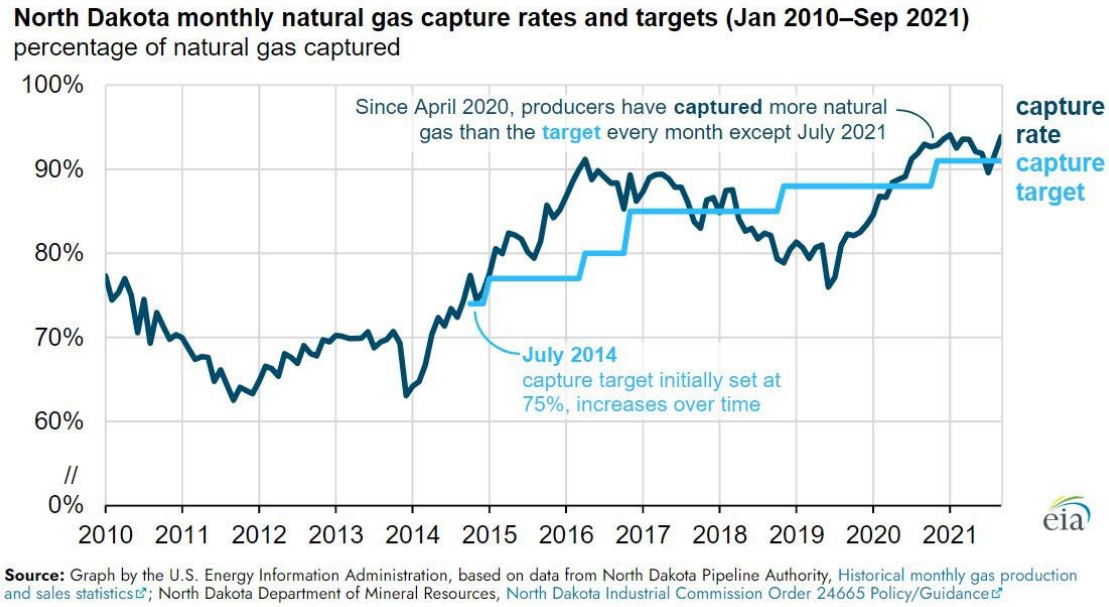
Within the region, NGL production from the Williston Basin has increased from 14,182 MMCF in 2011 to almost 229,353 MMCF in 2023 (U.S. Energy Information Administration [EIA], 2024b) and is projected by the North Dakota Industrial Commission (NDIC) to continue to increase through 2035 (see Figure 4.1.1-1). Thus, development of solutions for gas gathering, processing, and take-away infrastructure are needed. Historically, gathering, processing, and pipeline constraints have held back production growth in the Williston Basin region.

A No Action Alternative will leave the region constrained by limited transport capacity for safe and reliable transmission of NGL products to markets. The No Action Alternative does not meet the

commercial needs of Hiland and does not serve the industry and public at-large. For these reasons, Hiland rejected the No Action Alternative.

The following is an Energy Information Administration (EIA) graphic of the natural gas capture rate for North Dakota. While exceeding the target capture rate, the demand for processing and transporting of the captured natural gas and liquids is increasing.

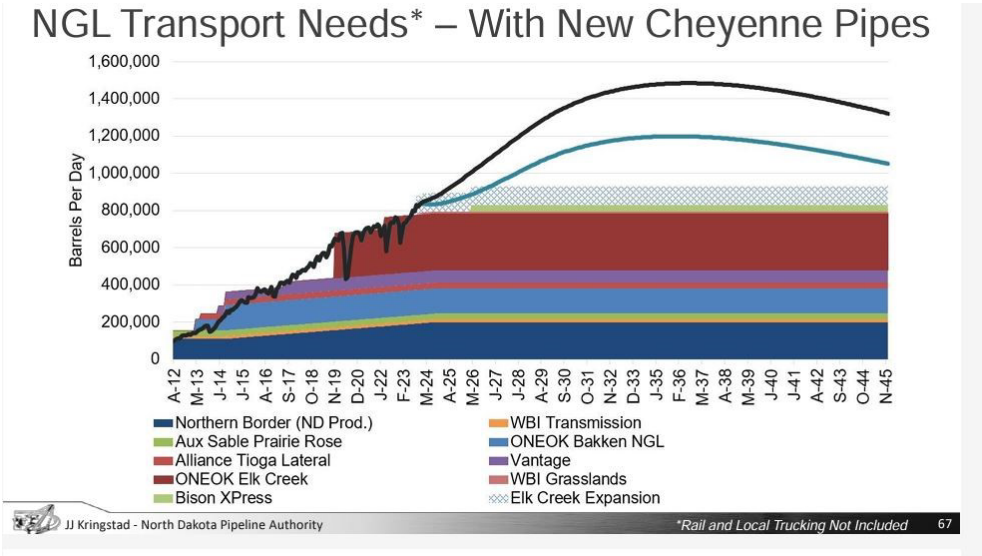
Figure 4.1.1-1: North Dakota Natural Gas Capture Rate



Source: EIA 2024c

Figure 4.1.1-2: North Dakota NGL Transportation Needs

The following is a graphic of the NGL transportation needs developed by the North Dakota Pipeline Authority.



Source: NDPA 2024b

4.1.2 Trucking Transportation Alternative

A Trucking Transportation Alternative was reviewed and rejected due to the volumes of NGLs that will be produced from the Hiland Roosevelt Gas Plant. The maximum daily capacity provided by the proposed Project will be equal to an estimated 80,000 barrels, or 3,360,000 gallons, of NGLs. The average load for an NGL truck is approximately 10,000 gallons per truck. Thus, it would require 336 trucks per day to be loaded at the Hiland Roosevelt Gas Plant, an average of 14 trucks every hour for 24 hours a day. Similarly, it would require these 336 trucks per day to be unloaded (i.e., transloaded) at a railcar facility terminal. This level of truck activity is not logistically feasible, as it will cause significant amounts of heavy vehicle traffic for the area residents, as well additional wear and tear on the infrastructure. Further, any disruption in the trucking capacity due to seasonal load restrictions on roads, inclement weather, or road repairs would result in a plant shutdown and flaring of gas production. The Trucking Transportation Alternative is additionally constrained by the road network in the rural area of the Project. For these reasons, Hiland rejected the Trucking Transportation Alternative.

4.1.3 Rail Transportation Alternative

A Rail Transportation Alternative was also evaluated as a surface transportation alternative. However, the lack of active railroad service within reasonable proximity to the Hiland Roosevelt Gas Plant's location limited the viability of this alternative. Upon further analysis, this alternative was determined not feasible due to the associated environmental impacts and financial, logistic, and time constraints necessary to acquire land and construct the requisite rail infrastructure. This alternative would also require a third-party rail operator.

A Rail Transportation Alternative would require the design and construction of rail car loading and offloading facilities, lateral service lines, and ancillary facilities necessary to support the requisite volumes of NGLs, requiring land acquisition and permanent conversion of agricultural land to industrial. Use of rail would require a completely different Project design than that currently proposed for the Project.

While rail tanker cars are a vital part of the short-haul distribution network for NGLs, pipelines are a more reliable, safe, and economical alternative for the large volumes to be transported and long distances to be covered by the Project. As such, the Rail Transportation Alternative is not considered a viable alternative and was rejected.

4.2 ROUTE/SEGMENT ALTERNATIVES

Hiland has conducted a thorough analysis of the Project Corridor. The purpose of this analysis was to confirm that the proposed Project Corridor is suitable and would cause minimal environmental impacts, thus conforming to the NDPSC siting criteria.

In conjunction with these efforts, Hiland studied routing alternatives based upon criteria as discussed in Section 2.17 above. A variety of routes were explored but later rejected due to a host of feasibility constraints. In support of Hiland's route selection, the desktop studies of the Project Corridor were refined and augmented with field studies along the entire length of the Project Corridor where landowner permission for surveys was obtained by trained natural and cultural resource specialists. The environmental survey was conducted across a minimum 300-foot-wide area generally centered on the proposed Route. Field crews performed these

comprehensive natural and cultural resource surveys in summer and fall of 2024. The purpose of these field studies was two-fold:

1) to definitively identify any potential resource issues (e.g., wetlands, waterbodies, protected species, critical habitats, or cultural resources) within the Project Corridor; and

2) to provide the baseline field data necessary to prescribe alternative routing or mitigation as necessary to minimize environmental impacts.

Based upon desktop and field studies, as well as input from regulatory agencies, Hiland developed its preferred Route. The Route begins at the Hiland Roosevelt Gas Plant located in Section 30, Township 149N, Range 98W, McKenzie County, ND and continues in a northwest direction terminating at a location in the SE/4SE/4 of Section 2, Township 151N, Range 101W, McKenzie County, ND. Hiland has chosen this Project alignment to meet landowner requests and to minimize impacts to environmental and cultural features. The Route meets the Project's objectives while conforming to the transmission route siting requirements of the NDPSC.

The results of these field surveys are discussed in the following sections, and the full Natural Resources Survey Report is contained in Exhibit C. The Cultural Resources Survey Report is privileged and not included in this application. Please see Sections 5.1 and 6.14 below for a summary of the cultural resource work, results, and consultation with the North Dakota State Historic Preservation Office (SHPO).

5.0 ENVIRONMENTAL STUDIES

Hiland defined its study area as a one-mile-wide corridor generally centered on the pipeline route and conducted an initial desktop analysis for cultural resources, wetlands and waterbodies, and other sensitive environmental resources. The assessment was conducted using GIS mapping, agency database review, peer-reviewed articles, and internet research. Following the desktop analysis, the appropriate agencies were consulted for cultural and biological resources (see Section 6.0 below).

Field studies for the Project focused on a generally 300-foot-wide environmental survey corridor, generally centered on the pipeline route. The survey corridor was widened in select locations to allow for flexibility in pipeline routing or in areas where extra workspace is anticipated to be required. As of November 2024, 100 percent of the Project Corridor (as shown on the maps in Exhibits B.2 through B.4) has been surveyed for natural resources and cultural resources, respectively with the exception of a minor reroute on the Johnson property, which was requested by the landowner in January. The on-ground surveys of the reroute will be conducted when the ground thaws.

Hiland contracted specialized consultants to perform cultural, wetland and waterbody, habitat, noxious weeds, and special species assessment surveys for the Project. Additional surveys, including a tree and shrub inventory, and eagle and raptor nest surveys were also initiated and will be supplemented at the pre-construction phase as needed.

5.1 CULTURAL RESOURCE INVENTORY

According to the North Dakota Energy Conversion and Transmission Facility Siting Act, among the "*factors to be considered [by the Commission] in evaluating applications and designation of*

sites, corridors, and routes," is the effect of the proposed site or route on existing scenic areas, historic sites and structures, and paleontological or archaeological sites. The repository in North Dakota for this information is the North Dakota SHPO, which acts as a technical resource during identification and evaluation of areas, sites, and structures, and during reviews of Project effects. The NDPSC tasks the Applicant to coordinate identification and effects discussions with the SHPO.

In September 2024, Hiland sponsored desktop and field reviews of a study area that encompasses the Project Corridor and Route. The review tasks included: canvassing the SHPO previous survey and archaeological and historic structure files and characterizing them in a Class I cultural resource report; documenting archaeological sites and historic structure field inventory of an area that includes the Project Corridor and Route in a Class III cultural resource report; and corresponding with SHPO and other federal agencies about the resources identified and projected avoidance measures, where applicable. The standards of the National Register of Historic Places (NRHP) are used in North Dakota to differentiate those sites for which impacts are considered during Project reviews (i.e., eligible, not evaluated for inclusion on the NRHP) from those for which impacts are not considered.

As mentioned above, a minor reroute was requested on the Johnson property. While the area was included in the Corridor review, field work will be conducted for the reroute in the spring.

Hiland understands that details and locations of cultural resources are considered as privileged; as such, these features are not displayed on the enclosed maps with this application, and the Class III survey report is not included with this filing. Hiland is in active consultation with the SHPO regarding the Project and is working to finalize avoidance measures. Hiland will file copies of future correspondence with the SHPO to the NDPSC to document that the Project will not adversely affect cultural resources.

5.2 WETLAND AND WATERBODY INVENTORY

Wetland and waterbody surveys were conducted within the Project Corridor in September-November 2024. Wetland delineations were conducted pursuant to the *1987 U.S. Army Corps of Engineers* (USACE) *Wetlands Delineation Manual* (USACE, 1987), the *2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0)* (USACE, 2010), the *Classification of Wetland and Deepwater Habitats of the United States* (Cowardin et al., 1979), and the *National Wetland Plant List* (USACE, 2022). Waterbody survey methods followed the protocols set forth in the *USACE National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams* (David, et. al., 2022) and The Classification of Wetland and Deepwater Habitats of the United States (Cowardin et al., 1979).

The results of this survey can be found in the Natural Resource Survey Report provided in Exhibit C. Mapping of wetlands and waterbodies within the surveyed corridor are included in the Selection Criteria maps in Exhibit B.2. A summary of delineated features for the Route is provided in Table 5.2-1 below.

TABLE 5.2-1

Summary of Delineated Wetlands and Waterbodies

Component	Palustrine Emergent Wetland	Palustrine Open Water	Waterbody
Number of Delineated Features	14	0	2
Number of features crossed by Route Centerline	8	0	1

TABLE 5.2-1

Summary of Delineated Wetlands and Waterbodies

Component	Palustrine Emergent Wetland	Palustrine Open Water	Waterbody
Temporary Impacts (acres):	0.0	0.0	0.0
Permanent Impacts (acres):	0.0	0.0	0.0

Hiland will HDD under all of the wetland resources and anticipates no wetland impact for the Project.

5.3 WILDLIFE INVENTORY

Wildlife surveys were conducted within the Project Corridor in conjunction with the wetland and waterbody delineations during September through November 2024. Details regarding the results of field surveys are included in the Natural Resources Survey Report included in Exhibit C. Suitable habitat for two federally-listed species (Dakota skipper and northern long-eared bat) and one proposed species (western regal fritillary) was found within the Project Corridor (see Section 5.3.1 below).

5.3.1 Federally Protected Species Review

A review of the U.S. Fish and Wildlife Service (USFWS) Endangered Species Information, Planning, and Conservation System (IPaC) website (USFWS, 2018a) was conducted to determine the potential for listed species and critical habitat that may be present in McKenzie County, North Dakota. Field surveys for listed species and a general habitat assessment of the Project Corridor were conducted during September through November 2024. Details regarding the wildlife observed during field surveys are provided in the Natural Resources Survey Report included in Exhibit C.

Suitable habitat for the Dakota skipper was found within the Project Corridor. Due to concerns with releasing Dakota skipper information to the public, the USFWS has requested that this information not be included with the NDPSC application and that locations of suitable habitat not be displayed on maps submitted to NDPSC. This report and/or maps can be submitted to NDPSC as confidential/not for public review upon request. Hiland plans to avoid impacts to Dakota skipper habitat. See Section 9.4.6.

Table 5.3-1 below provides a summary of protected species in McKenzie County. A brief description of each species and their preferred habitat is also provided below. A summary of Hiland's consultation with USFWS with respect to federally-listed threatened and endangered species is included in Section 6.22 below and in Exhibit D.

TABLE 5.3-1

Federally Listed Species in McKenzie County, ND

Scientific Name	Common Name	Status	Critical Habitat Designated?
Myotis septentrionalis	Northern long-eared bat	Endangered	No
Charadrius melodus	Piping plover	Threatened	Yes
Calidris canutus rufa	Rufa red knot	Threatened	No
Grus americana	Whooping crane	Endangered	No
Hesperia dacotae	Dakota skipper	Threatened	Yes
Argynnis idalia occidentalis	Western regal fritillary	Proposed Threatened	No

TABLE 5.3-1

Federally Listed Species in McKenzie County, ND

Scientific Name	Common Name	Status	Critical Habitat Designated?
Danaus plexippus	Monarch butterfly	Candidate	No

5.3.1.1 Northern long-eared bat

The northern long-eared bat is a medium-sized bat of the *Vespertilionidae* family. The species overwinters in small crevices or cracks in hibernacula, such as caves and mines. In summer, the species roosts either singly or in colonies under loose bark or in crevices and hollows in both live trees and snags. A habitat generalist, roost tree selection appears also to be opportunistic, and the species will use a variety of tree sizes and species; however, they appear to prefer trees with a diameter at breast height of at least 3 inches. Less frequently, northern long-eared bats have been observed roosting in man-made structures such as sheds or barns. Although historically less common in the western portion of its range, northern long-eared bats occur throughout North Dakota (USFWS, 2015).

The primary threat to the northern long-eared bat is the spread of white nose syndrome (WNS); in the absence of this disease, it is unlikely the species would be suffering the dramatic population declines seen across its range (USFWS, 2015).

Northern long-eared bat was listed as endangered in 2023, and incidental take of the species is prohibited. Incidental take includes tree clearing, which will be necessary for this Project. -Twenty seven patches of potential summer roosting and foraging habitat, totaling 11.66 acres, were identified within the Project Corridor. No hibernacula for overwintering are present in the Project Corridor. Locations of these habitat areas are available for review in the natural resources report in Exhibit C.

Portions of the proposed project are located within northern long-eared bat habitat. However, Hiland intends to avoid impacts to the habitat. See Section 9.4.8. Upon finalization of the pipeline route and determination of construction methodologies and timing, Hiland will confirm with the USFWS that bat habitat impacts are avoided.

5.3.1.2 Piping plover

The piping plover is a small shore bird that nests on sandbars in rivers and sandy beaches bordering lakes and reservoirs. The Great Plains population of piping plover are annual migrants; the species overwinters on the Gulf Coast and migrates to summer nesting areas in the central U.S. and southern Canada. The species arrives in North Dakota in mid-April and remains until late August. Piping plovers use wide, sparsely vegetated beaches and barren river sandbars, as well as alkali wetlands in the Great Plains for nesting, foraging, sheltering, brood -rearing, and dispersal (USFWS, 2016c; 2018d).

Wetland and waterbody surveys conducted in 2024 did not identify the presence of potential suitable wetlands for piping plover within the proposed Project workspaces (see Exhibit C). As such, no impacts on suitable habitat are anticipated.

Critical habitat has been designated for the piping plover in McKenzie County; however, the Project Corridor does not intersect with designated critical habitat for the species. Consultations

with the USFWS are ongoing. Hiland will develop conservation measures, if necessary, to avoid and/or reduce impacts to the piping plover.

5.3.1.3 Rufa red knot

The rufa red knot is a large sandpiper noted for its long-distance migration between summer breeding grounds in the Arctic and wintering areas at high latitudes in the Southern Hemisphere. Some rufa red knots wintering in the northwestern Gulf of Mexico migrate through interior North America during both spring and fall and use stopover sites in the Northern Great Plains. The species relies heavily on exposed substrate at wetland edges for stopover habitat; the suitability of a wetland for rufa red knots depends on water levels and may vary annually (Skagen, 2006; USFWS, 2014a).

The rufa red knot is not a resident of North Dakota; the species is an infrequent migrant during bi-annual migrations (May 15 to June 15 and July 15 to September 15). The number of migrating shorebirds documented in the interior can vary dramatically due to high inter-annual availability in water levels and habitat quality at mid-continental wetlands. The shoreline of the Missouri River provides stopover habitat for rufa red knots during annual migration through North Dakota. The Project workspaces are, at the closest, 0.5 mile from the Missouri River, and the Project is not within line-of-sight of the Missouri River. As such, no impacts on suitable habitat or individuals are anticipated.

5.3.1.4 Whooping crane

Whooping cranes embark on a bi-annual migration from summer nesting and breeding grounds in Wood Buffalo National Park in northern Alberta to the barrier islands and coastal marshes of the Aransas National Wildlife Refuge (NWR) on the Gulf Coast of Texas (USFWS, 2014b). Twice yearly in the spring and fall, the cranes migrate along the Central Flyway, a migratory corridor approximately 220 miles wide and 2,400 miles in length which includes eastern Montana and portions of North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, and eastern Texas. During the migration, cranes make numerous stops, roosting in large shallow marshes, and feeding in harvested grain fields (USFWS, 2014b).

In North Dakota, the whooping crane is not present year-round; they are only present during the bi-annual migration between winter grounds and summer nesting sites (late April to June 15 and September 15 to November 15). The Project Corridor falls within the 50 to 75 percent migration corridor, and suitable stopover habitat (i.e., open landscape wetlands and croplands) is present in the vicinity of the Project.

Construction activities have the potential to impact individual whooping cranes. Specifically, if construction takes place during the species' migration period, human presence or noise from construction activities and equipment may cause migrating whooping cranes to startle and flush from wetlands or fields and/or to divert from the area. See Section 9.4 below for conservation measures which will be implemented to reduce impacts on the whooping crane.

5.3.1.5 Dakota skipper

The Dakota skipper is a small-to-medium sized butterfly characterized by a short, sturdy body and a quick, skipping flight. The species is an obligate of high-quality prairie habitat (i.e., grasslands or discrete patches of habitat within a grassland that are predominantly native and that have not been tilled). The species can be found in both wetlands and uplands, but do

not thrive in heavily grazed or cultivated areas. Adults emerge in mid-June, feeding on the nectar of flowering native forbs (harebell, wood lily, and purple coneflower are common components of their diet), and larvae of the Dakota skipper feed on grasses, favoring little bluestem. The species overwinters at the base of grasses in the soil of the site which they inhabit. In North Dakota, the skipper typically occupies both wet-mesic and dry-mesic prairie (USFWS, 2014d).

Preliminary desktop assessment of habitat within the Project area was conducted prior to field surveys and divided the habitat into two basic groups: grassland and unsuitable. The assessment identified 297.65 acres of grassland habitat within the Project area, and the field survey was conducted within these identified habitats to determine their potential suitability for Dakota skipper.

Surveys were conducted September to November 2024 by qualified surveyors within an environmental survey boundary. Potential suitable habitat was delineated in a number of areas within the Project Corridor. The field survey identified 11.53 acres of native prairie within the Project area, and nine patches within the native prairie, totaling 1.39 acres, qualifies as potential suitable habitat for Dakota skipper. These potential suitable habitat patches were dominated by native graminoids including little bluestem *(Schizachyrium scoparium)* and needle and thread grass *(Hesperostipa comata)* as well as native forbs including purple coneflower *(Echinacea angustifolia)* and fringed sagewort *(Artemisia frigida).* Locations of these habitat areas are available for review in the natural resources report in Exhibit C.

Critical habitat has been designated for the Dakota skipper in McKenzie County; however, the Project Corridor does not intersect with designated critical habitat for the species. See Section 6.22 below for a summary of consultations with USFWS and Section 9.4 below for conservation measures which will be implemented to reduce impacts on the Dakota skipper. Hiland plans to avoid impacts to potential Dakota skipper habitat.

5.3.1.6 Western regal fritillary

The western regal fritillary is a large, nonmigratory butterfly found in grassland habitats in 14 states. Adults have dorsal orange forewings and dark hindwings that feature black bars, fine white markings, and two rows of large spots at the base of the wings. The species are strong and rapid flyers capable of moving long distances in search of nectar; however, they are dependent on connectivity between large (more than 3.86 square miles), intact grasslands with diverse nectar sources maintained by periodic disturbances. Adults emerge in June and are nectar generalists, feeding on the nectar of many flowering plants. Eggs are laid only once a year and hatch within two to three weeks, and these larvae overwinter in nearby grassland vegetation before emerging in early spring. Larvae emerge in May and pupate in leaf litter of warm season grasses after feeding on their sole food source, violets (*Viola* spp.).

Surveys were conducted September to November 2024 by qualified surveyors within an environmental survey boundary. Potential suitable habitat was delineated in a number of areas within the Project Corridor. The field survey identified 11.53 acres of native prairie in 19 patches within the Project Corridor as potential suitable habitat for western regal fritillary. Locations of these habitat areas are available for review in the natural resources report in Exhibit C. See Section 6.22 below for a summary of consultations with USFWS and Section 9.4 below for conservation measures which will be implemented to reduce impacts on the Dakota skipper.

5.3.1.7 Monarch butterfly

The monarch butterfly (*Danaus plexippus*) is a migratory insect native to North America. There are two distinct populations of monarch butterflies. The eastern North American population overwinters primarily in oyamel firs (*Abies religiosa*) in mountainous regions of central Mexico. The population that lives west of the Rocky Mountains overwinters primarily in eucalyptus trees (*Eucalyptus* spp.), Monterey pines (*Pinus radiata*), and Monterey cypress (*Hesperocyparis macrocarpa*) in California along the Pacific Coast.

Suitable summer foraging habitat includes roadsides, prairies, meadows, old fields, and urban areas. Monarch butterflies feed on the nectar of many flowering plants during breeding and migration. Monarch butterfly caterpillars can only eat milkweed (*Asclepias* spp.), which limits where the adults can lay eggs. Because common milkweed (*Asclepias syriaca*) grows in a variety of habitats and disperses easily across the landscape, there are many habitats that have the potential to support the monarch butterfly within the Project Corridor.

5.3.2 Migratory Bird Treaty Act

Migratory birds are protected under the Migratory Bird Treaty Act (MBTA), which prohibits the taking of any migratory bird, or a part, nest, or eggs of any such bird, except under the terms of a valid permit issued pursuant to federal regulations. Executive Order (EO) 13186 (66 Federal Register 3853) directs federal agencies to identify where unintentional take is likely to have a measurable negative effect on migratory bird populations and to avoid or minimize adverse effects on migratory birds through enhanced collaboration with the USFWS. EO 13186 states that emphasis should be placed on species of concern, priority habitats, and key risk factors, and that particular focus should be given to addressing population-level impacts.

Surveys of the Project Corridor were conducted in 2024, which confirmed that suitable nesting habitat for migratory birds is present within the Project Corridor or within line-of-site of the Project Corridor. Hiland will develop a plan to avoid, minimize, and reduce possible impacts on migratory birds. Conservation measures will be developed in consideration of statutory authority, regulatory guidance, and through experience with state and federal agencies on past projects in the region.

Prior to initiating pre-clearing activities and construction, Hiland will also conduct environmental training for company and contractor supervisory personnel. Where constructing the Project outside of the peak nesting season for migratory birds is not feasible, Hiland will conduct ground surveys to identify migratory bird nests that could be impacted by construction activities. Varying activity restriction buffers around active nests will be used as conservation measures for the plan.

A summary of Hiland's consultation with USFWS with respect to MBTA is included in Exhibit D.

5.3.3 Bald and Golden Eagle Protection Act

Bald and golden eagles are protected by both the MBTA and the Bald and Golden Eagle Protection Act (BGEPA). The BGEPA prohibits the take of a bald or golden eagle adults, juveniles, or chicks including their parts, nests, or eggs without a permit. Take is defined by the BGEPA as to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb. The BGEPA also addresses impacts resulting from human-induced alterations occurring around previously used nesting sites.

Surveys of the Project Corridor were conducted September to November 2024, which confirmed no suitable eagle nesting habitat is present within the Project Corridor or within line-of-site of the Project Corridor. No bald or golden eagle nests are recorded in the North Dakota Game and Fish Department (NDGFD) database within 0.5 miles of the Project area. A summary of Hiland's consultation with USFWS with respect to BGEPA is included in Section 6.22 and in Exhibit D.

5.4 TREE/SAPLING/SHRUB INVENTORY

During the natural resource surveys described above, crews performed a tree and shrub inventory, documenting 1,235 trees and 2,120 shrubs in total. Non-native Siberian elm (*Ulmus pumila*) was the most common tree species with 818 stems. Non-native Russian olive (*Elaeagnus angustifolia*) was the next most common species with 260 stems. Other tree species observed included peach leaf willow *(Salix amygdaloides),* green ash *(Fraxinus pennsylvanica),* ponderosa pine *(Pinus ponderosa),* and crab apple *(Malus* spp.*).*

Silver buffaloberry (*Shepherdia argentea*) was the most common shrub species with 1,218 stems. Non-native Siberian peashrub (*Caragana arborescens)* was the next most common shrub species with 540 stems. Other shrub species observed included chokecherry (*Prunus virginiana*), Tatarian honeysuckle (*Lonicera tatarica*), silverberry (*Elaeagnus commutata*), Wood's wild rose (*Rosa woodsii*), and fragrant sumac (*Rhus aromatica*).

The tree and shrub inventory establishes a pre-construction status of these resources to help form the baseline for restoration and mitigation reconciliation. Hiland anticipates authorization of the Project will require all trees and shrubs that are removed to be replaced at a 2:1 ratio. Hiland will submit its tree and shrub inventory and proposed mitigation plan upon completion. See Section 9.4 for conservation measures which will be implemented to reduce impacts on trees and shrubs in the Project Corridor.

5.5 NOXIOUS WEEDS INVENTORY

The Federal Noxious Weed Act of 1974 established a federal program to control the spread of noxious weeds. The U.S. Secretary of Agriculture was given the authority to declare plants "Noxious Weeds" and limit the interstate spread of such plants without a permit. North Dakota law (NDCC § 4.1-47-02) requires every person to do all things necessary and proper to control the spread of noxious weeds and makes it illegal for any person to distribute, sell, or offer for sale within this state a noxious weed.

The North Dakota Department of Agriculture (NDDA) lists 13 species of noxious weeds and invasive species. In addition to the NDDA noxious weed and invasive species list, localized weed boards within each county manage noxious weeds and invasive species and may develop a list of additional weeds for enforcement within their jurisdiction. McKenzie County has designated four additional species as noxious weeds (see Table 5.5-1 below and Exhibit C).

TABLE 5.5-1

State and County Listed Noxious Weeds

Common and Scientific Name	State of North Dakota	McKenzie County
Absinth wormwood (*Artemisia absinthium*)	x	
Baby's breath (*Gypsophila*)		x
Black henbane (*Hyoscyamus niger*)		x
Canada thistle (*Cirsium arvense*)	x	
Common burdock (*Arctium minus*)		x

TABLE 5.5-1

State and County Listed Noxious Weeds

Common and Scientific Name	State of North Dakota	McKenzie County
Dalmatian toadflax (*Linaria dalmatica*)	x	
Diffuse knapweed (*Centaurea diffusa*)	x	
Halogeton (*Halogeton glomeratus*)		x
Houndstongue (*Cynoglossum officinale*)	x	
Leafy spurge (*Euphorbia esula*)	x	
Musk thistle (*Carduus nutans*)	x	
Palmer amaranth (*Amaranthus palmeri*)	x	
Purple loosestrife (*Lythrum salicaria*)	x	
Russian knapweed (*Acroptilon repens*)	x	
Saltcedar (*Tamarix chinensis*)	x	
Spotted knapweed (*Centaurea maculosa*)	x	
Yellow toadflax (*Linaria vulgaris*)	x	

Field surveys conducted during September through November 2024 documented 19 areas of noxious weeds within the planned Project Corridor, all consisting of Canada thistle (*Cirsium arvense*). A detailed description of these areas and maps displaying their locations are included in the Natural Resources Survey Report in Exhibit C.

It is Hiland's intent to minimize the potential introduction and/or spread of invasive species and noxious weeds along its construction ROW during pipeline construction activities and the revegetation timeframe. However, it is not practicable for Hiland to eradicate undesirable species that are adjacent to its ROW. Hiland will minimize the potential for the establishment of undesirable species by minimizing the time duration between final grading and permanent seeding. Hiland will also require that construction equipment be cleaned before arriving on the construction spread to prevent the introduction of undesirable species to the Project area. The McKenzie County Weed Board requires a Weed Management Plan be prepared and submitted for approval. Hiland has received approval of the Weed Management Plan from the Board (Exhibit F). A summary of Hiland's consultation with McKenzie County with respect to the Weed Management Plan is included in Section 6.25 below.

6.0 AGENCY NOTIFICATIONS AND PERMITTING

In early fall of 2024, Hiland initiated consultation and coordination with federal, state, and local agencies requesting input on the proposed Project Route. Letters and/or emails were submitted with accompanying maps of the Project. A summary of these consultations is provided in Table 6.0-1 below and further details on each consultation are included in the following sections.

TABLE 6.0-1

Summary of Agency Notifications[a]

Agency	Agency Mission/Regulatory Jurisdiction	Date Submitted	Response Received
North Dakota Aeronautics Commission	Provides representation of the state in aviation matters and provides responsibility for the state's aviation programs and regulatory framework.	9/12/2024	No response at this time
North Dakota Attorney General	Represents and defends the legal interests of the public.	9/12/2024	No response at this time

TABLE 6.0-1

Summary of Agency Notifications[a]

Agency	Agency Mission/Regulatory Jurisdiction	Date Submitted	Response Received
North Dakota Department of Agriculture	Fosters a healthy economic, environmental, and social climate for agriculture and the rural community through leadership, advocacy, education, regulation and other services.	9/12/2024	No response at this time
North Dakota Department of Health	Aims to improve the length and quality of life for the public.	9/12/2024	No response at this time
North Dakota Department of Human Services	Fosters positive, comprehensive outcomes by promoting economic, behavioral, and physical health, ensuring a holistic approach to individual and community well-being.	9/12/2024	No response at this time
North Dakota Department of Labor and Human Rights	Responsible for enforcing North Dakota labor and human rights laws and for educating the public about these laws. In addition, the department licenses employment agencies operating in the state and can verify the status of independent contractor relationships.	9/12/2024	No response at this time
North Dakota Department of Career and Technical Education	Works with private and public entities to provide all North Dakota citizens with the technical skills, knowledge, and attitudes necessary for successful performance in a globally competitive workplace.	9/12/2024	No response at this time
North Dakota Department of Commerce	Leads the efforts to attract, retain, and expand wealth and talent in North Dakota.	9/12/2024	No response at this time
North Dakota Energy Infrastructure & Impact Office	A Division within the Department of Trust Lands, with the goal of providing financial assistance to local units of government that are impacted by oil and gas activity.	9/12/2024	No response at this time
North Dakota Game and Fish Department	Implements stewardship of the state's fish, game, and wildlife resources. The department sets fish and game regulations, including issuance of hunting and fishing licenses and enforcement of state regulations throughout the state.	10/14/2024	11/5/2024
North Dakota Industrial Commission	Oversees the management of several separate programs and resources, including, the Bank of North Dakota, North Dakota Mill and Elevator, the Department of Mineral Resources, Housing Finance Agency, Building Authority, Pipeline Authority, Transmission Authority, Public Finance Authority, and Student Loan Trust.	9/12/2024	No response at this time
North Dakota Office of the Governor	Represents the current North Dakota governor, as well as the 150+ Boards and Commissions that the governor appoints.	9/12/2024	No response at this time
North Dakota Department of Transportation	Safely moves people and goods, acts as North Dakota’s transportation leader, promoting safe ways, superior service, and economic growth. NDOT builds and maintains over 8,500 miles of roadway and nearly 4,900 bridges.	9/12/2024	No response at this time
North Dakota State Historic Preservation Office	The State Historic Preservation Office is implemented within the State Historical Society of North Dakota, which is under the direction of the Director who is appointed by a 12-member State Historical Board. The agency includes four departments: administration, archaeology and historic preservation, audience engagement and museum, and the state archives department. The agency oversees the cultural resources’ consultation for proposed projects.	9/12/2024	9/17/2024
North Dakota Indian Affairs Commission	Acts as a liaison between the Executive Branch and the Tribes in North Dakota. Works with the Tribes and various State agencies regarding proper protocol in working with Indian people and Tribal governments.	9/12/2024	No response at this time
Job Service of North Dakota	Provides workforce and unemployment services across the state in nine Workforce Centers and at a Central location in Bismarck.	9/12/2024	No response at this time
North Dakota Department of Trust Lands, School/Surface Trust	Manage assets of the permanent trusts to preserve the purchasing power of the funds, maintain stable distributions to fund beneficiaries, and manage all other assets and programs entrusted in accordance with the North Dakota Constitution and applicable state law.	9/12/2024	No response at this time

TABLE 6.0-1

Summary of Agency Notifications[a]

Agency	Agency Mission/Regulatory Jurisdiction	Date Submitted	Response Received
North Dakota Parks and Recreation Department	Administers selected state parks and recreation areas for the state. Manages off-highway vehicle planning and safety, snowmobile safety programs and trails, Nature Preserves Act, and outdoor recreation grants and statewide recreation planning. Scope of authority and expertise covers properties protected under Section 6(f) of the Land and Water Conservation Fund, rare plants, and ecological communities established through the Natural Heritage Program.	9/12/2024	10/11/2024
Natural Resources Conservation Service	The primary private lands conservation agency within the United States Department of Agriculture. Deliver conservation solutions to assist agricultural producers with protecting natural resources.	9/12/2024	No response at this time
North Dakota Department of Water Resources	Previously the State Water Commission. Contains the authority to investigate, plan, construct, and develop water-related projects, and serves as a mechanism to financially support those efforts throughout North Dakota.	9/12/2024	No response at this time
United States Department of Defense	An executive branch department of the federal government of the United States charged with coordinating and supervising all agencies and functions of the U.S. government directly related to national security and the United States Armed Forces.	9/12/2024	No response at this time
U.S. Fish and Wildlife Service North Dakota Ecological Services Field Office	Administers several programs designed to identify and protect special status plant and animal species, critical habitats, and lands managed by the agency. Additionally, the USFWS administers National Wildlife Refuge and Waterfowl Production Areas, as well as wetland and grassland easements throughout North Dakota.	10/14/2024	10/24/2024
U.S. Army Corps of Engineers North Dakota Regulatory Office	The USACE regulates impacts to Waters of the U.S. under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act, as well as bridges, dams, dikes, or causeways over Waters of the U.S. under Section 9 of the Rivers and Harbors Act. The USACE also manages Section 408 program, reviewing projects that may alter a USACE Civil Works Project.	9/12/2024	9/27/2024
Federal Aviation Administration	Agency within the U.S. Department of Transportation which regulates civil aviation in the United States and surrounding international waters.	9/12/2024	No response at this time
McKenzie County	Contains several Departments with authority that may apply to the Project, including: - Floodplain, stormwater and erosion, or other local ordinances that may require reviews or permits issued through the Board of Commissioners. - Regulation of noxious weeds and noxious weed management plans. - Regulation of county-regulated drains, ditches, and/or other drainage features. - Other potential applicable ordinances or regulations.	9/12/2024	Plan approval received February 11, 2025
North Dakota Transmission Authority c/o North Dakota Industrial Commission	The North Dakota Transmission Authority was created at the request of the North Dakota Industrial Commission, with the mission to facilitate the development of transmission infrastructure in North Dakota.	9/12/2024	9/25/2024
North Dakota Pipeline Authority c/o North Dakota Industrial Commission	The North Dakota Pipeline Authority was created at the request of the North Dakota Industrial Commission, with the mission to diversify and expand the North Dakota economy by facilitating the development of pipeline facilities to support production, transportation, and utilization of North Dakota energy- related commodities.	9/12/2024	No response at this time
North Dakota Department of Environmental Quality	Conserve and protect the quality of North Dakota's air, land, and water resources following science and law. In cooperation with the general public, industry and government at all levels, the department implements protective programs and standards to help maintain and improve environmental quality.	9/12/2024	10/8/2024

TABLE 6.0-1

Summary of Agency Notifications[a]

Agency	Agency Mission/Regulatory Jurisdiction	Date Submitted	Response Received
North Dakota Geological Survey	Investigates the geology of North Dakota, administers regulatory programs and acts as an advisor to other state agencies, and provides public service to the public.	9/12/2024	9/24/2024
North Dakota Forest Service	Manage, protect, and improve forest and natural resources to enhance the quality of life for present and future generations.	9/12/2024	No response at this time
Bureau of Land Management, North Dakota Field Office	Sustain the health, diversity, and productivity of public lands for the use and enjoyment of present and future generations. The North Dakota Field Office manages over 4.1 million acres of Federal and Indian Trust mineral estate in the western one-third of the state and about 58,000 acres of public land and manages approximately 2,500 Federal oil and gas leases.	9/12/2024	9/19/2024
Military Aviation and Installation Assurance Siting Clearinghouse	Works to protect the Department's mission capabilities from incompatible energy development by collaborating with DOD components and external stakeholders to prevent, minimize, or mitigate adverse impacts on military training, testing, and readiness. Provide a timely, transparent, and repeatable process to evaluate potential impacts as well as explore potential mitigation options related to alternative energy production while preserving the military mission.	9/12/2024	No response at this time
Minot Air Force Base (Twentieth airforce ninety-first missile wing)	One of the Air Force's three operational missile units, allowing the wing to defend the nation with a combat-ready nuclear force. Located at the Minot Air Force Base.	9/12/2024	No response at this time
Minot Air Force Base	A U.S. Air Force Base in Ward County, North Dakota.	9/12/2024	No response at this time
Grand Forks Air Force Base	A U.S. Air Force Base in Grand Forks, North Dakota.	9/12/2024	No response at this time

[a] Full copies of agency consultations are included in Exhibit D.

6.1 NORTH DAKOTA AERONAUTICS COMMISSION

On September 12, 2024, Project notification was initiated with the North Dakota Aeronautics Commission to solicit comments on the Project. A response is pending. A record of this communication can be found in Exhibit D.

6.2 NORTH DAKOTA ATTORNEY GENERAL

On September 12, 2024, Project notification was initiated with the North Dakota Attorney General to solicit comments on the Project. A response is pending. A record of this communication can be found in Exhibit D.

6.3 NORTH DAKOTA DEPARTMENT OF AGRICULTURE

On September 12, 2024, Project notification was initiated with the North Dakota Department of Agriculture to solicit comments on the Project. A response is pending. A record of this communication can be found in Exhibit D.

Lands enrolled in the U.S. Department of Agriculture's Farm Service Agency (FSA) administered Conservation Reserve Program (CRP) are privately owned; however, the FSA has administrative responsibilities to ensure the provisions of CRP are maintained throughout the contract period. The CRP program stipulates that lands enrolled in CRP may not have the vegetative cover disturbed during the Primary Nesting and Brood Rearing Season (April 15 through August 1)

unless disturbance of the existing cover is minimal, and a waiver of this provision is granted by the FSA.

Hiland is working with landowners directly during the easement acquisition process to identify presence of CRP enrolled lands within the Project area. Should CRP land be impacted by the Project within the Primary Nesting and Brood Season noted above, Hiland will apply for a waiver from the FSA. A record of this communication can be found in Exhibit D.

6.4 NORTH DAKOTA DEPARTMENT OF HEALTH

On September 12, 2024, Project notification was initiated with the North Dakota Department of Health (NDDH) to solicit comments on the Project. A response is pending. A record of this communication can be found in Exhibit D.

The North Dakota Pollutant Discharge Elimination System (NDPDES) is the regulatory program that regulates water discharges such as construction stormwater, trench dewatering, and hydrostatic discharge permits. Hiland will procure the following NDPDES permits from the NDDH as described below.

6.4.1 Construction Stormwater

The NDDH, through their NDPDES construction stormwater program, authorizes the discharge of stormwater associated with construction activities under their general permit North Dakota Rules (NDR) 11-0000. Per the Energy Policy Act of 2005 and the remand of the U.S. Environmental Protection Agency's rule by the Ninth Circuit Court of Appeals, this Project is exempt from requiring permit coverage under NDR11-0000. However, Hiland will implement a Stormwater Pollution Prevention Plan (SWPPP, Exhibit F) to prevent pollutant runoff from the construction site to waters of the State.

6.4.2 Hydrostatic Test Water Discharges

The NDDH provides authorization to discharge water from hydrostatic testing of pipe and dewatering activities during construction under the NDPDES general permit NDG07-0000. Hiland will apply for permit coverage and comply with the requirements of NDG07-0000 for hydrostatic test discharge and dewatering activities associated with the Project. Coverage under the permit is generally granted no more than 30 days after submittal of an application. Hiland will file a copy of this permit with the NDPSC upon receipt.

6.5 NORTH DAKOTA DEPARTMENT OF HUMAN SERVICES

On September 12, 2024, Project notification was initiated with the North Dakota Department of Human Services to solicit comments on the Project. A response is pending. A record of this communication can be found in Exhibit D.

6.6 NORTH DAKOTA DEPARTMENT OF LABOR AND HUMAN RIGHTS

On September 12, 2024, Project notification was initiated with the North Dakota Department of Labor and Human Rights to solicit comments on the Project. A response is pending. A record of this communication can be found in Exhibit D.

6.7 NORTH DAKOTA DEPARTMENT OF CAREER AND TECHNICAL EDUCATION

On September 12, 2024, Project notification was initiated with the North Dakota Department of Career and Technical Education to solicit comments on the Project. A response is pending. A record of this communication can be found in Exhibit D.

6.8 NORTH DAKOTA DEPARTMENT OF COMMERCE

On September 12, 2024, Project notification was initiated with the North Dakota Department of Commerce to solicit comments on the Project. A response is pending. A record of this communication can be found in Exhibit D.

6.9 NORTH DAKOTA ENERGY INFRASTRUCURE AND IMPACT OFFICE

On September 12, 2024, Project notification was initiated with the North Dakota Energy Infrastructure and Impact Office to solicit comments on the Project. A response is pending. A record of this communication can be found in Exhibit D.

6.10 NORTH DAKOTA GAME AND FISH DEPARTMENT

On October 14, 2024, Project notification was initiated with the NDGFD to solicit comments on the Project. The NDGFD provided a response on November 5, 2024.

The NDGFD's response indicated their primary concern is the possible disturbance of native prairie and wooded draws. The NDGFD requested every effort be made to prevent destruction of these areas and that disturbed areas be reclaimed to pre-Project conditions. The NDGFD requested appropriate precautions be taken to protect any wetlands that cannot be avoided. Lastly, the NDGFD recommended aerial surveys be conducted for raptor nests before construction begins, and a 0.5-mile buffer is implemented around active eagle nest sites. A record of this communication can be found in Exhibit D.

On November 14, 2024, Hiland's environmental consultant on the Project, Merjent, Inc. (Merjent), organized and participated in a call with NDGFD staff to discuss the agency's recommendations. This Project does not cross wooded draws; therefore, no impacts on that habitat type are expected. Merjent staff outlined Hiland's habitat surveys for Dakota skipper, a native prairie obligate, and Hiland's plans to avoid habitat for these species by routing around or boring. Through these measures, impacts on native prairie will be avoided. Merjent also relayed Hiland's plans to avoid and minimize impacts on wetlands and to consult with the USACE if wetland impacts are anticipated. Hiland conducted line-of-sight surveys for eagle nests during September 2024; aerial surveys were deemed unnecessary due to flat topography and limited nesting habitat in the vicinity of the Project. No nests were observed. Hiland also plans to conduct pre-construction line--of-sight nest surveys in 2025. Nests observed during pre-construction will be avoided or re-located.

As outlined in Section 9, Hiland has already accounted for many of these concerns and has developed, or will develop, plans and procedures to address these items during construction. Hiland will continue to review work plans and procedures to incorporate NDGFD's recommendations where feasible.

6.11 NORTH DAKOTA INDUSTRIAL COMMISSION

On September 12, 2024, Project notification was initiated with the North Dakota Industrial Commission to solicit comments on the Project. A response is pending. A record of this communication can be found in Exhibit D.

6.12 NORTH DAKOTA DEPARTMENT OF THE GOVERNOR

On September 12, 2024, Project notification was initiated with the North Dakota Office of the Governor to solicit comments on the Project. A response is pending. A record of this communication can be found in Exhibit D.

6.13 NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

On September 12, 2024, Project notification was initiated with the North Dakota Department of Transportation to solicit comments on the Project. A response is pending. A record of this communication can be found in Exhibit D.

6.14 NORTH DAKOTA HISTORIC PRESERVATION OFFICE

On September 12, 2024, Project notification was initiated with the North Dakota SHPO to solicit comments on the Project. According to the North Dakota Energy Conversion and Transmission Facility Siting Act, among the "*factors to be considered [by the Commission] in evaluating applications and designation of sites, corridors, and routes,"* is the effect of the proposed site or route on existing scenic areas, historic sites and structures, and paleontological or archaeological sites. The repository in North Dakota for this information is the SHPO, which acts as a technical resource during identification and evaluation of areas, sites, and structures and during reviews of Project effects. The NDPSC tasks the Applicant to coordinate identification and effects discussions with the SHPO. A response was received on September 17, 2024, recommending a Class III intensive cultural resources inventory of cultural resources in the Project area. The survey must follow North Dakota SHPO Guidelines Manual for Cultural Resource Inventory Projects. A record of this communication can be found in Exhibit D.

Cultural resources investigations were initiated with a Class I literature search, and a Class III pedestrian survey, including limited subsurface testing, was completed in November 2024. A draft cultural resources report will be submitted to SHPO for review and comment in January 2025. Through Project design and avoidance, Hiland anticipates SHPO concurrence with a finding that no historic properties will be affected by the Project. Following agency review, SHPO's concurrence and/or comments will be filed with NDPSC, and Hiland will consult with the SHPO to finalize any avoidance protocols or mitigation measures for historic properties or potentially historic properties located on private lands. All written correspondence between Hiland and SHPO will be submitted to the NDPSC.

6.15 NORTH DAKOTA INDIAN AFFAIRS COMMISSION

On September 12, 2024, Project notification was initiated with the North Dakota Indian Affairs Commission to solicit comments on the Project. A response is pending. A record of this communication can be found in Exhibit D.

6.16 JOB SERVICES OF NORTH DAKOTA

On September 12, 2024, Project notification was initiated with the Job Services of North Dakota to solicit comments on the Project. A response is pending. A record of this communication can be found in Exhibit D.

6.17 NORTH DAKOTA DEPARTMENT OF TRUST LANDS, SCHOOL/SURFACE TRUST

On September 12, 2024, Project notification was initiated with North Dakota Department of Trust Lands, School/Surface Trust to solicit comments on the Project. A response is pending. A record of this communication can be found in Exhibit D.

A preliminary review of the Surface Trust Land dataset (North Dakota, 2023) concluded no School Trust Lands intersect the Project Corridor. A preliminary review of the NDDH Mineral Trust Land dataset (North Dakota, 2024) identified State Mineral Trust Lands located within the Project Corridor (see Table 6.17-1 below).

TABLE 6.17-1

NDDTL Mineral Trust Lands within the Project Corridor

Tract ID	Township	Range	Section
2706030	150	100	3
2706030	150	100	3
2707750	151	100	7
2704060	149	99	10
2706080	150	100	13
2706080	150	100	13
2706170	150	100	24
2706160	150	100	24
2706160	150	100	24
2705930	150	99	19
2706180	150	100	24
2706180	150	100	24
2705940	150	99	19
2705960	150	99	21

6.18 NORTH DAKOTA PARKS AND RECREATION DEPARTMENT

On September 12, 2024, Project notification was initiated with the North Dakota Parks and Recreation Department (NDPRD) to solicit comments on the Project. A response was received on October 11, 2024. NDPRD stated the Project does not appear to affect properties NDPRD owns, leases, or manages, or properties protected under Section 6(f) of the Land and Water Fund. In addition, a North Dakota Heritage biological conservation database query was run to determine if any current or historical plant or animal species of concern or other significant ecological community are known to occur within an approximate one-mile radius of the Project area. Based on the review, no plant or animal species of concern, or significant ecological communities were documented within or immediately adjacent to the Project site. A record of this communication can be found in Exhibit D.

6.19 NATURAL RESOURCES CONSERVATION SERVICE

On September 12, 2024, Project notification was initiated with the Natural Resources Conservation Service (NRCS) to solicit comments on the Project. A response is pending. A record of this communication can be found in Exhibit D.

The U.S. Department of Agriculture's (USDA) NRCS administers the Grassland Reserve Program, Wetland Reserve Program (WRP), as well as the Farm and Ranch Lands Protection Program and the Agricultural Conservation Easement Program.

Through landowner communications to date, Hiland has identified one crossing of Conservation Stewardship Program (CSP) land. The NRCS has not identified any specific requirements related to CSP land.

6.20 NORTH DAKOTA DEPARTMENT OF WATER RESOURCES

On September 12, 2024, Project notification was initiated with the North Dakota Department of Water Resources to solicit comments on the Project. A response is pending. A record of this communication can be found in Exhibit D.

Appropriation of water from the State's water resources is permitted by the ND State Water Commission (NDSWC). Typically, Hiland will truck in water for hydrostatic testing of the pipe and/or dust control rather than appropriating water from a nearby surface or groundwater source. As such, Hiland does not expect that the Project will require a permit from the NDSWC. Should the scope of the Project change and a permit be required, Hiland will apply for permit coverage through the NDSWC at that time. If a permit is obtained for water appropriation, it will be filed with the NDPSC upon receipt.

6.21 UNITED STATES DEPARTMENT OF DEFENSE

On September 12, 2024, Project notification was initiated with the United States Department of Defense to solicit comments on the Project. A response is pending. A record of this communication can be found in Exhibit D.

6.22 U.S. FISH AND WILDLIFE SERVICE NORTH DAKOTA ECOLOGICAL SERVICES FIELD OFFICE

The USFWS administers several programs designed to identify and protect special status plant and animal species, critical habitats, and lands managed by the agency, including the Endangered Species Act, MBTA, and BGEPA. Additionally, the USFWS administers NWR and Waterfowl Production Areas (WPAs), as well as wetland and grassland easements throughout North Dakota. Merjent provided Hiland assistance with protected species reviews and subsequent correspondence with USFWS.

On October 14, 2024, Project notification was initiated with the USFWS North Dakota Ecological Services Field Office to solicit comments on the Project, specifically requesting confirmation regarding the presence of sensitive resources or property interests that the USFWS manages in the Project Corridor. A record of this communication can be found in Exhibit D. In the Project introduction letter, Hiland provided the list of federally endangered, threatened, proposed, and candidate species and critical habitat based on a review of the Project Corridor in the USFWS's online IPaC system. In the letter, Hiland also outlined its plan for surveys for habitat for piping

plover, Dakota skipper, northern long-eared bat, and nests of bald eagle and golden eagle. The USFWS responded via email on October 24, 2024, stating they plan to coordinate as the Project goes through the Section 7 process with the USACE. A record of these communications can be found in Exhibit D. Merjent coordinated a call with the USFWS ND Ecological Services Field Office on November 14, 2024. During the call, Merjent summarized the Project-specific surveys for federally protected species, outlined the list of species potentially impacted, and reviewed the species-specific results of the Determination Keys. Results of this analysis are discussed in Section 5.3.1 and 9.0 of this application.

6.22.1 Endangered Species Act

Hiland reviewed the Project Corridor in the USFWS's IPAC system for federally endangered, threatened, proposed, and candidate species and critical habitat that may be present in the Project Corridor. See Section 5.3.1 above and 9.0 below for results. Hiland conducted habitat surveys for whooping crane, rufa red knot, western regal fritillary, monarch butterfly, piping plover, Dakota skipper, and northern long-eared bat with the intent of avoiding areas of habitat through re-route or boring.

6.22.2 Migratory Bird Treaty Act

Migratory birds are federally protected by the MBTA, which prohibits the taking, killing, possession, and transportation of migratory birds, their eggs, parts, and nests, except when specifically permitted by regulations. In North Dakota, both native prairie and non-native grasslands, forested areas, and wetlands provide breeding, nesting, foraging, brood-rearing, and dispersal habitat for many species of migratory birds. As summarized in Section 9.0, Hiland plans to conduct pre-construction surveys for migratory bird nests and to either avoid or re-locate nests that are documented within the Project as needed with appropriate permits.

6.22.3 Bald and Golden Eagle Protection Act

Bald and golden eagles are protected by both the MBTA and the BGEPA. The BGEPA prohibits the take of a bald or golden eagle adults, juveniles, or chicks including their parts, nests, or eggs without a permit. Take is defined by the BGEPA as to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb. BGEPA also addresses impacts resulting from human-induced alterations occurring around previously used nesting sites. Hiland conducted a line-of-sight survey for bald and golden eagle nests in September 2024; no nests were observed. As summarized in Section 9.0, Hiland also plans to conduct pre-construction line-of-sight surveys for eagle and other migratory bird nests. If eagle nests are observed within 0.5 mile of the Project Corridor, Hiland will coordinate with the USFWS on appropriate conservation measures and permits as needed.

6.22.4 Wetland and Grassland Easements

The USFWS administers NWRs and WPAs, as well as wetland and grassland easements throughout North Dakota. The Project Corridor does not traverse any USFWS land, and the closest USFWS easement is approximately 12.8 miles to the north (USFWS, 2024c). In addition, the USFWS did not relay that they had lands managed by the agency within the Project Corridor during Hiland's call with them on November 14, 2024. Hiland has inquired with landowners along the route if their property contains any USFWS easements. To date, Hiland is not aware of any wetland or grassland easements that will be impacted.

6.23 U.S. ARMY CORPS OF ENGINEERS NORTH DAKOTA REGULATORY OFFICE

On September 12, 2024, Project notification was initiated with the USACE North Dakota Regulatory Office to solicit comments on the Project. A response was received on September 26, 2024. The response letter provides a summary of the USACE jurisdiction to regulate fill material placed within Waters of the U.S. through Section 404 of the Clean Water Act and Nationwide Permit 12 for Oil and Natural Gas Pipeline Activities.

Based on a review of the wetland and waterbody data collected during field surveys (see Section 5.2 above and Exhibit C), the pipeline will cross features that likely fall within the USACE's jurisdiction. Hiland expects that the Project will be eligible for coverage under the USACE Nationwide Permit (NWP) 12, which authorizes temporary impacts to USACE-jurisdictional waters due to construction of oil and natural gas pipeline activities, provided the pipeline can be placed without any change to pre-construction contours. Based on a review of anticipated temporary impacts to waters of the U.S., at this time, Hiland does not anticipate that the Project will trigger any of the following Pre-Construction Notification (PCN) criteria listed under the NWP conditions:

1) A Section 10 permit is required;

2) Discharges that result in the loss (i.e., permanent fill) of greater than 1/10 acre of Waters of the U.S.;

3) The proposed Project is associated with an overall project that is greater than 250 miles in length and the Project purpose is to install new pipeline along the majority of the Project length.

In addition, the Project does not trigger any PCN criteria listed under the Regional Conditions.

If a PCN is not required to be submitted, work within jurisdictional waters will be conducted in accordance with the NWP conditions, General Conditions, and the Omaha District Required Best Management Practices. If it is determined a PCN is required, Hiland will inform the NDPSC and provide a copy of USACE's approval upon receipt.

No Section 408 Civil Works projects or other USACE-owned or managed lands were noted by the USACE.

A record of this communication can be found in Exhibit D.

6.24 FEDERAL AVIATION ADMINISTRATION

On September 12, 2024, Project notification was initiated with the Federal Aviation Administration to solicit comments on the Project. A response is pending. A record of this communication can be found in Exhibit D.

6.25 MCKENZIE COUNTY

On September 12, 2024, Project notification was initiated with McKenzie County to solicit comments on the Project. A response is pending. A record of this communication can be found in Exhibit D.

On December 11, 2024, Hiland's environmental consultant on the Project, Merjent, spoke with the Weed Control Officer of the McKenzie County Weed Control Board to confirm weed management requirements. The Weed Control Officer confirmed a Weed Management Plan will be required prior to construction. Hiland prepared a Weed Management Plan and received Plan approval on February 11, 2025.

6.26 NORTH DAKOTA TRANSPORTATION AUTHORITY C/O NORTH DAKOTA INDUSTRIAL COMMISSION

On September 12, 2024, Project notification was initiated with the North Dakota Transmission Authority C/O North Dakota Industrial Commission to solicit comments on the Project. A response was received on September 25, 2024, stating there are no permit requirements or concerns from the agency. A record of this communication can be found in Exhibit D.

6.27 NORTH DAKOTA PIPELINE AUTHORITY C/O NORTH DAKOTA INDUSTRIAL COMMISSION

On September 12, 2024, Project notification was initiated with the North Dakota Pipeline Authority C/O North Dakota Industrial Commission to solicit comments on the Project. A response is pending. A record of this communication can be found in Exhibit D.

6.28 NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY

On September 12, 2024, Project notification was initiated with the North Dakota Department of Environmental Quality (NDDEQ) to solicit comments on the Project. A response was received on October 8, 2024. A summary of the items indicated in the letter includes:

- Ensure measures are implemented to minimize fugitive dust emissions during construction.
- Construction activity near any water of the state should be completed to minimize any adverse effects to the water, including, revegetating disturbed areas as soon as possible and preventing oil and grease spills.
- Projects disturbing one or more acres must obtain a permit to discharge stormwater runoff until the site is stabilized.
- Counties and municipalities may require a stormwater permit.
- If water will be used for hydrostatic testing and will be discharged, a temporary discharge permit (NDG07-0000) will be required.
- The Project overlies the Tobacco Garden aquifer, and extra care should be taken to avoid spills of materials. All spills must be reported to the NDDEQ, and remediation must be completed.
- Solid waste material must be managed and transported in accordance with the NDDEQ solid and hazardous waste rules (Division of Waste Management).
- Overall minimization for potential impact to human health and environment should be considered with the selection of the pipeline route.

- A spill response plan should be developed.

The USACE NWPs were reviewed for North Dakota, including the Regional Conditions pertaining to Section 401 Water Quality Certification (WQC) NWP 12. The Project does not cross and will not affect any Class I, IA, II and III rivers and streams, and classified lakes listed in Appendixes I and II of the State Water Quality Standards. Hiland anticipates a 401 WQC will not be required.

A record of this communication can be found in Exhibit D.

6.29 NORTH DAKOTA GEOLOGICAL SURVEY

On September 12, 2024, Project notification was initiated with the North Dakota Geological Survey to solicit comments on the Project. A response received on September 24, 2024, states the agency reviewed the proposed pipeline against the agency's landslide maps and did not note any areas of concern with the proposed route at this time. A record of this communication can be found in Exhibit D.

6.30 NORTH DAKOTA FOREST SERVICE

On September 12, 2024, Project notification was initiated with the North Dakota Forest Service to solicit comments on the Project. A response is pending. A record of this communication can be found in Exhibit D.

6.31 BUREAU OF LAND MANAGEMENT, NORTH DAKOTA FIELD OFFICE

On September 12, 2024, Project notification was initiated with the Bureau of Land Management (BLM), North Dakota Field Office to solicit comments on the Project. The BLM responded on September 19, 2024, requesting a shapefile or legal land description of the pipeline route, to verify if there are any BLM lands in the area. A shapefile of the proposed pipeline centerline was provided to BLM on September 20, 2024. A response is pending. Hiland's review indicates the Project does not cross any BLM lands. A record of this communication can be found in Exhibit D.

6.32 MILITARY AVIATION AND INSTALLATION ASSURANCE SITING CLEARINGHOUSE

On September 12, 2024, Project notification was initiated with the Military Aviation and Installation Assurance Siting Clearinghouse to solicit comments on the Project. A response is pending. A record of this communication can be found in Exhibit D.

6.33 MINOT AIR FORCE BASE-TWENTIETH AIR FORCE NINETY-FIRST MISSILE WING

On September 12, 2024, Project notification was initiated with the Minot Air Force Base (Twentieth Airforce Ninety-First Missile Wing) to solicit comments on the Project. A response is pending. A record of this communication can be found in Exhibit D.

6.34 MINOT AIR FORCE BASE

On September 12, 2024, Project notification was initiated with the Minot Air Force Base to solicit comments on the Project. A response is pending. A record of this communication can be found in Exhibit D.

6.35 GRAND FORKS AIR FORCE BASE

On September 12, 2024, Project notification was initiated with the Grand Forks Air Force Base to solicit comments on the Project. A response is pending. A record of this communication can be found in Exhibit D.

7.0 CRITERIA

The information presented in this section was developed to demonstrate conformance with the NDPSC's siting criteria for transmission facilities. Hiland has conducted a thorough inventory of the Project Corridor and evaluated the resources within it to assess the compatibility of the Project with the NDPSC's siting criteria. The following sections identify and discuss the presence or absence of siting criteria within the Project Corridor and Route. Where siting criteria are identified, the location of each is shown on the maps in Exhibits B.2 through B.4.

7.1 EXCLUSION AREAS

Exclusion areas are geographic areas that must be excluded in the consideration of a route for a transmission facility. A buffer zone of a reasonable width must also be included to protect the area. The following table and text identify and discuss exclusion areas within the Project Corridor.

TABLE 7.1-1

Exclusion Areas
NDPSC Certificate of Corridor Compatibility and Route Permit

Exclusion Area	Located within Study Area	Located within the Project Corridor	Crossed by Route	Administering Agency
National Parks	No	No	No	U.S. National Park Service (NPS)
National Memorial Parks	No	No	No	NPS
National Historic Sites and Landmarks	No	No	No	NPS
National Natural Landmarks	No	No	No	NPS
National Wilderness Areas	No	No	No	NPS; U.S. Forest Service [USFS]
National Monuments	No	No	No	NPS
State Parks	No	No	No	ND Parks and Recreation Department (NDPRD)
State Historic Sites	No	No	No	State Historical Board
State Monuments	No	No	No	State Historical Board
State Historical Markers	No	No	No	State Historical Society
State Archaeological Sites	Yes	Yes	Yes	State Historical Board
State Nature Preserves	No	No	No	State Park Service
County Parks and Recreation Areas, Municipal Parks, and Parks under Other Governmental Jurisdiction	No	No	No	Various
Areas Critical to the Life Stages of Threatened or Endangered Animal or Plant Species	See Sections 5.3 and 6.2			USFWS/Various
Areas Where Animal or Plant Species Unique or Rare to the State Would be Irreversibly Damaged	No	No	No	USFWS/ Various
Areas within 1,200 feet of an ICBM facility	No	No	No	U.S. Department of Defense (USDOD)
Areas within 30 feet of direct line of ICBM launch facility	No	No	No	USDOD

7.1.1 Federal Resource Review

Review of digital data (National Park Service [NPS], 2024a, 2024b, 2024c, 2023a, 2023b; USGS, 2024) indicates that there are no national parks, national memorial parks, national historic sites and landmarks, national natural landmarks, national wilderness areas, or national monuments located within the Project Corridor or Route. Therefore, there will be no direct impacts to national parks, historic sites, monuments, or wilderness. The nearest of these federal resources is the Theodore Roosevelt National Park, located approximately 4.8 miles to the south of the Project Corridor.

7.1.2 State Resource Review

Review of digital data (NDPRD, 2022; State Historical Society of North Dakota, 2024a and 2024b; USGS, 2024) indicates that there are no designated or registered state parks, state historic sites, state monuments, state historical markers, state archaeological sites, or state nature preserves within the Project Corridor or Route. The nearest of these state resources is Lewis and Clark State Park, located approximately 18.2 miles to the northwest of the Project Corridor. Therefore, there will be no direct impacts to these state resources.

7.1.3 County Resource Review

Review of digital data (USGS, 2024; Google Earth, 2024) indicates that there are no County Parks and Recreation Areas, Municipal Parks, or Parks under Other Governmental Jurisdiction within the Project Corridor or Route. The nearest of these county resources is Nelson Park in Arnegard, North Dakota, located 0.53 mile to the west of the Project Corridor. Therefore, there will be no direct impacts to these county resources.

7.1.4 Areas of Critical Habitat

No USFWS-designated critical habitat was identified during desktop analysis of the Project Corridor (USFWS, 2024a). The nearest USFWS-designated piping plover critical habitat is located approximately 4.2 miles north of the Project area along the Missouri River. The nearest known Dakota skipper designated critical habitat is located approximately 26.6 miles northeast of the Project Corridor.

As described in Section 5.3 above, Hiland commissioned natural resource surveys of the Corridor. The scope of the surveys included documentation of the presence or absence of federally-listed and state-listed species of concern or evidence of suitable habitats for these species. The results of these field studies are detailed in Section 5.3.1 above, and planned mitigation measures are discussed in Section 9.0 of this application. Consultations with USFWS are ongoing, and formal correspondence regarding federally-listed species will be provided when received.

7.1.5 Areas where Unique or Rare Species Rare to the State Would Be Irreversibly Damaged

Based upon field surveys and agency consultations, the proposed Project will not result in irreversible impacts that are detrimental to plant and animal species or their habitats that are unique or rare to the State. The implementation of the proposed construction plans (see

Section 9.0 below) and full compliance with environmental permits will fully mitigate the potential for irreversible damage.

7.1.6 Areas within 1,200 Feet of Intercontinental Ballistic Missile Facility or 30 Feet of Direct Line of Launch Facility

Review of digital data (United Nations Institute for Disarmament Research, 2024) shows that the Project is not within 1,200 feet of an Intercontinental Ballistic Missile (ICBM) Facility or within 30 feet of a direct line of launch facility. The nearest ICBM Facility is located approximately 43.1 miles northeast of the Project Corridor.

7.2 AVOIDANCE AREAS

Avoidance areas are geographic areas that may not be considered in the routing of a transmission facility unless it is shown there is no reasonable alternative under the circumstances. A route may contain avoidance areas; however, avoidance areas may not encompass more than 50 percent of the Project Corridor width at any point, unless there is no reasonable alternative. The following table and text identify and discuss avoidance areas within the Project Corridor.

TABLE 7.2-1

Avoidance Areas
NDPSC Certificate of Corridor Compatibility and Route Permit

Avoidance Area	Located within Study Area	Located within the Project Corridor	Crossed by Route	Administering Agency
National Historic Districts	No	No	No	State Historic Society
National Wildlife Areas	No	No	No	USFWS
National Wild, Scenic, or Recreational Rivers	No	No	No	Heritage Conservation Recreation Service, State
NWRs	No	No	No	USFWS
National Grasslands	No	No	No	USFS
State Wild, Scenic, or Recreational Rivers	No	No	No	State of North Dakota Legislative Assembly
State Game Refuges	No	No	No	NDGFD
State Game Management and Management Areas	No	No	No	NDGFD
State Forests	No	No	No	State Forest Service
State Forest Management Lands	No	No	No	State Forest Service
State Grasslands	No	No	No	State Park Service
Historical Resources not specifically designated as Exclusion or Avoidance Areas	See Sections 5.1 and 6.14			SHPO
Geologically Unstable Areas	Yes	Yes	No	State Geological Survey
Within 500 Feet of a Residences, School, or Place of Business	Yes	Yes	Yes	Landowner
Reservoirs	No	No	No	USACE; NDSWC
Municipal Water Supplies	No	No	No	NDSWC
Water Sources for Organized Rural Water Districts	Yes	Yes	Yes	NDSWC
Irrigated Land[a]	N/A	N/A	N/A	NDSWC
Areas of Recreational Significance not designated as exclusion areas	No	No	No	Various

[a] Irrigated land does not apply to underground transmission facilities.

7.2.1 Federal Resource Review

Review of digital data (NPS, 2024d; USFWS 2024b; USFWS 2023; U.S. Forest Service [USFS], 2024; USFS, 2022; USGS, 2024) indicates that there are no designated or registered national historic districts, national wildlife areas, national wild, scenic or recreational rivers, NWRs, or national grasslands within the Project Corridor or Route. Therefore, there will be no direct impacts to these resources. The nearest of these federal resources are the Dakota Prairie Grasslands and Little Missouri National Grassland, located approximately 1.9 miles to the southwest and 3.9 miles east of the Project Corridor, respectively.

7.2.2 State Resource Review

Review of digital data (North Dakota Legislative Branch, 2017; NDFS, 2022; NDGFD, 2023, 2022) indicates that there are no state wild, scenic, or recreational rivers, state game refuges, state game management and management areas, state forests, state forest management lands, or state grasslands within the Project Corridor or Route. Therefore, there will be no direct impacts to these resources. The nearest of these state resources is the Lewis and Clark Wildlife Management Area, located approximately 11 miles to the northeast of the Project Corridor.

7.2.3 Historical Resources Not Designated as Exclusion/Avoidance Areas

See Section 5.1 above for a discussion of historical resource desktop and field studies conducted for completion of Class I and Class III cultural resource reports and see Sections 6.1.2 and 6.9 above for a discussion of agency consultations conducted with the SHPO regarding the Project Corridor.

7.2.4 Geologically Unstable Areas

Review of digital data (North Dakota Geological Survey, 2023) indicates there are landslide deposits within the study area and Project Corridor, but these areas are not crossed by the route.

North Dakota has not experienced an earthquake of sufficient magnitude to damage steel welded pipe or structural steel structures in recorded history. Sinkholes are known to occur in the region, but these are related to subsurface mining activities as opposed to limestone dissolution. According to review of NDPSC abandoned mine data, no mining activities are located within the Project Corridor (NDPSC, 2022).

7.2.5 Areas within 500 Feet of a Residence, School, or Place of Business

Review of digital data (Federal Emergency Management Agency, 2023) displays the study area, Project Corridor, and route are within 500 feet of residences, schools, or places of business. Hiland will obtain landowner waivers, as required.

7.2.6 Reservoirs and Municipal Water Supplies

Review of digital data (USACE, 2023; NDDEQ, 2023) has confirmed the absence of reservoirs or municipal source water protection areas for community water supply sources within the Project Corridor.

7.2.7 Water Sources for Organized Rural Water Districts

Review of digital data (North Dakota, 2021) indicates the study area, Project Corridor, and route are within an organized rural water district, the Western Area Water Supply (WAWS). The Project Corridor crosses WAWS water pipelines as well as McKenzie County Water Resource District (MCWRD) water pipelines. Water pipeline crossings are at road crossings and crossing approvals will be part of the roadway crossing permitting.

7.2.8 Irrigated Land

Irrigated land does not apply to underground transmission facilities.

7.2.9 Areas of Recreational Significance but Not Designated Exclusion Areas

Review of digital data (U.S. Geological Survey [USGS], 2024) indicates there are no areas of recreational significance within the Project Corridor. Two State Land Board areas, representing areas managed for multiple uses associated with North Dakota Trust Lands, are present within the Project study area. These areas do not represent recreational significance and are not located within the Project Corridor or crossed by the Project Corridor.

7.3 SELECTION CRITERIA

The State of North Dakota Administrative Code 69-06-08-02(3) specifies selection criteria considered in designating a pipeline corridor or route. These criteria are used to determine whether adverse effects from the location, construction, and maintenance of the facility will be at an acceptable minimum or whether these effects will be managed and maintained at an acceptable minimum.

The selection criteria that were considered for the Project include:

- agricultural production;
- family farms and ranches;
- land suitable for irrigation;
- surface drainage and groundwater flow patterns;
- sound sensitive areas;
- visual effects;
- extractive and storage resources;
- wetlands, woodlands, and wooded areas;
- communication or electric control facilities;
- human health and safety;
- animal health and safety; and
- plant life.

Potential impacts and measures to avoid and minimize these impacts, as they relate to each of the selection criteria, are discussed in the following subsections.

7.3.1 Agricultural Impacts

7.3.1.1 Agricultural Production

The Route would temporarily affect approximately 270 acres of private land in North Dakota, of which approximately 155 acres are located on privately-owned cropland (USGS, 2014). The majority of the land crossed can be characterized as either agricultural or natural vegetative cover. Once the construction is complete, the land will be restored to its pre-construction contours and land use. Hiland will provide settlements to landowners for crop loss resulting from Project construction.

7.3.1.2 Family Farms and Ranches

The Route would temporarily affect approximately 270 acres of private land in North Dakota, of which approximately 91 acres are comprised of privately-owned farms and/or ranches.[1] Once construction is complete, the land will be restored to its pre-construction contours and land use. Hiland will negotiate easements with all affected landowners. The Project will have no permanent impacts to lifestyle or farm/ranch operations once construction is completed.

The location of pipeline markers is defined under 49 CFR part 195 for pipelines. Hiland works with local landowners and county officials to ensure that pipeline markers are located where required and also in an acceptable location for these parties. These markers are to be placed in full view so that they are not accidentally damaged by, nor cause damage to, landowner or county equipment.

7.3.1.3 Lands Suitable for Irrigation

This section is not applicable to buried pipelines (NDAC 69-06-08-02(2)(h)).

7.3.1.4 Surface Drainage

Standard pipeline construction techniques to be employed would not modify existing surface drainage patterns. Care will be taken throughout the construction process to minimize environmental impacts, including modification of drainage patterns. During restoration, those areas that were disturbed during construction will be restored, the local topography will be restored to its original contours, vegetation will be re-established, and impacts will be minimal and temporary. BMPs will be implemented in accordance with the Project-specific SWPPP, which will be modeled after the NDDEQ Construction Storm Water General Permit requirements. Permanent impacts to surface drainage will be minimized to the maximum extent possible.

7.3.1.5 Ground Water

Well data has been recorded by the ND Department of Water Resources (NDDWR) for the Project Area. Well data indicates that groundwater is generally located approximately 50 to 80 feet below the surface (NDDWR, 2021). The required tie-in excavations for the proposed Project are not anticipated to reach these depths. As such, no impact to ground water is anticipated. If groundwater is encountered during construction activities, it will be dewatered in accordance with Hiland's construction plans (see Section 9.0 below) and applicable state and/or local permits.

[1] Approximately by sum of grassland/herbaceous and hay/pasture land use types (USGS, 2014)

7.3.2 Sound-Sensitive Land Uses

Temporary increases in ambient sound will occur in the areas immediately surrounding active construction. The majority of the Project is located in a rural setting away from major population centers. Construction will take place over a period of approximately six months; however, no one area will have ongoing daily activity, as construction will progress from one area of the route into the next. Construction activities at any given point along the Project are generally limited to daylight hours. The use of heavy equipment or trucks will be the primary noise generating activity during construction and excavation. The level of impact may vary by equipment type, duration of construction activity, and the distance between the noise source and the receptor. Once constructed and in-service, normal pipeline operations are not audible. Construction and operation of the Project is expected to comply with applicable noise requirements and local ordinances.

7.3.3 Visual Effect on Adjacent Areas

The proposed pipeline would include two mainline block valves and two pig launcher/receiver facilities. The valves are typically enclosed with fences which are padlocked shut against vandalism and accidental activation. The location will be clearly marked with a small placard that details ownership and contact information. The visual piping and equipment will be finished and maintained with a tan or white painted surface. These features are common throughout the landscape and are not obtrusive. The pig launcher/receiver facilities will both be located in existing Hiland facilities that are already developed and will cause only minor incremental visual impacts. No other permanent, aboveground features are proposed as a part of the Project.

7.3.4 Extractive and Storage Resources

This Project will not affect any known extractive or storage resources. Impacts on future extractive development would not constitute a substantial loss of resource availability because of the narrow, linear nature of the pipeline ROW relative to the expanse of areas with resource potential.

7.3.5 Wetlands, Woodlands, and Wooded Areas

A comprehensive desktop review of published data, including aerial photography and National Wetlands Inventory data, was conducted to assess the presence or absence of wetlands, woodlands, and wooded areas. The review of the proposed Project Corridor confirmed the presence of these resources. In addition, Hiland commissioned field surveys to further identify and record the locations of these resources along the Route. The results of these field studies will be used to implement construction measures to avoid or minimize impacts to wetlands, woodlands, and wooded areas. Land use and land cover information is shown in Exhibit B.3. The proposed mitigation is detailed in Section 9.0 of this application, and detailed survey results can be found in Exhibit C.

7.3.6 Radio and TV Reception and Other Communication or Electronic Facilities

Based on review of publicly available information (ND, 2020), no radio and TV reception and other communication or electronic facilities are located within the Project Corridor; however, some of these facilities are located within the study area. The proposed Project is a buried, underground utility. No impacts on television or radio reception or communication or electronic control facilities are anticipated to occur as a result of the Project.

7.3.7 Human Health and Safety

During construction, residences and businesses in proximity to construction activities will be exposed to short-term increases in construction-related noise and dust. The construction ROW, access roads, and spoil piles near residential and commercial areas, and near farming or ranching operations, will be watered down as needed to control fugitive dust emissions during construction. Following construction, measures to stabilize and revegetate the ROW will be taken promptly to minimize further dust emissions. Heavy construction equipment required for pipeline installation will generate unavoidable short-term increases in sound levels. Increases in noise levels due to equipment operation will be limited to the period of active construction and will primarily be avoided during night-time hours (10p.m. to 7a.m.). Twenty-four-hour construction activities are generally limited to completing tasks that commenced during the day, and where ceasing to complete could jeopardize the installation. This largely applies to some phases of HDDs, various bores, and occasional aboveground facility construction.

The USDOT's pipeline standards are published in Part 195 of Title 49 of the CFR. The regulations are intended to ensure adequate protection of the public and to prevent accidents and failures. Part 195 addresses petroleum pipeline safety issues, specifying material selection and qualification, minimum design requirements, and protection from internal, external, and atmospheric corrosion.

Actual installation of the pipeline and all construction and testing records will be subject to inspection. All pipe installed along the Project will be externally coated with a fusion bonded epoxy to resist corrosion. Once installed, internal inspections will be conducted on the pipeline at regular intervals using in-line inspection technology. The pipeline will undergo hydrostatic testing above maximum allowable operating pressure to ensure its integrity and will be placed into service only after successful completion and commissioning to verify compliance with all construction standards and requirements.

Hiland will ensure that a public education and outreach program is developed to promote public awareness of pipelines and pipeline safety in accordance with USDOT requirements. Proper signage and warnings at road and highway crossings, railroad crossings, navigable rivers, and other locations will alert the public to the presence of underground lines and provide information, contact numbers, and emergency data.

7.3.8 Animal Health and Safety

Hiland will avoid, minimize, and mitigate impacts to protected species to the maximum extent practicable. Hiland is continuing to consult with agencies regarding protected species (see Sections 5.3.1, 6.1.1 and 6.2 above). Impacts to the majority of animal species will be short-term and temporary, and the construction workspace will be restored to its pre-construction conditions following installation of the pipe.

7.3.9 Plant Life

Field surveys conducted for the Project did not identify any critical habitat within the Project Corridor (see Exhibit C). All areas disturbed by construction of the Project will be revegetated in accordance with applicable agency standards and landowner requests. In addition, Hiland will complete tree and shrub mitigation per NDPSC guidelines.

7.4 POLICY CRITERIA

7.4.1 Location and Design

The Project facilities are being sited in accordance with the North Dakota Energy Conversion and Transmission Facility Siting Act (NDCC chapter 49-22.1). Efforts to avoid and minimize environmental and human impacts are ongoing. Additionally, discussions with landowners regarding placement of the pipeline on respective tracts are taking place.

Facilities will be constructed and operated according to all applicable regulations. The Project will meet or exceed state and federal safety requirements and will be designed in accordance with 49 CFR part 195. All persons and firms providing service to Hiland are required to conduct their work in compliance with environmental conditions, permit authorizations, and applicable regulations and will be held accountable for their actions.

7.4.2 Benefit for North Dakota Citizens

While the intention of Hiland is to connect the Project to a larger pipeline system to transport products to a national market, there are significant benefits derived from this pipeline for North Dakota residents. Labor will be required for construction and operation of the pipeline as mentioned in Section 7.4.3 below. Construction of the pipeline not only provides temporary construction opportunities for local workers, but it will also provide revenue for local service providers such as restaurants and hotels. Operation of the pipeline will create new jobs. The pipeline itself will generate easement income for the landowners and will generate taxes for the County as mentioned in section 7.4.4 below.

North Dakota oil and gas well owners and operators will also benefit from selling the NGLs rather than flaring the resource. Additionally, part of the benefit of collecting the NGLs rather than flaring is the reduction of air quality impacts. For several years, North Dakota has worked to reduce flaring and has made significant progress. This pipeline will add to the reduction of NGL flaring in the region and will incrementally reduce air pollution and greenhouse gas impacts.

7.4.3 Training and Utilization of In-State Labor

Construction of the Project will require at least 300 workers in North Dakota.

7.4.4 Economies of Construction and Operation

The Project will be an additional North Dakota asset for Hiland. In 2023, Hiland paid ad valorem tax in excess of $606,000 for its existing infrastructure in the State. Once constructed and in-service, the continued costs of maintenance and operation of the Project are minimal.

7.4.5 Use of Citizen Coordinating Committees

Hiland has established and maintains a good relationship with the local residents through its long-term regional presence operating various assets in the area. Through these relationships, Hiland has maintained several grassroots communication channels to inform local residents regarding the developments associated with the Project. Hiland will continue to maintain contact with local government officials. Through these contacts, Project-related information will be exchanged and, should concerns arise, Hiland will work with officials to resolve those issues.

7.4.6 Commitment of Portion of Transmitted Product For Use In State

The proposed Project will transport NGLs from the Williston Basin to markets in the Mid-Continent and Gulf Coast. There are no plans for direct in-state use of the NGLs.

7.4.7 Labor Relations

Hiland maintains positive labor relations with its staff and contract work force and does not anticipate encountering any adverse labor relations on this Project. Hiland is an equal opportunity employer committed to diversity and inclusion. Additionally, the labor market in the region is generally supportive of the oil and gas industry.

7.4.8 Policies and Commitments to Limit Environmental Impact

Hiland is committed to protecting the environment during all phases of construction of the Project. Before construction, environmental field surveys of the pipeline route were conducted to identify wetlands, streams, threatened and endangered species and their habitat, cultural resources, agricultural or forested areas, and special land-use designations. In consultation with state and federal agencies, Hiland developed mitigation plans to protect these sensitive areas during and after construction. Once the Project is operational, ongoing monitoring and maintenance activities will be implemented to ensure the safe operation of the pipeline.

7.4.9 Coordination of Facilities

Hiland owns and operates the Roosevelt Gas Plant and the Watford Gas Plant and is in discussions with other gas plant operators regarding use of this Project. Coordination of the proposed Project with the Hiland gas plants is anticipated to be seamless, as the proposed Project will provide critical take-away transport of NGLs, allowing all plants owned by a Hiland to operate at full capacity, and will provide opportunity for other third parties to connect to Hiland's NGL pipelines.

7.4.10 Monitoring Impacts

Hiland has established and maintained positive landowner and community relationships throughout the region through its open communication and commitment to corporate citizenship standards that are based on integrity. Hiland monitors landowner concerns through its ROW department and responds to all reasonable requests. In a similar manner, Hiland monitors community concerns and responds to all reasonable concerns brought to its attention by local community leaders. Hiland will select a qualified contractor for construction of the Project and will coordinate the oversight responsibilities for construction activities with this contractor throughout the Project. Environmental responsibilities will be coordinated in the same manner.

During operation, pipeline control personnel provide 24-hour electronic surveillance of Hiland pipeline operations. In addition, Hiland uses a number of inspection methods and processes to mitigate corrosion and minimize the potential for third-party damage to the pipelines. These include regular ROW patrols, inspections of cathodic protection equipment, and coordination with the North Dakota One-Call Center to mark the pipeline or to be present during excavation to ensure the public's safety and the integrity of the pipeline.

Hiland designs, constructs, operates, and maintains its pipeline systems to ensure safety and reliability. If a leak were detected, the company is able to stop the flow of product remotely from

its control center. Hiland continues to establish and maintain contact with appropriate fire, police, and other public officials. This communication establishes the responsibility and resources of each government organization that may respond to a pipeline emergency. Hiland also acquaints officials with the abilities of the pipeline operator when responding to an emergency. In all cases, emergency responders are directed to protect people first, the environment next, and then property.

7.4.11 Using Existing and Proposed Rights-of way And Corridors

Hiland selected the Project alignment to maximize the use of existing utility corridors. Of the 28.1 miles of the proposed route, approximately 54.4 percent (15.3 miles) of the Project will be co-located with existing pipeline corridors.

7.4.12 Other Existing or Proposed Transmission Facilities

Hiland's assets, mostly fee based, consist of crude oil gathering and transportation pipelines and natural gas gathering and processing systems, primarily serving production from the Bakken Formation in North Dakota and Montana. Hiland has owned and operated hydrocarbon pipelines since 2004.

8.0 OTHER FACTORS CONSIDERED

8.1 PUBLIC HEALTH, WELFARE, NATURAL RESOURCES, AND THE ENVIRONMENT

Please see Sections 5.0, 7.1, 7.2, 7.3, and 7.4 in this application.

8.2 TRANSMISSION TECHNOLOGIES AND SYSTEMS DESIGNED TO MINIMIZED ADVERSE ENVIRONMENTAL EFFECTS

The Project design is consistent with existing pipeline technologies. A variety of measures will be taken to avoid, minimize, or mitigate impacts to sensitive resources, including but not limited to implementing trenchless construction (i.e., HDD, bores), narrowing ROW widths, rerouting, and route deviations. Trenchless techniques avoid the need for open cut trenches, thereby minimizing environmental impacts and eliminating ground-level surface hazards in sensitive areas along the route. BMPs will be used to minimize impacts from clearing, trenching, and reclamation of the construction ROW. Potential impacts to environmentally sensitive areas will be either avoided through rerouting, HDD/bore, or by protecting sites during construction.

Hiland's Construction Standards Section C1260 prescribes construction techniques and mitigation measures that will be employed to minimize the effects of construction on environmental resources and is available upon request. Mitigation measures are also discussed in Section 9.0 of this application.

8.3 BENEFICIAL USES OF WASTE ENERGY FROM A PROPOSED ENERGY CONVERSION FACILITY

The Project does not involve new energy conversion facilities; as such, the potential for beneficial uses of waste energy from a proposed energy conversion facility do not apply to the Project.

8.4 UNAVOIDABLE ADVERSE DIRECT AND INDIRECT ENVIRONMENTAL EFFECTS

Unavoidable adverse direct and indirect environmental effects will be temporary, short-term, and will be minimized to the extent practicable. The Project will be co-located and run parallel to existing infrastructure (e.g., pipelines, utility corridors, railway) to the maximum extent possible. Hiland will implement measures to mitigate potential impacts to resources such as vegetation, wildlife, agricultural, transportation, and noise levels. Please see Section 9.0 below for a complete description of mitigation measures.

8.5 CORRIDOR OR ROUTE ALTERNATIVES DEVELOPED DURING THE HEARING THAT MINIMIZE ADVERSE EFFECTS

A description of the alternatives analyzed in the design of the Project is presented in Section 4.0 of this application. The Project Corridor and Route have been designed based on landowner engagement, stakeholder outreach, civil surveys, environmental surveys, and constructability analysis, among other considerations. Reroutes of varying lengths and for a variety of reasons have been made to minimize adverse effects to sensitive areas. Hiland will continue to adjust the Route based on additional constructability concerns and necessary feature avoidance. Hiland will participate in the hearing process and will address any alternatives developed during the process, as applicable.

8.6 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF NATURAL RESOURCES IF DESIGNATED

The Project was designed to co-locate the pipeline within existing linear infrastructure (i.e., pipeline, utility, road, and railroad corridor) to the maximum extent practicable. This design minimizes irreversible or irretrievable commitments of natural resources due to conversion of greenfield to industrial uses and optimizing existing fragmentation. Generally, all areas impacted by pipeline construction (except for aboveground facilities) will return to previous land use. Long-term vegetation impacts will result from converting wooded areas to herbaceous/scrub shrub areas to comply with federal pipeline regulations, ensure safety and integrity of the pipeline, and facilitate routing aerial inspections.

Trees and shrubs that will be removed for construction will be replaced at a 2:1 replacement: loss ratio in accordance with the NDPSC requirements.

It is anticipated that the Project will not result in an irreversible and irretrievable commitment of natural resources.

8.7 DIRECT AND INDIRECT ECONOMIC IMPACTS OF THE FACILITY

Estimated total spending for construction of the Project is $37.2 million. This estimate includes construction of the pipeline, engineering, real estate services, easement payments, mitigation payments, and other support services. Construction outputs for the Project include employment, labor income, and production spending. The Project is expected to employ at least 300 workers for construction of the Project. These economic impacts will be realized during construction in 2025 and throughout operations and maintenance annually starting in 2026.

North Dakota imposes taxes on sales, use, gross receipts and lodging, and individual income. Local governments may impose taxes on the same tax bases; however, most unincorporated

areas do not impose local option sales taxes. The Project will contribute directly and indirectly to tax bases at the state and local levels.

Construction of this Project would provide firm, reliable service of 80,000 barrels of NGLs per day and would provide the critical link between the Hiland Roosevelt Plant and Hiland's NGL transmission system for delivery to facilities in the Mid-Continent and Gulf Coast for additional processing prior to distribution to various markets.

8.8 EXISTING PLANS FOR OTHER DEVELOPMENTS IN THE VICINITY

Hiland is one of the largest independent operators of crude oil and natural gas gathering and processing facilities in the Williston Basin.

Currently, Hiland is planning a three-mile crude oil pipeline in northwest McKenzie County and will be submitting a separate NDPSC application in the near months. Hiland has no other pipeline or facility plans in the near future.

In addition, Hiland is aware of several other current or foreseeable projects in McKenzie County, North Dakota undergoing National Environmental Policy Act (NEPA) review, or applications are being developed to meet state permitting requirements. These projects include new NGL pipelines, crude oil gathering lines, two compressor station expansions, and three natural gas processing plants or plant expansions. In addition, according to the NDIC – Oil and Gas Division (NDIC, 2025), there are 15 active drilling rigs in MacKenzie County.

Based on a review of the scope and location of present and foreseeable projects, Hiland has concluded that this Project is not in conflict with any known or proposed developments planned in the area.

8.9 THE EFFECT OF THE PROPOSED ROUTE ON SCENIC AREAS, HISTORIC SITES AND STRUCTURES, AND PALEONTOLOGICAL AND ARCHEOLOGICAL SITES

Hiland has consulted with the NDPRD and the NDSHPO and found that scenic areas and paleontological sites are not found within the Project corridor. Further, Hiland has researched State records and conducted cultural resource surveys to identify historic and archeological resources and has designed the route to avoid impacts to historic sites and structures and archeological sites. Please refer to Sections 5.1, 6.14, 7.2.3, 7.3.3, and 9.6 for more avoidance measure detail.

8.10 THE EFFECT OF THE PROPOSED ROUTE ON AREAS THAT ARE UNIQUE BECAUSE OF BIOLOGICAL WEALTH OR BECAUSE THE SITES OR ROUTE IS A HABITIAT FOR RARE AND ENDANGERED SPECIES

Hiland has consulted with the USFWS and the NDGFD and conducted biological surveys to identify unique, rare, and endangered plant and animal species. While such biological resources are found within the Project corridor, Hiland has developed avoidance plans in coordination with the USFWS and the NDGFD. Please refer to Sections 5.3, 5.4, 5.5, 6.10, 6.22, 7.1.4, 7.1.5, 8.1, and 9.4 for more avoidance measure detail.

8.11 PROBLEMS RAISED BY FEDERAL, STATE, AND LOCAL AGENCIES

Hiland provided Project-specific notification to various federal, state, and local agencies; through this notification process, these agencies have the opportunity to identify possible sensitive environmental resources within the study area and any related agency concerns. Section 6.0 of this application summarizes the consultations that have taken place to date. Hiland is actively working with federal, state, and local agencies and will address problems if they are raised. A complete record of these agency communications is provided in Exhibit D.

8.12 IMPACT ON ELECTRICAL SERVICES

For the operation of the pipeline, power needs will be limited to the two valve sites where Hiland will need power to remotely operate the valves. The draw on the electrical grid will be infrequent, and when needed, will be very small. Hiland has located the valves adjacent to existing power facilities to avoid the need to install new power lines.

8.13 IMPACT ON EMERGENCY SERVICES

A number of types of emergencies can occur when constructing and operating an NGL pipeline, from personnel injuries to pipeline failures. Hiland has safely operated crude, natural gas, and NGL pipelines in this area for over 14 years, has developed a strong relationship with emergency service providers in the region, and has a solid safety record. The absence of significant safety issues is a result of Hiland's staff diligence in constructing and operating the pipelines in a safe manner over the years.

During the construction phase, Hiland has a number of safety precautions that are outlined in Hiland's Construction Standards C1260, including measures to protected landowners, construction staff, property, and the environment. Each of the construction staff will go through safety training and there will be daily 'tailgate' safety meetings each day. It is anticipated that this will minimize safety incidents and impacts to Emergency Services.

For operation of the pipeline, Hiland's pipeline operators receive safety and emergency response training. All of the operators ware well versed in the Hiland Emergency Response Plan as well as the SPCC Plan, and are trained to respond to emergencies. Emergency response planning and training includes coordination with local and State Emergency Services.

9.0 MITIGATION MEASURES

Hiland has developed several Project construction control documents that will be used during construction activities to minimize and mitigate impacts to environmental resources (see Exhibit F). These plans will be incorporated into contract documents and enforced by Hiland:

- Construction Standards C1260-Environmental Requirements
    - Comprehensive control document that describes general mitigation measures related to erosion and sedimentation (SWPPP), upland construction techniques, stream/wetland crossings, dewatering and hydrostatic testing, dust control, waste management, and revegetation.
- Spill Prevention, Control, and Countermeasure Plan

  - Provides control measures to prevent hazardous materials spills and measures to control and clean up any spills that may occur.

- HDD Inadvertent Return Mitigation Plan
  - Provides measures to minimize the potential for release of drilling mud during HDD operations. Establishes procedures and responsibilities for containment/cleanup in the event of an inadvertent release.

- Unanticipated Discoveries Plan
  - Provides response measures to be followed in the event of a discovery of cultural resources or human remains.

- Weed Management Plan
  - Outlines methods to control state- and county-listed noxious weeds. The plan was approved by the McKenzie County Weed Board on February 11, 2025.

In addition to these plans, the Project will be subject to permits from various federal, state, and local agencies (environmental permits are discussed in Section 6.0 above). To further ensure compliance with permits, plans, obligations, and commitments, Hiland will employ one or more Environmental Inspectors (EIs) during the Project. The EI(s) will be responsible for monitoring construction activities and will provide daily reports to Hiland staff.

9.1 HUMAN ENVIRONMENT

Hiland will require its construction contractor to clean up, on a daily basis, all personal litter, bottles, and paper deposited by ROW preparation and construction crews. Waste and scrap that is the product of pipeline construction will be removed and properly disposed of in accordance with applicable regulations before construction is completed. To the maximum extent practicable, Hiland will minimize noise and dust resulting from construction near residential areas and farming and ranching operations.

Paved roads and railroad crossings will be bored; therefore, use of these facilities will not be disrupted because of the Project. Gravel roads will be open cut or bored. Open cutting a road will temporarily close it to traffic; however, the road network throughout the Project Area is sufficient that suitable alternative routes are readily available to prevent any significant delays in traffic. Furthermore, the trench can be plated to allow for traffic crossing when construction is not active (i.e., after the end of the workday).

Hiland will obtain applicable permits prior to conducting road crossings. Temporary signs will be posted at each crossing, as appropriate, to alert motorists to construction activity. Paved roads and railroads will be bored, which will minimize interference with traffic flow caused by construction activities.

As noted above, Hiland has developed, or is in the process of developing, several Project control plans, which will be used during construction activities to minimize and mitigate impacts.

9.2 TERRAIN AND GEOLOGICAL RESOURCES

Hiland will, to the maximum extent practicable, restore the area affected by pipeline construction to its pre-construction condition. Restoration will be compatible with the safe operation, maintenance, and inspection of the pipeline. Measures such as slope breakers, erosion control blankets, and re-vegetation will be employed to maintain the stability of slopes along the ROW. No crown of backfill material will be left over the trench in wetlands.

9.3 SOILS

Pipeline construction activities such as clearing, grading, trench excavation, and backfilling, as well as the movement of construction equipment along the ROW, may result in impacts on soil resources. Clearing removes protective cover and exposes soil to the effects of wind and precipitation, which may increase the potential for soil erosion and movement of sediments into sensitive environmental areas. Grading and equipment traffic may compact soil, reducing porosity and percolation rates, which could result in increased runoff potential. Trench excavation and backfilling could lead to a mixing of topsoil and subsoil and may introduce rocks to the soil surface from deeper soil horizons.

Hiland will minimize or avoid these impacts to soils by implementing the mitigation measures described in its Construction Standards C1260. Construction Standards C1260 will be included in contract documents and enforced as such throughout the duration of the Project. Temporary erosion and sedimentation control measures may include installation of silt fence, straw bales, slope breakers, trench breakers, erosion control fabric, and mulch.

To minimize potential impacts to soil productivity, topsoil will be segregated during trench excavation in agricultural land, unsaturated wetlands, and if applicable, other areas where soil productivity is an important consideration. Unless otherwise requested by the landowner, topsoil in cropland will be removed to a maximum depth of 12 inches from the trench and spoil storage area and stored separately from the trench spoil. After the trench is backfilled, topsoil will be returned to its approximate original location in the soil horizon.

Compaction of agricultural soils will be minimized by restricting construction activities during periods of prolonged rainfall. Where unacceptable levels of compaction occur in agricultural lands, a chisel plow or other deep tillage equipment will be used to loosen the soil during restoration.

Hiland will retain EIs to monitor the contractor’s compliance with applicable requirements to protect soil resources during construction of the Project.

Recognizing the unique terrain and soils within portions of the Project Corridor, Hiland may commission additional studies to assist in Project planning. Pending final construction design, geotechnical investigations will be initiated at certain HDD locations to assist in planning the set-up, profile, and completion of boring efforts and to minimize risk for unexpected conditions during construction. The results of these studies will be incorporated into the final Project plans and specifications.

9.4 VEGETATION AND WILDLIFE

Hiland will clear the ROW to the extent necessary to assure suitable access for construction, safe operation, and maintenance of the pipeline. In areas that require permanent revegetation, Hiland will specify appropriate seed mixes, application rates, and seeding dates, taking into account

recommendations of appropriate state and federal agencies and landowner requests. In non-agricultural areas, vegetation cleared from extra workspace will be allowed to revegetate after construction depending on arrangements with the landowner. Consequently, significant changes in cover types are not anticipated.

Hiland will take appropriate precautions to protect livestock and crops from being affected by construction. Operation of the proposed pipeline is not anticipated to significantly affect terrestrial wildlife, fisheries resources, or other aquatic species. Shelter belts and trees will be protected and restored by Hiland to the extent practicable in a manner compatible with the safe operation, maintenance, and inspection of the pipeline.

9.4.1 Noxious Weeds

The Project Corridor intersects 19 noxious weed areas (see Exhibit C). To mitigate the spread of noxious weeds, equipment leaving infested areas will be visually inspected prior to leaving the area, and vegetation and soils will be cleaned from vehicles and equipment. The vehicles and equipment will be cleaned to remove remaining soils and vegetation prior to entering uninfected tracts. Hiland will also comply with its Weed Management Plan, which was approved by the McKenzie County Weed Management Board.

9.4.2 Trees and shrubs

Hiland will comply with the NDPSC's tree and shrub mitigation specifications. A formal tree and shrub inventory was initiated as part of the overall Natural Resource Inventory (see Exhibit C). Hiland will submit a tree and shrub mitigation plan upon route and construction method finalization as well as final regulatory authorization of the Project. The clearing or removal of trees or shrubs will be done selectively and minimally, in a manner that minimizes the disturbance to woody vegetation and in compliance with NDPSC's specifications. The replacement of trees and shrubs will be based upon actual impacts due to construction will meet the 2:1 ratio specified and will be fully documented.

9.4.3 Wetlands and Waterbodies

Hiland will minimize impacts to wetlands and waterbodies by minimizing workspace through these features and by using low-impact crossing methods, such as HDD, where appropriate. Furthermore, Hiland will conduct all regulated crossings in compliance with the USACE NWP 12. After completion of waterbody crossings, Hiland will revegetate disturbed stream banks in accordance with the Construction Standards C1260 and requirements of applicable state or federal permits. During construction in unsaturated wetlands, topsoil will be segregated from the trench line to preserve natural sources of seed and rootstock. After the trench is backfilled, the topsoil will be replaced to facilitate the natural revegetation process. Features will be returned to their pre-construction condition and contours.

9.4.4 Whooping crane

If a whooping crane is sighted within the construction corridor, or if the USFWS notifies Hiland of a whooping crane sighting within one mile of the construction ROW, Hiland will suspend construction activities, and work would not resume until the birds have left the area. Any whooping crane sightings would be immediately reported to the USFWS and the NDGFD. As part of pre-construction activities, Hiland would conduct environmental training with contractors and construction crews, providing them information on proper identification of the species and correct

procedures regarding a sighting. In addition, to avoid long-term impacts on whooping crane migratory stopover habitat, wetlands that are crossed by the Project would be restored to pre-construction contours. With these conservation measures in place, Project activities are not anticipated to have adverse impacts on the whooping crane.

Consultations with the USFWS are ongoing. Hiland will develop further conservation measures, if necessary, to avoid and/or reduce impacts to the whooping crane.

9.4.5 Rufa red knot

If red knots are sighted during construction, or if the USFWS notifies Hiland of a red knot sighting within one mile of construction activities, Hiland would suspend construction activities, and work would not resume until the birds have left the area. Any sightings within the construction corridor would be immediately reported to the USFWS. As part of pre-construction activities, Hiland would conduct environmental training with contractors and construction crews, providing information on proper identification of the species and correct procedures regarding a sighting. In addition, to avoid long-term impacts on the red knot's migratory stopover habitat, wetlands crossed by the Project would be restored to pre-construction contours. With these conservation measures in place, Project activities are not anticipated to have adverse impacts on the rufa red knot.

Consultations with the USFWS are ongoing. Hiland will develop further conservation measures, if necessary, to avoid and/or reduce impacts to the rufa red knot.

9.4.6 Dakota skipper

Suitable habitat for the Dakota skipper is present in the Project Corridor. The Project plans propose to traverse these areas using low-impact crossing methods, such as HDD. Additional consultation with USFWS will be completed prior to construction.

9.4.7 Western regal fritillary

Suitable habitat for western regal fritillary is present in the Project Corridor. Consultations with the USFWS are ongoing, and Hiland is working to develop avoidance, minimization, and mitigation measures to reduce impacts on Western regal fritillary.

9.4.8 Northern long-eared bat

Suitable habitat for northern long-eared bat is present in the Project Corridor. The Project plans to avoid most of these areas, though minor tree clearing is anticipated. Additional consultation with USFWS will be completed prior to construction.

9.4.9 Bald and Golden Eagles

To mitigate potential adverse effects on nesting and breeding eagles, the USFS generally recommends maintaining a nest buffer of at least 0.5 mile for golden eagles nesting in the area, and a buffer of one mile for active bald eagle nests. Hiland will work with the USFS and USFWS as necessary if an active eagle nest is identified within one mile of the proposed pipeline route.

9.4.10 Migratory Bird Treaty Act

The commonly observed timeframe for avian migration in North Dakota is February 1st to July 15th. Construction activities for the proposed Project are planned to begin in May 2025. Based on the Project's schedule, construction activities are anticipated to occur during the recognized migration/breeding season. Hiland anticipates avoiding avian habitat areas, such as tree and shrub areas, and will conduct pre-clearing surveys for nesting birds prior to the commencement of ground disturbing activities. If nesting areas are identified, Hiland will implement avoidance and monitoring measures of any active nests.

As part of the consultations with the NDGFD, it requested:

- Every effort be made to prevent destruction of native prairie and wooded draws and disturbed areas be reclaimed to pre-Project conditions.
- Appropriate precautions be taken to protect any wetlands that cannot be avoided.
- Aerial surveys be conducted for raptor nests before construction begins and a 0.5-mile buffer is implemented around active eagle nest sites.

A record of this communication can be found in Exhibit D.

As mentioned above, on November 14, 2024, Hiland's consultant discussed these concerns with NDGFD. This Project does not cross wooded draws, and thus no impacts on that habitat type are expected. Hiland outlined Hiland's habitat surveys for Dakota skipper, a native prairie obligate, and will avoid habitat for these species by routing around or boring. Through these measures, impacts on native prairie will be avoided.

Hiland plans to avoid and minimize impacts on wetlands and to consult with the USACE if wetland impacts are anticipated.

Hiland conducted line-of-sight surveys for eagle nests during September 2024; aerial surveys were deemed unnecessary by NDGFD due to flat topography and limited nesting habitat in the vicinity of the Project. No nests were observed. Hiland also plans to conduct pre-construction line-of-sight nest surveys in 2025. Nests observed during pre-construction will be avoided or re-located.

As outlined in Section 9.0, Hiland has already accounted for many of these concerns and has developed, or will develop, plans and procedures to address these items during construction. Hiland will continue to review work plans and procedures to incorporate NDGFD's recommendations where feasible.

9.5 LAND USE

Hiland will obtain and comply with applicable county permits, including, but not limited to, grade and fill permits, ditch crossing permits, and road and utility permits. Hiland will retain one or more EIs to monitor compliance with environmental conditions of county permits.

Hiland will repair surface drains and drainage tiles disturbed during ROW preparation, construction, and maintenance activities. Hiland will repair private roads and farm lanes damaged when moving equipment or when obtaining access to the ROW. Hiland will repair or replace

fences and gates removed or damaged as a result of ROW preparation, construction, or maintenance activities.

The Project will be installed at a minimum depth of 48 inches from the surface contour to minimize the potential for environmental damage resulting from deep tillage activities unless modified to accommodate special construction issues at the site. Upon installation of the pipeline, all Project locations will be returned to their original pre-construction contours and land use to the extent feasible.

9.6 CULTURAL RESOURCES

Consideration of the potential effects to cultural resources have occurred throughout the course of the Project. Hiland has revised the pipeline route to avoid cultural resources and proposes to use HDD as an avoidance measure when design alternatives are not possible. Hiland anticipates concurrence on the Project's cultural resources recommendations and a determination no historic properties affected from the North Dakota SHPO.

As discussed in Section 5.1 above, with the exception of a minor reroute on the Johnson property, Hiland completed a Class III intensive cultural resources inventory survey of the Project Corridor and will submit the cultural resource report to North Dakota SHPO for agency review in January 2025. Following the SHPO's review of the report and Project effect, Hiland will continue to consult with the SHPO to develop and implement avoidance measures to avoid effect to NRHP-eligible properties. Hiland will file future SHPO correspondence with the NDPSC upon receipt.

Despite the intensive Class III inventory, there remains a potential that previously unreported cultural resources or human remains could be encountered during later phases of the Project. As such, Hiland developed a Project-specific Unanticipated Discoveries Plan (UDP, Exhibit F). The UDP specifies protocols that will be followed in the unlikely event that mortuary features or other cultural resources are discovered during Project development. At the point of discovery, ground disturbing work will be halted, the find will be secured until appropriate agencies can be notified, and the discovery will be assessed and mitigated under terms of the UDP. The UDP will be incorporated into contract documents and will be followed over the duration of the Project.

10.0 DEVELOPMENT

10.1 AREAS OF KNOWN GEOLOGIC INSTABILITY

Desktop analysis identified one area containing landslide deposits within the Project Corridor. However, this deposit does not intersect the Route. Mitigation will be implemented through minimizing impacts with construction techniques and restoring the area to its original condition. This will be accomplished through preserving topsoil and continued monitoring of the area through restoration until the site reaches final stabilization per applicable permit(s) requirements.

10.2 PRESENT AND FUTURE NATURAL RESOURCE DEVELOPMENT IN THE AREA

A small percentage of North Dakota is held in public ownership. Of the 44.1 million acres of land in the state, approximately five percent (2.2 million acres) are owned in fee title by state and federal land management agencies. Most of these agencies work in cooperation with private producers in managing these lands. For example, the NDGFD leases certain tracts of wildlife management areas for grazing, haying, and food plots. The USFS manages for multiple uses,

and the sustained yield of renewable resources such as water, forage, wildlife, and recreation, as well as industries such as oil and gas development.

As discussed in Section 7.1 above, there are no national parks, national memorial parks, national historic sites and landmarks, national wilderness areas, or national monuments located within the Project Corridor. There are no designated or registered state parks, sites, monuments, or nature preserves along the Project Corridor. There are no county parks, recreational areas, municipal parks, or parks owned or administered by other governmental subdivisions crossed by the route. As such, there will be no direct impacts to national parks, sites, monuments, or wilderness.

As discussed in Section 7.2 above, there are no federally-managed wildlife areas; wild, scenic, or recreational rivers; or wildlife refuges within the study area, Project Corridor, or Route. The Project does not cross the Little Missouri National Grassland (LMNG) managed by USFS. Within the LMNG, with the exception of approximately two miles, Hiland has collocated the Project adjacent to a previously disturbed pipeline corridor. As noted previously, Hiland is currently seeking the appropriate permits from USFS for installation of the pipeline. Hiland will comply with all conditions of the USFS permit and will file the permit with the NDPSC upon receipt.

The land use along the pipeline route is primarily in agricultural production with a significant number of oil wells and other pipeline systems and associated infrastructure in the area. As the pipeline is a buried utility, surface land use will return to pre-existing conditions once the pipeline is installed.

Other known development projects in the vicinity of the Project are discussed in Section 8.8 of this application. Hiland is not aware of any federal, state, or local natural resource development plans within the Project Corridor or study area.

11.0 QUALIFICATIONS OF PREPARERS

Eric Jensen
Senior Project Manager
Kinder Morgan, 8811 South Yale Ave, Suite 200, Tulsa, OK 74137
Degree: B.S. Mechanical Engineering from University of Saskatchewan

Mr. Jensen is a Senior Project Manager with over 28 years of experience in project management in the Oil and Gas Industry in various aspects related to construction, engineering, operations and maintenance activities. He has managed multiple pipeline projects that have been regulated with various federal, state and local agencies.

Cody Mikeska
Specialist- Permitting Compliance Sr. II
Kinder Morgan
Degree: B.S. Rangland Ecology and Management from Texas A&M University

Mr. Mikeska is a Permitting Compliance Specialist with over 26 years of experience in environmental permitting and natural resource management in the oil and gas industry. He has managed the environmental permitting and compliance for multiple pipeline projects that have been regulated with various federal, state, and local agencies.

John Cannon
Senior Project Manager

Merjent, Inc.
Degree(s): M.S. Environmental Planning, University of Minnesota
B.S. Environmental and Natural Resources, University of Minnesota

John Cannon is a Senior Environmental Project Manager in Merjent's Minneapolis, Minnesota office with over 15 years of consulting experience. Mr. Cannon provides environmental permitting services, including: NEPA compliance, wetland permitting, National Pollutant Discharge Elimination System (NPDES) compliance, and SWPPP management services for oil and gas and energy projects throughout the Midwest. Mr. Cannon's responsibilities include client account management, project management, technical discipline task leadership, state and federal agency coordination, field work coordination and supervision, permit application preparation, and technical report preparation.

Matthew Long
Senior Landscape Ecologist, Pipeline Sector Lead
Merjent, Inc.
Degree(s): M.A. Theological Education, Gordon Conwell Theological Seminary
B.S. Watershed Management, Colorado State University

Mr. Long is a Senior Landscape Ecologist and a Project Manager with more than 25 years of environmental consulting experience serving the pipeline industry as well as other industrial, commercial, and government interests. He has served as Project Manager and resource specialist on numerous projects in over 48 states and several other countries. Mr. Long's responsibilities have included preparation of federal, state, and local permit applications, State Public Utility Commission filings, construction and industrial SWPPPs, NPDES applications, Soil Erosion and Sediment Control Plans, Environmental Mitigation Plans; and coordination of state and federal agency consultations. Mr. Long is also Merjent's Pipeline Sector Lead.

Teagan Loew, PWS
Certified Senior Ecologist and Deputy Project Manager
Merjent, Inc.
Degree(s): M.S., Environmental Science, Bowling Green State University
B.A. Environmental Studies, Bowling Green State University

Mr. Loew is a Senior Ecologist and Project Manager with 15 years of technical experience managing and completing a variety of natural resource focused projects in midwestern and western regions. His expertise includes wetland delineations, stream assessments, federal and state listed species coordination and surveys, biological surveys, restoration and mitigation design and planning, and a variety of permitting and documentation (including Clean Water Act jurisdictional determinations and 404/401 permitting, NPDES applications, compliance, and SWPPPs, NEPA Environmental Assessments, Environmental Impact Statements, and Categorical Exclusions, and various local permitting). He has managed and acted as a resource specialist on projects of various sizes and within several market types.

Taylor Roberts
GIS Analyst
Merjent, Inc.
Degree(s): B.A. Environmental Studies, University of Wisconsin – Madison;
B.A. Political Science, University of Wisconsin – Madison

Ms. Roberts is a GIS Analyst at Merjent with five years of experience mapping, analyzing, managing, and maintaining various datasets using ArcGIS and ArcGIS Online. Ms. Roberts works as the technical lead for small and large-scale projects, providing geospatial data and mapping for various oil and gas pipeline, transmission line, solar and wind projects. GIS tasks performed include natural resource mapping and analysis, permitting support and impact assessments, mapping and analysis of threatened and endangered species, vegetation mapping and analysis, Python scripting, and managing ArcGIS Online web applications for internal and external clients.

Erin Vander Stelt, PWS, M.S.
Sr. Environmental Scientist
Merjent, Inc.
Degree(s): M.S. Plant Biology and Conservation, Northwestern University
B.S. Biology – Ecological Sciences, Northwestern College

Mrs. Vander Stelt is an Environmental Consultant with Merjent with nine years of experience in the water resources and environmental regulation fields. Her experience in the environmental field includes deputy project management, interpretation and analysis of regulations, coordinating environmental field surveys and inspections, and conducting environmental field surveys and inspections. Mrs. Vander Stelt has permitting experience in nine states at the federal, state, and local levels to include Environmental Resource Reports, Nationwide Permit Applications, NPDES applications, and additional coordination with local, state, and federal units of government.

Jenna Long, B.S.
Environmental Analyst
Merjent, Inc.
Degree(s): B.S. Natural Resources, Oregon State University
B.A. History, Columbia University

Ms. Long is an Environmental Analyst with Merjent with several years of experience in wetland delineations and environmental permitting across the west and mid-west. Her experience in the environmental field includes deputy project management, interpretation and analysis of regulations, and coordinating and conducting environmental compliance inspections. Ms. Long has permitting experience in eight states at the federal, state, and local levels to include Environmental Resource Reports, Nationwide Permit applications, NPDES applications and SWPPPs, floodplain permitting applications, and additional coordination with local, state, and federal units of government.

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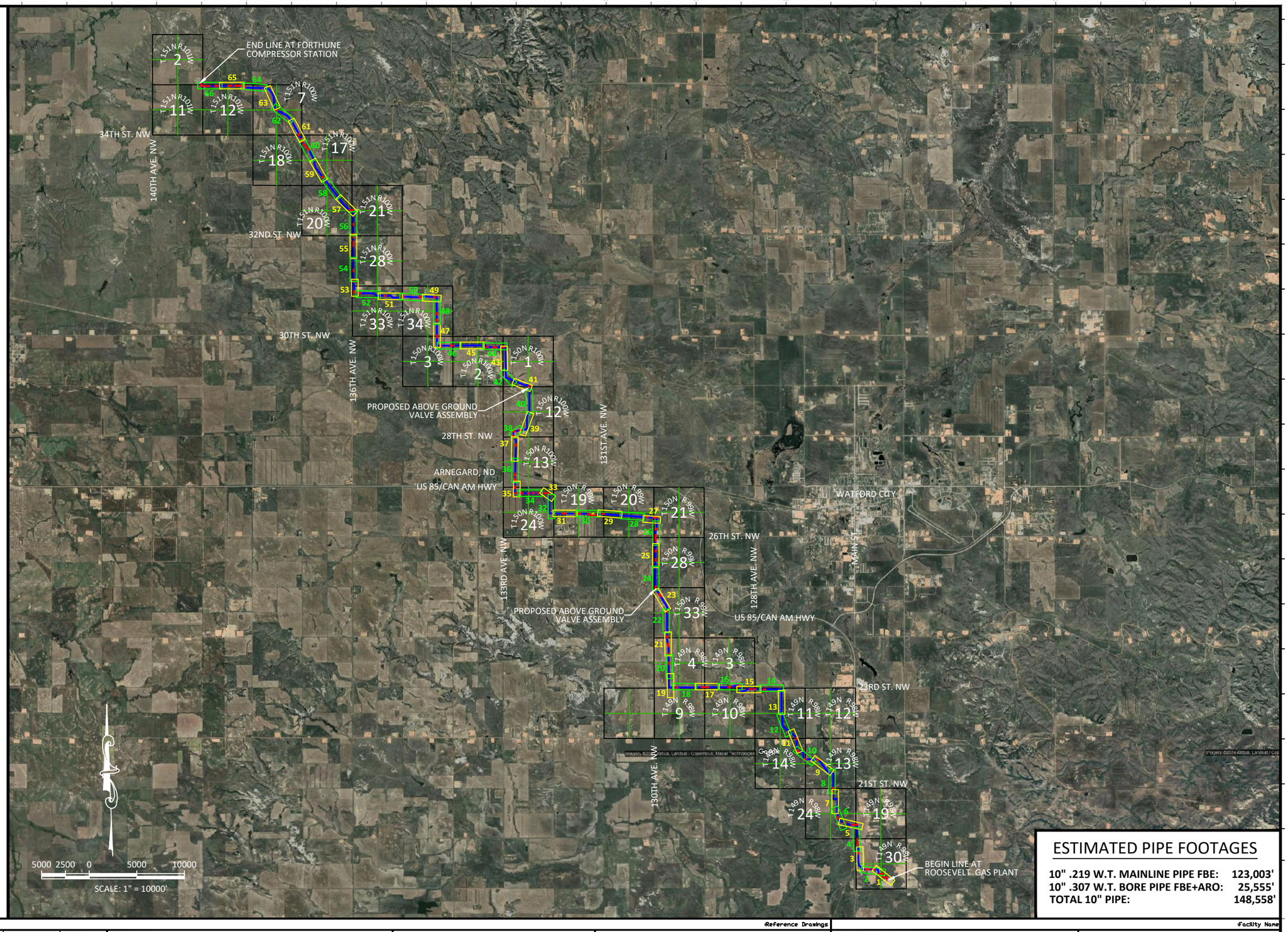
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Exhibit A

Engineering Documents

DRAWING INDEX

DESCRIPTION				SHEET #
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STATION:	1462+00.00`	to	1485+57.34	66



ESTIMATED PIPE FOOTAGES

10" .219 W.T. MAINLINE PIPE FBE:	123,003'
10" .307 W.T. BORE PIPE FBE+ARO:	25,555'
TOTAL 10" PIPE:	148,558'

CRITICAL_DRAWING

D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024
	Revision Description	Project ID	Date

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

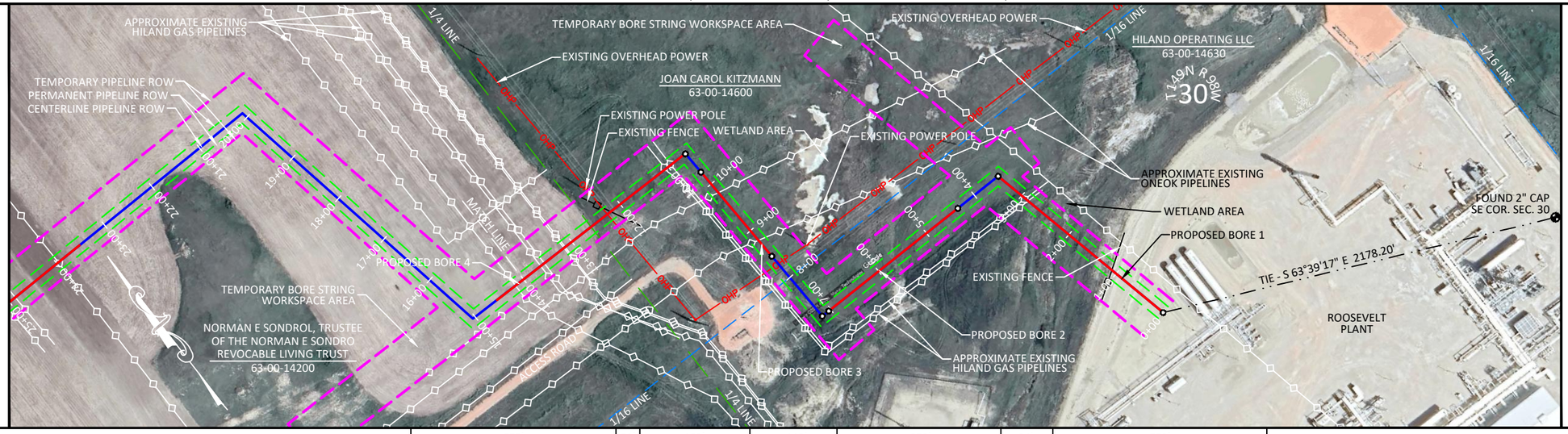
HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
COVER SHEET
0+00.00 (B.O.L.) TO 1485+57.34 (E.O.L.)
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Facility Name

Status: PROPOSED

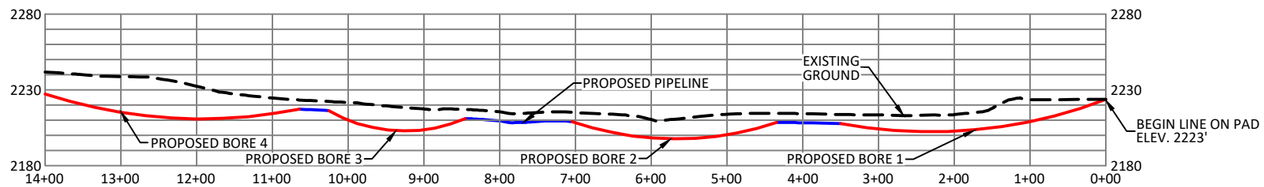
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County:	MCKENZIE	Scale:	1" = 10000'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

LAND	PROTECTION EASEMENT				NORMAN E SONDROL, TRUSTEE OF THE NORMAN E SONDRO REVOCABLE LIVING TRUST 63-00-14200			JOAN CAROL KITZMANN 63-00-14600			HILAND OPERATING LLC 63-00-14630								
	LAND PLAT RODS				8.48			27.89			48.49								
	STATION				14+00.00			12+60.15			8+00.02							0+00.00	
PIPELINE STATIONING	CROSSINGS	14+00.00 MATCHLINE	13+64.31 APPROXIMATE EXISTING HILAND GAS PIPELINE	13+56.87 APPROXIMATE EXISTING HILAND GAS PIPELINE	13+16.25 APPROXIMATE EXISTING HILAND GAS PIPELINE	13+13.57 APPROXIMATE EXISTING HILAND GAS PIPELINE	12+60.15 OWNERSHIP LINE	12+26.39 EXISTING OVERHEAD POWER	12+19.39 EXISTING FENCE	11+05.72 APPROXIMATE EXISTING HILAND GAS PIPELINE	10+94.88 APPROXIMATE EXISTING HILAND GAS PIPELINE	10+64.87 BEGIN BORE 4	10+64.87 P.I. < 87°41'47" LT	10+25.73 END BORE 3	9+81.70 APPROXIMATE EXISTING ONEOK PIPELINE	8+79.70 APPROXIMATE EXISTING ONEOK PIPELINE	8+45.73 BEGIN BORE 3	8+29.24 EXISTING OVERHEAD POWER	8+00.02 OWNERSHIP LINE	7+17.65 P.I. < 88°20'04" RT	7+04.32 END BORE 2	5+84.41 WETLAND AREA	5+58.78 WETLAND AREA	4+34.32 BEGIN BORE 2	3+50.00 P.I. < 78°04'59" LT	3+50.00 END BORE 1	2+92.42 APPROXIMATE EXISTING HILAND GAS PIPELINE	2.86.41 APPROXIMATE EXISTING HILAND GAS PIPELINE	2+56.71 WETLAND AREA	2+09.73 WETLAND AREA	1+08.90 EXISTING FENCE	0+00.00 BEGIN BORE 1	0+00.00 BEGIN LINE @ ROOSEVELT PLANT
ALIGNMENT STRIP MAP	PLAN																		

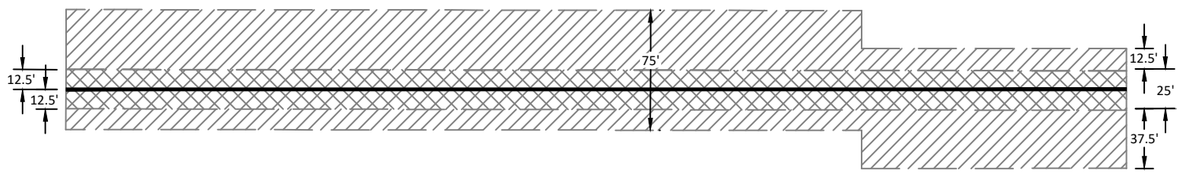


PIPELINE								
MATERIAL	335'	39'	180'	142'	270'	84'	350'	
	②	①	②	①	②	①	②	
COATING								
DESIGN FACTOR								
CLASS LOCATION								
MAOP								

PROFILE — ELEVATION



WORKSPACE — FOOTPRINT



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

GENERAL NOTES

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BEARINGS ARE ORIENTED TO THE NORTH DAKOTA STATE PLANE COORDINATE SYSTEM, NORTH ZONE, FROM GPS MEASUREMENTS AT A WHS CONTROL POINT (5/8" REBAR), LATITUDE: 47°50'53.379" NORTH, LONGITUDE: 103°27'47.616" WEST, HAVING A NAVD 88 ELEVATION OF 2374.789. PROJECT ELEVATIONS ARE BASED ON GPS OBSERVATIONS DERIVED USING GEOID 12B HELD ON THE CONTROL POINT.

DISTANCES SHOWN ARE GRID DISTANCES, USE A COMBINED SCALE FACTOR OF 1.000166337 TO GET GROUND DISTANCES.

INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	265'
2	10" .307 W.T. BORE PIPE FBE+ARO	1135'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024
NO.	Revision Description	Project ID	Date

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

Facility Name

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 1 OF 66
0+00.00 (B.O.L.) TO 14+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

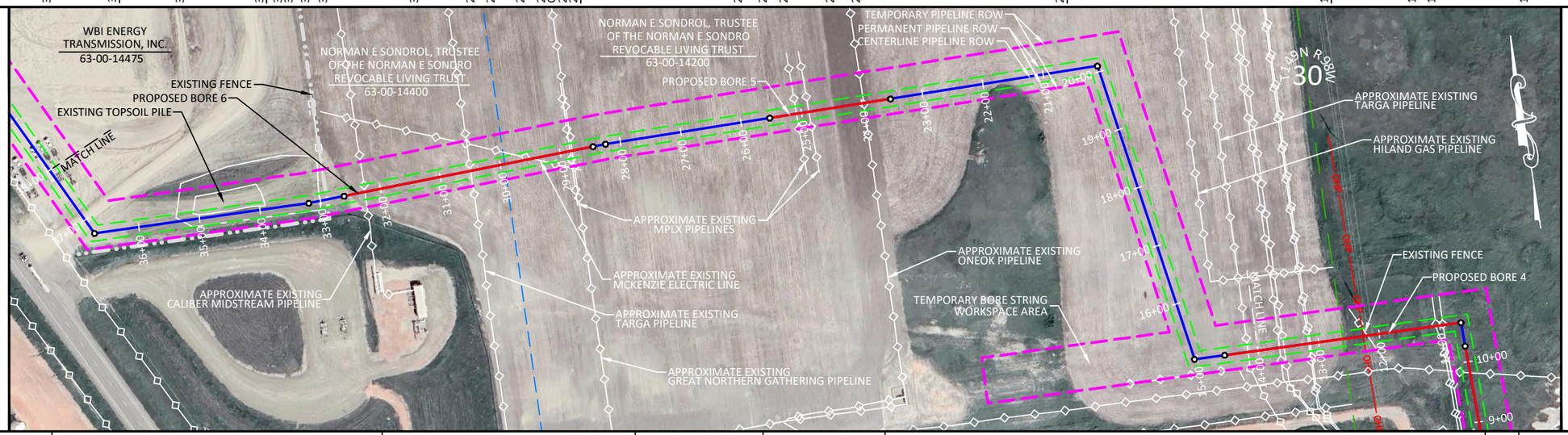
Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

Feb 12, 2025 - 8:53pm

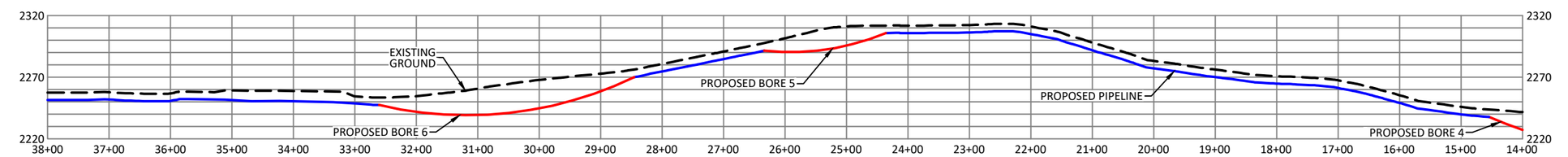
LAND	PROTECTION EASEMENT		WBI ENERGY TRANSMISSION, INC. 63-00-14475 30.94		NORMAN E SONDROL, TRUSTEE OF THE NORMAN E SONDROL REVOCABLE LIVING TRUST 63-00-14400 17.97		NORMAN E SONDROL, TRUSTEE OF THE NORMAN E SONDRO REVOCABLE LIVING TRUST 63-00-14200 96.55										
	LAND PLAT RODS																
	STATION	38+00.00		32+89.47		29+93.01											14+00.00
PIPELINE STATIONING	CROSSINGS	38+00.00 MATCHLINE	36+73.46 P.I. < 62°33'57"RT	35+28.55 TOPSOIL PILE	33+19.52 P.I. < 3°13'27"RT 33+00.72 TOPSOIL PILE 32+89.47 OWNERSHIP LINE	32+60.57 END BORE 6	32+25.62 APPROXIMATE EXISTING CALIBER MIDSTREAM PIPELINE	30+49.82 APPROXIMATE EXISTING TARGA PIPELINE	29+93.01 OWNERSHIP LINE	29+47.46 APPROXIMATE EXISTING MCKENZIE ELECTRIC LINE	28+83.81 APPROXIMATE EXISTING MPLX PIPELINE	28+80.52 APPROXIMATE EXISTING GREAT NORTHERN GATHERING PIPELINE	28+45.57 BEGIN BORE 6 28+24.57 P.I. < 2°14'46"LT	25+52.71 END BORE 5	25+08.33 APPROXIMATE EXISTING MPLX PIPELINE 24+88.00 APPROXIMATE EXISTING MPLX PIPELINE	23+97.10 APPROXIMATE EXISTING ONEOK PIPELINE	23+52.71 BEGIN BORE 5	20+09.87 P.I. < 80°41'41"LT	15+04.69 P.I. < 79°31'41"RT	14+54.87 END BORE 4	14+16.44 APPROXIMATE EXISTING TARGA PIPELINE	14+00.00 MATCHLINE

ALIGNMENT STRIP MAP — PLAN

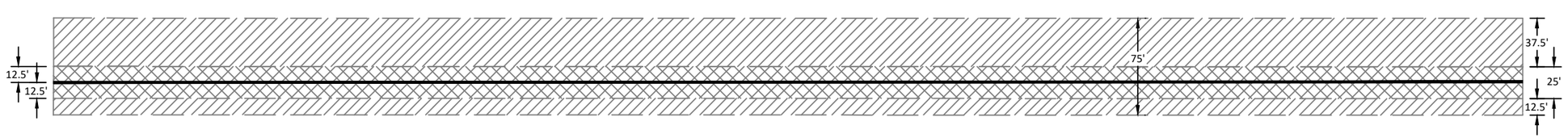


PIPELINE							
MATERIAL	540' ①	415' ②	292' ①	200' ②	898' ①	55' ②	
COATING							
DESIGN FACTOR							
CLASS LOCATION							
MAOP							

PROFILE — ELEVATION



WORKSPACE — FOOTPRINT



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

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INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1730'
2	10" .307 W.T. BORE PIPE FBE+ARO	670'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024
NO.	Revision Description	Project ID	Date

NOTES

Reference Drawings

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Facility Name

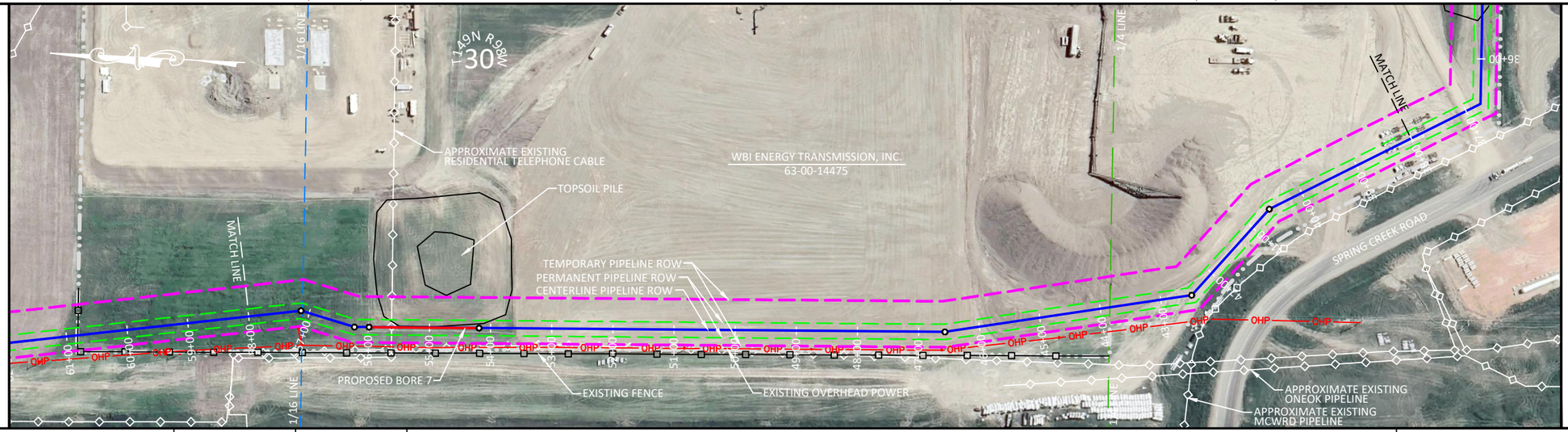
HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 2 OF 66
14+00.00 TO 38+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

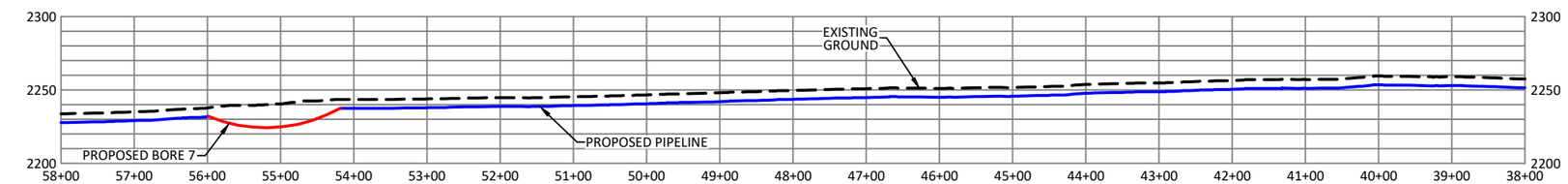
State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

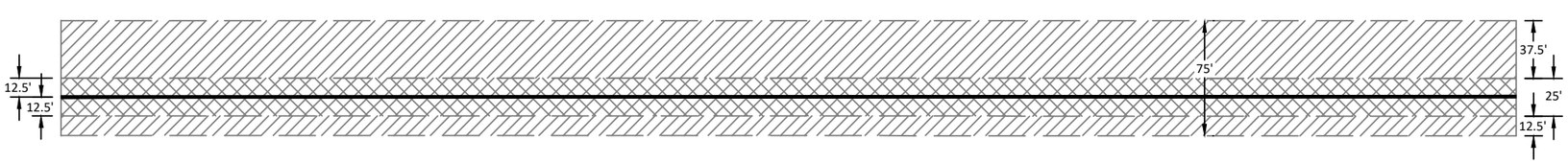
Feb 12, 2025 - 8:53pm

LAND	PROTECTION EASEMENT																
	LAND PLAT																
	RODS																
	STATION	58+00.00														38+00.00	
PIPELINE STATIONING	CROSSINGS	58+00.00 MATCHLINE		57+14.03 P.I. < 23°14'31" LT	56+22.76 P.I. < 16°29'29" RT	55+98.81 END BORE 7	55+61.71 APPROXIMATE EXISTING RESIDENTIAL TELEPHONE CABLE	54+18.81 BEGIN BORE 7				46+56.83 P.I. < 8°55'37" RT			42+48.70 P.I. < 39°28'12" RT	40+59.26 P.I. < 21°27'27" LT		38+00.00 MATCHLINE



PIPELINE	MATERIAL	381' ①		180' ②	1619' ①												
	COATING																
	DESIGN FACTOR																
	CLASS LOCATION																
	MAOP																





LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

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INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1820'
2	10" .307 W.T. BORE PIPE FBE+ARO	180'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024
NO.	Revision Description	Project ID	Date

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

Facility Name

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 3 OF 66
38+00.00 TO 58+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

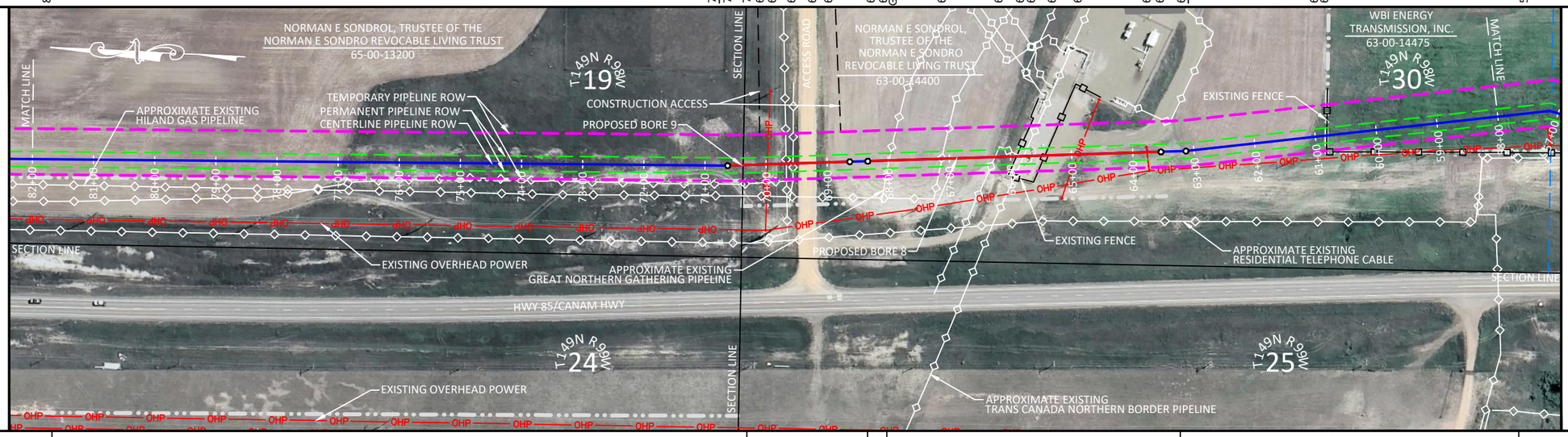
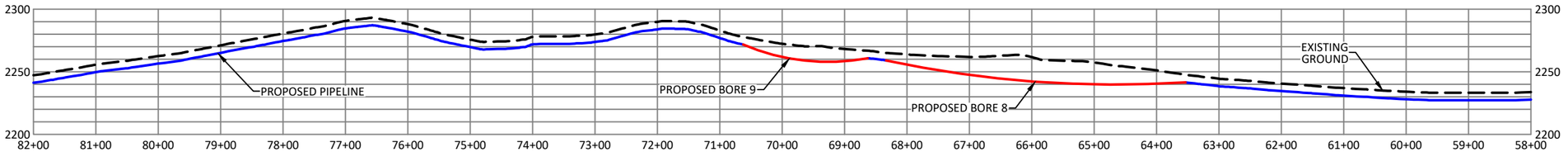
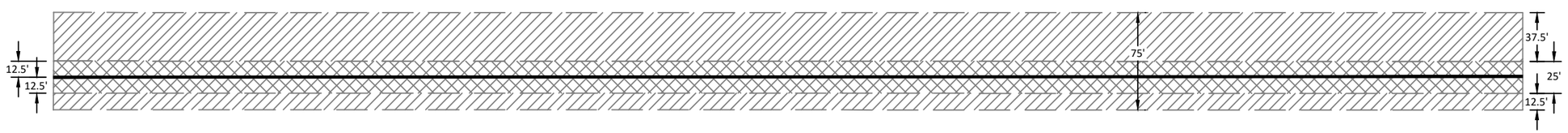
Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			

File Name: HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg

Drawing No: HILAND EXPRESS SPINE TIE-IN-PRO-001 Rev

Feb 12, 2025 - 8:59pm

LAND	PROTECTION EASEMENT		NORMAN E SONDROL, TRUSTEE OF THE NORMAN E SONDRO REVOCABLE LIVING TRUST 65-00-13200 70.45					NORMAN E SONDROL, TRUSTEE OF THE NORMAN E SONDRO REVOCABLE LIVING TRUST 63-00-14400 57.91					WBI ENERGY TRANSMISSION, INC. 63-00-14475 17.09				
	LAND PLAT RODS																
	STATION	82+00.00					70+37.51					60+81.97					58+00.00
PIPELINE STATIONING	CROSSINGS	82+00.00 MATCHLINE					70+62.99 P.I. < 2°20'19" RT 70+62.99 END BORE 9	70+37.51 SECTION/OWNERSHIP LINE 69+97.56 EXISTING OVERHEAD POWER 69+67.06 APPROXIMATE EXISTING RESIDENTIAL TELEPHONE CABLE 69+55.85 APPROXIMATE EXISTING RESIDENTIAL TELEPHONE CABLE 69+28.36 EXISTING ACCESS ROAD	68+62.99 BEGIN BORE 9	68+33.56 END BORE 8 67+98.56 APPROXIMATE EXISTING GREAT NORTHERN GATHERING PIPELINE	67+12.38 APPROXIMATE EXISTING HILAND GAS PIPELINE	66+25.23 APPROXIMATE EXISTING EXISTING HESS PIPELINE 65+90.18 EXISTING FENCE 65+78.31 APPROXIMATE EXISTING TRANS CANADIAN PIPELINE 65+43.52 EXISTING FENCE	64+89.76 EXISTING OVERHEAD POWER	63+76.24 EXISTING GUY WIRES 63+53.56 BEGIN BORE 8 63+12.80 P.I. < 4°27'30" RT	60+81.97 OWNERSHIP LINE 60+81.26 EXISTING FENCE			58+00.00 MATCHLINE
ALIGNMENT STRIP MAP	PLAN																
PIPELINE	MATERIAL		1137' ①				200' ②	30' ①	480' ②			553' ①					
	COATING																
	DESIGN FACTOR																
	CLASS LOCATION																
	MAOP																
PROFILE	ELEVATION																
WORKSPACE	FOOTPRINT																

LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
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INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1720'
2	10" .307 W.T. BORE PIPE FBE+ARO	680'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

Reference Drawings

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Facility Name

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 4 OF 66
58+00.00 TO 82+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

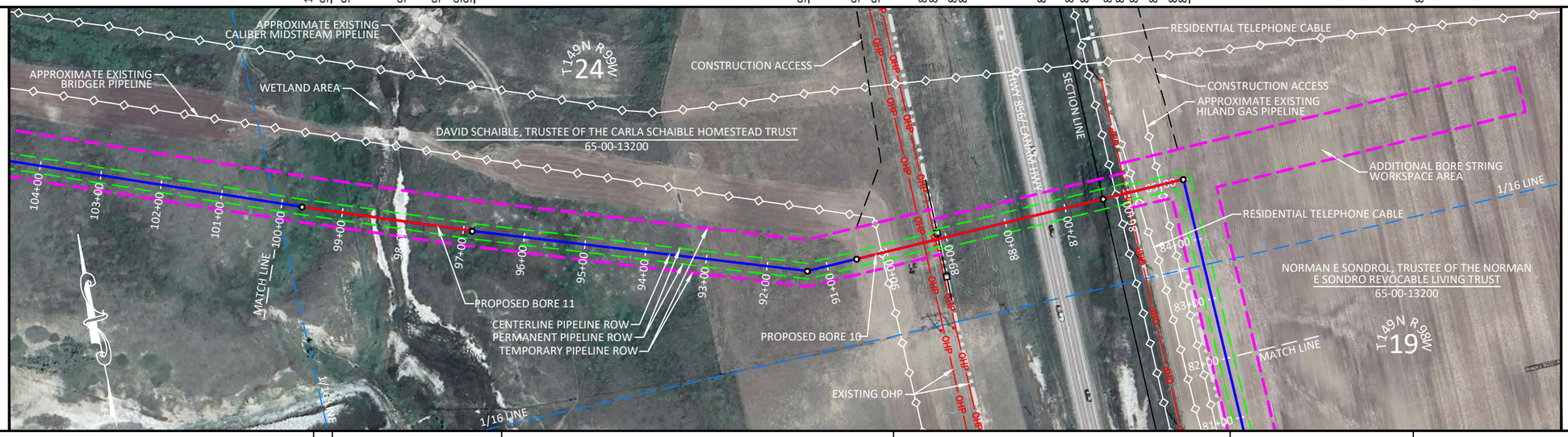
Feb 12, 2025 - 8:50am

LAND	PROTECTION EASEMENT		DAVID SCHAIBLE, TRUSTEE OF THE CARLA SCHAIBLE HOMESTEAD TRUST 65-00-13200 65.87	STATE OF NORTH DAKOTA 19.30	NORMAN E SONDROL, TRUSTEE OF THE NORMAN E SONDRO REVOCABLE LIVING TRUST 65-00-13200 23.91
	LAND PLAT RODS				
	STATION	100+00.00		89+13.07	85+94.59 82+00.00

PIPELINE STATIONING — CROSSINGS

100+00.00 MATCHLINE
99+66.81 P.I. < 0°51'10" RT
99+66.81 END BORE 11
98+42.15 WETLAND AREA
97+88.26 WETLAND AREA
96+86.20 BEGIN BORE 11
96+86.20 P.I. < 1°17'01" RT
91+33.56 P.I. < 20°30'08" RT
90+50.73 END BORE 10
90+08.30 APPROXIMATE EXISTING BRIDGER PIPELINE
89+38.11 EXISTING OVERHEAD POWER
89+18.11 EXISTING OVERHEAD POWER
89+13.07 HWY 85 R.O.W. LINE
89+12.89 EXISTING FENCE
87+38.39 HWY 85/CANAM HWY
86+35.44 SECTION/OWNERSHIP LINE
86+13.59 APPROXIMATE EXISTING RESIDENTIAL TELEPHONE CABLE
85+96.07 EXISTING OVERHEAD POWER
85+94.59 HWY 85 R.O.W. LINE
85+81.05 APPROXIMATE EXISTING RESIDENTIAL TELEPHONE CABLE
85+39.51 APPROXIMATE EXISTING HILAND GAS PIPELINE
85+00.73 BEGIN BORE 10
85+00.73 P.I. < 90°12'57" LT
82+00.00 MATCHLINE

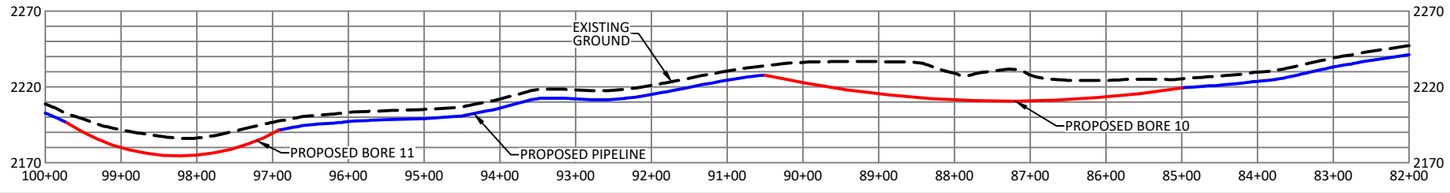
ALIGNMENT STRIP MAP — PLAN



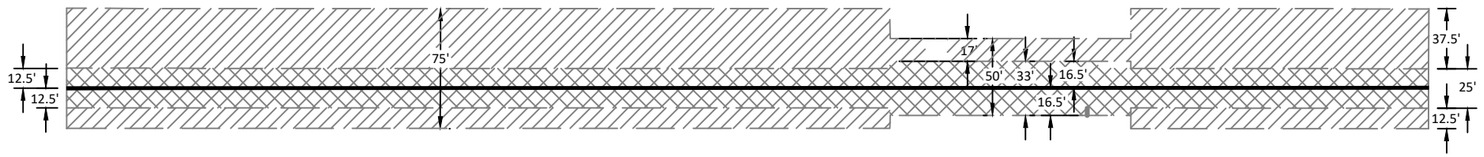
PIPELINE

MATERIAL	33'	280'	636'	550'	301'
	①	②	①	②	①
COATING					
DESIGN FACTOR					
CLASS LOCATION					
MAOP					

PROFILE — ELEVATION



WORKSPACE — FOOTPRINT



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

GENERAL NOTES

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DISTANCES SHOWN ARE GRID DISTANCES, USE A COMBINED SCALE FACTOR OF 1.000166337 TO GET GROUND DISTANCES.

INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	970'
2	10" .307 W.T. BORE PIPE FBE+ARO	830'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024
NO.	Revision Description	Project ID	Date

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

Facility Name
HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 5 OF 66
82+00.00 TO 100+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

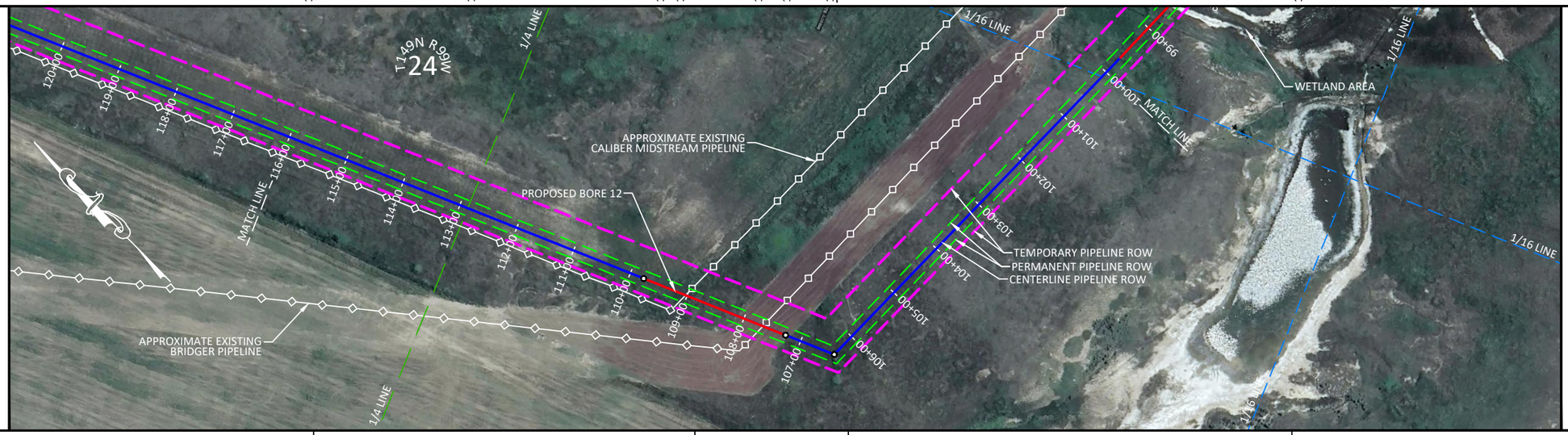
Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

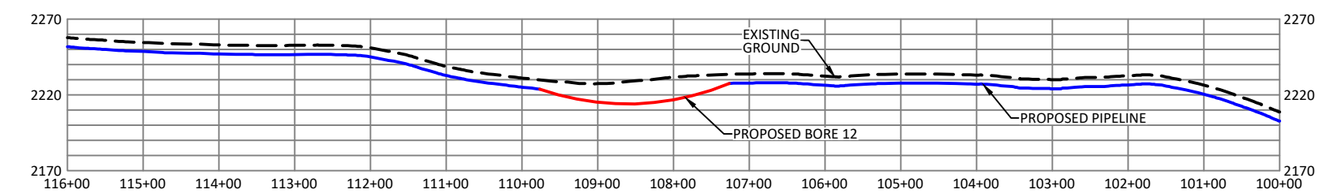
Feb 12, 2025 - 8:50PM

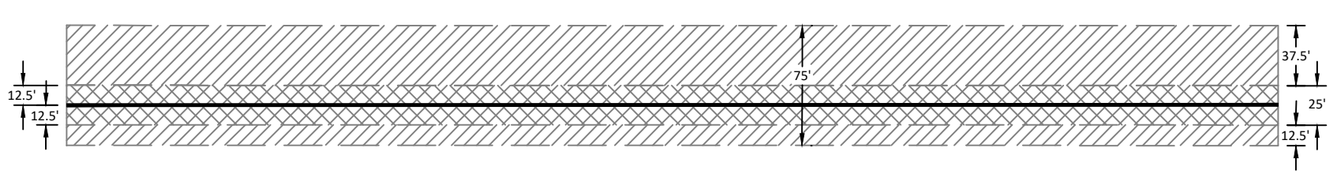
LAND	PROTECTION EASEMENT		TRACEY E CHRISTENSEN & TODD E SYVERSON 65-00-13250 19.01	DAVID SCHAIBLE, TRUSTEE OF THE CARLA SCHAIBLE HOMESTEAD TRUST 65-00-13200 77.96
	LAND PLAT			
	RODS			
	STATION	116+00.00	112+86.31	100+00.00

PIPELINE STATIONING	CROSSINGS	116+00.00 MATCHLINE	112+86.31 OWNERSHIP LINE	108+46.52 END BORE 12	108+02.59 APPROXIMATE EXISTING CALIBER MIDSTREAM PIPELINE	107+66.52 APPROXIMATE EXISTING BRIDGER PIPELINE	107+26.52 BEGIN BORE 12	106+40.61 P.I. < 67°48'28" RT	100+00.00 MATCHLINE



PIPELINE				
MATERIAL	624'	250'	726'	
	①	②	①	
COATING				
DESIGN FACTOR				
CLASS LOCATION				
MAOP				





LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
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- FOUND CORNER MONUMENT
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INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1350'
2	10" .307 W.T. BORE PIPE FBE+ARO	250'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

Facility Name

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 6 OF 66
100+00.00 TO 116+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

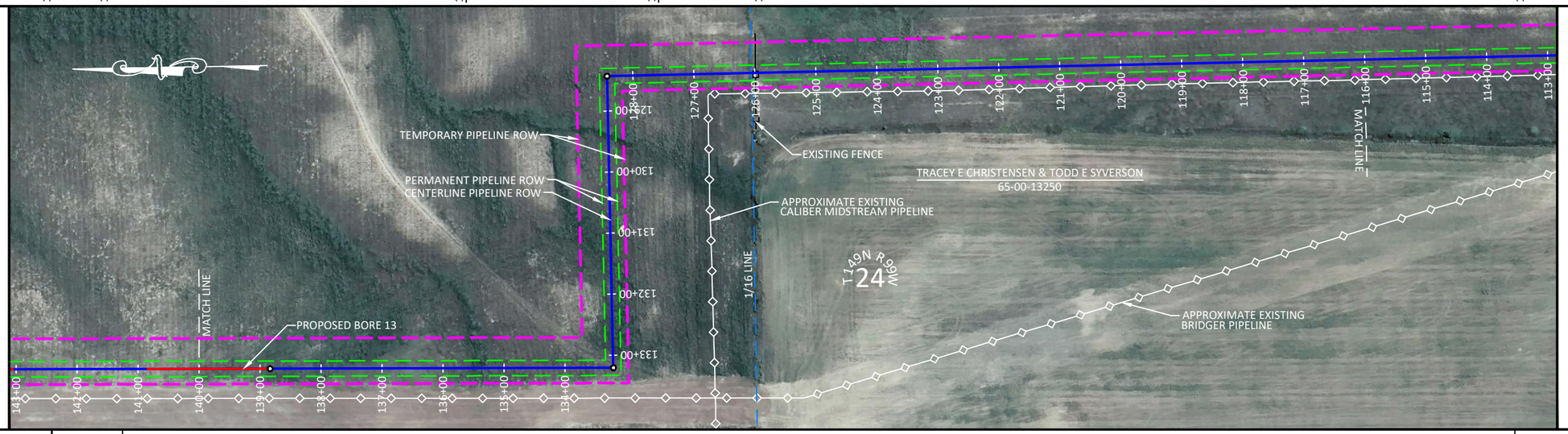
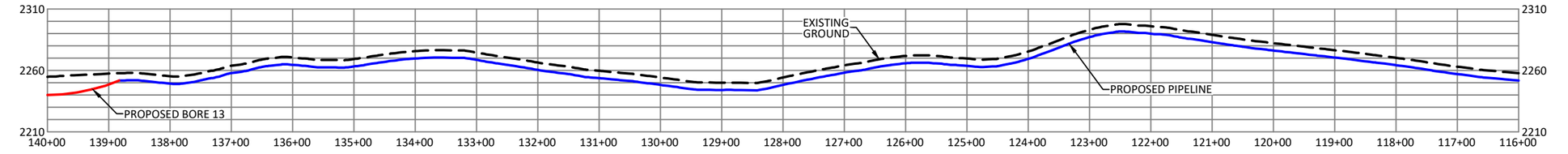
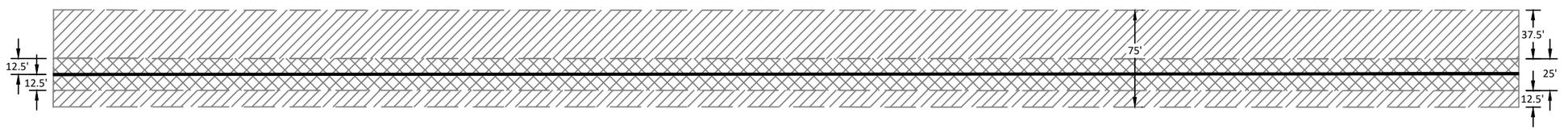
Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			

File Name: HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg

Drawing No: HILAND EXPRESS SPINE TIE-IN-PRO-001 Rev

Feb 12, 2025 - 8:35am

LAND	PROTECTION EASEMENT		TRACEY E CHRISTENSEN & TODD E SYVERSON 65-00-13250 145.45
	LAND PLAT RODS	140+00.00	116+00.00
	STATION		
PIPELINE STATIONING	CROSSINGS	140+00.00 MATCHLINE 138+83.76 BEGIN BORE 13 133+20.71 P.I. < 91°05'56" RT 128+42.54 P.I. < 89°59'35" LT 125+99.08 EXISTING FENCE	116+00.00 MATCHLINE
ALIGNMENT STRIP MAP	PLAN		
PIPELINE	MATERIAL	117' ②	2283' ①
	COATING		
	DESIGN FACTOR		
	CLASS LOCATION		
	MAOP		
PROFILE	ELEVATION		
WORKSPACE	FOOTPRINT		

LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

GENERAL NOTES

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DISTANCES SHOWN ARE GRID DISTANCES, USE A COMBINED SCALE FACTOR OF 1.000166337 TO GET GROUND DISTANCES.

INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2283'
2	10" .307 W.T. BORE PIPE FBE+ARO	117'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

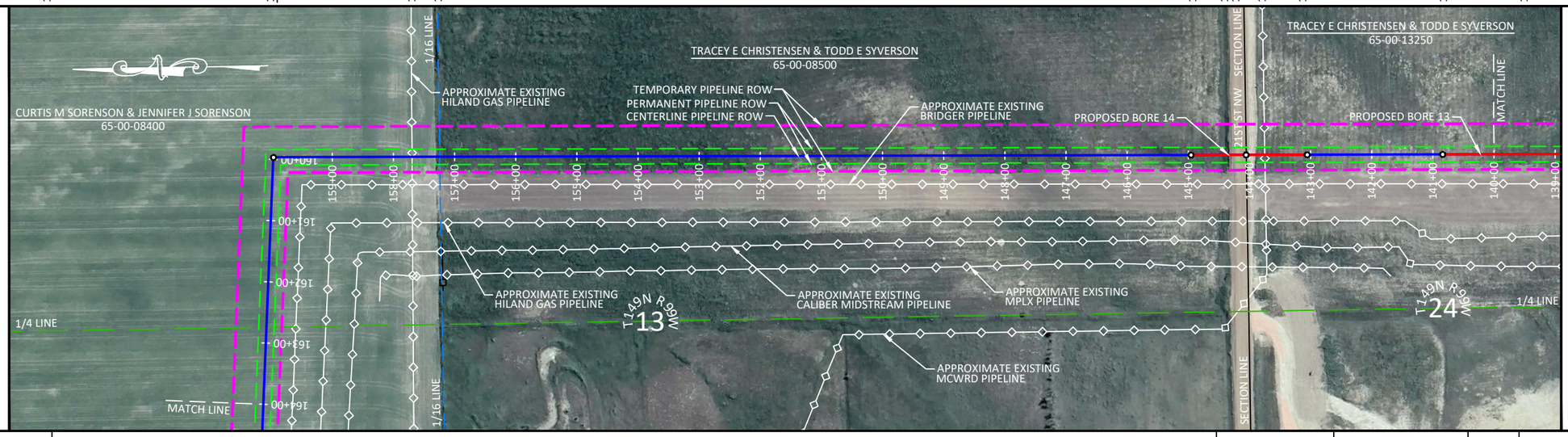
Facility Name

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 7 OF 66
116+00.00 TO 140+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

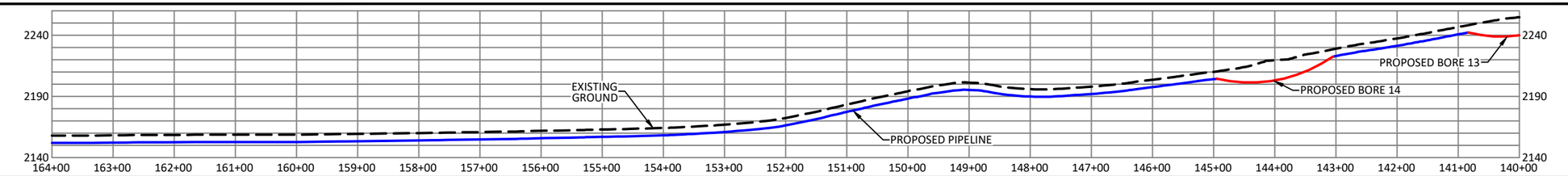
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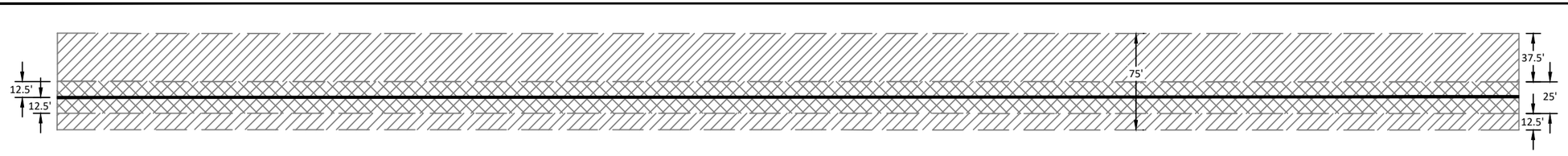
State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

LAND	PROTECTION EASEMENT		CURTIS M SORENSON & JENNIFER J SORENSON 65-00-08400 40.95			TRACEY E CHRISTENSEN & TODD E SYVERSON 65-00-08500 79.94							TRACEY E CHRISTENSEN & TODD E SYVERSON 65-00-13250 24.57					
	LAND PLAT RODS																	
	STATION	164+00.00			157+24.38							144+05.39						140+00.00
PIPELINE STATIONING	CROSSINGS	164+00.00 MATCHLINE		159+96.37 P.I. < 87°32'05" LT	157+69.60 APPROXIMATE EXISTING HILAND GAS PIPELINE	157+24.38 OWNERSHIP LINE						144+95.39 END BORE 14	144+17.13 21ST ST NW 144+05.39 SECTION/PROPERTY LINE		143+74.89 APPROXIMATE EXISTING MCWRD PIPELINE	143+05.39 BEGIN BORE 14		140+83.76 END BORE 13	140+00.00 MATCHLINE



PIPELINE	MATERIAL	1905' ①													190' ②	222' ①	83' ②	
	COATING																	
	DESIGN FACTOR																	
	CLASS LOCATION																	
	MAOP																	





LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
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INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2127'
2	10" .307 W.T. BORE PIPE FBE+ARO	273'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024
	Revision Description	Project ID	Date

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

Facility Name

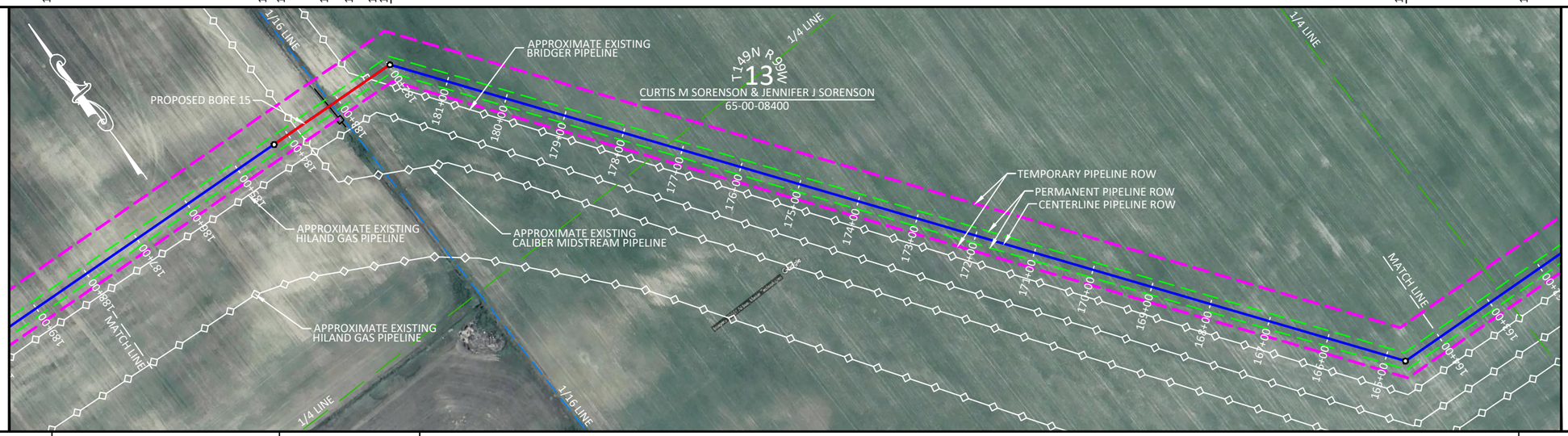
HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 8 OF 66
140+00.00 TO 164+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

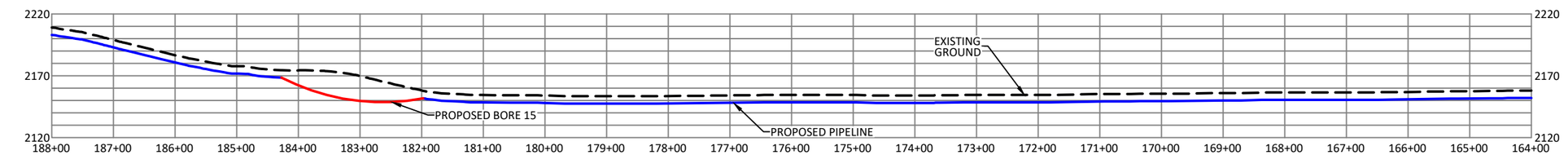
State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

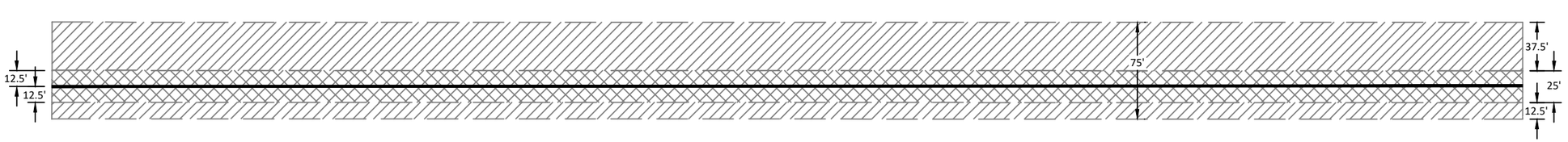
LAND	PROTECTION EASEMENT		CURTIS M SORENSON & JENNIFER J SORENSON 65-00-08400 145.45	
	LAND PLAT			
	RODS			
	STATION	188+00.00		164+00.00

PIPELINE STATIONING	CROSSINGS	188+00.00 MATCHLINE	184+27.93 END BORE 15 183+83.09 APPROXIMATE EXISTING CALIBER MIDSTREAM PIPELINE	183+18.68 EXISTING FENCE	182+39.44 APPROXIMATE EXISTING BRIDGER PIPELINE 181+97.93 BEGIN BORE 15 181+97.93 P.I. < 50°48'54" LT	164+67.50 P.I. < 50°56'23" RT	164+00.00 MATCHLINE	



PIPELINE	MATERIAL	372'	230'	1798'
		①	②	①
	COATING			
	DESIGN FACTOR			
	CLASS LOCATION			
	MAOP			





LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

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PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2170'
2	10" .307 W.T. BORE PIPE FBE+ARO	230'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024
NO.			

NOTES

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HILAND PARTNERS HOLDINGS, L.L.C.

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ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

Facility Name

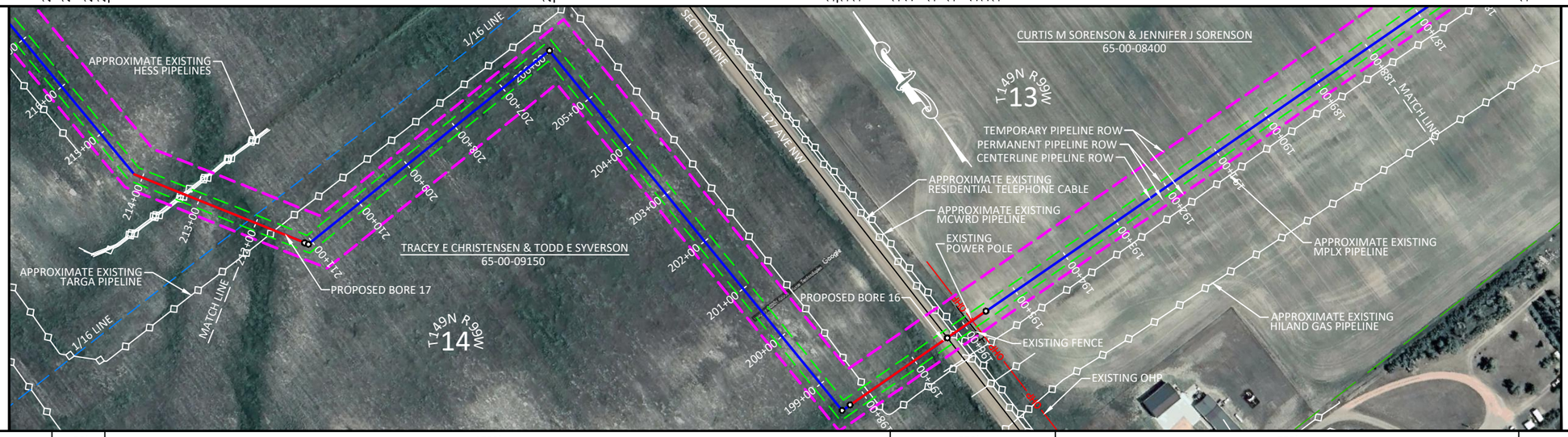
HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 9 OF 66
164+00.00 TO 188+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

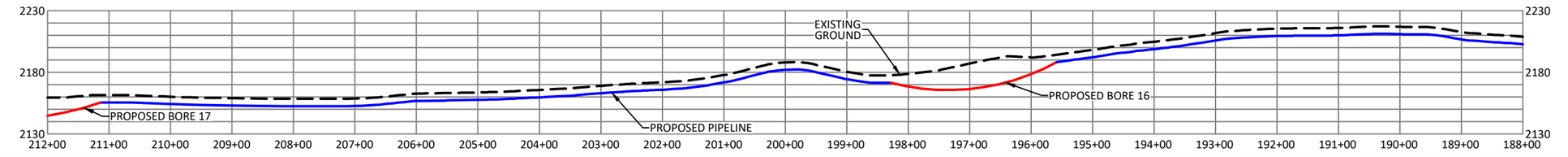
State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

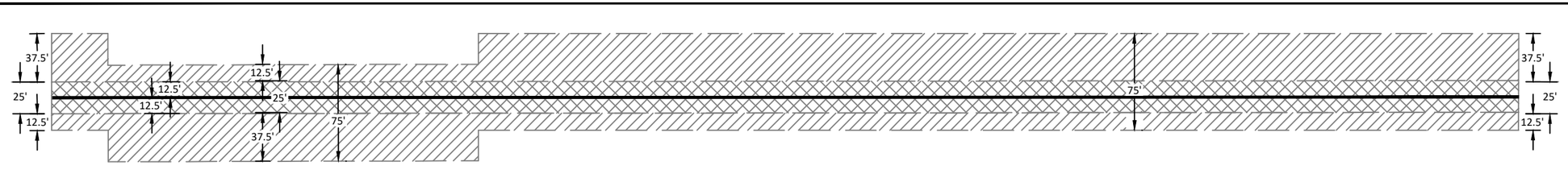
Feb 12, 2025 - 10:52am

LAND	PROTECTION EASEMENT		TRACEY E CHRISTENSEN & TODD E SYVERSON 65-00-09150 94.84	CURTIS M SORENSON & JENNIFER J SORENSON 65-00-08400 50.61
	LAND PLAT RODS	212+00.00	196+35.06	188+00.00
	STATION			
PIPELINE STATIONING	CROSSINGS	212+00.00 MATCHLINE 211+67.32 APPROXIMATE EXISTING TARGA PIPELINE 211+14.17 BEGIN BORE 17 211+07.47 P.I. < 60°33'40" RT 206+01.90 P.I. < 89°34'39" LT	198+43.96 P.I. < 85°24'04" RT 198+28.09 END BORE 16 197+90.95 APPROXIMATE EXISTING MPLX PIPELINE 196+40.31 127TH AVE NW 196+35.06 SECTION/OWNERSHIP LINE 196+23.25 APPROXIMATE EXISTING RESIDENTIAL TELEPHONE CABLE 196+15.05 APPROXIMATE EXISTING MCWRD PIPELINE 195+91.33 EXISTING FENCE 195+85.43 EXISTING OVERHEAD POWER 195+58.09 BEGIN BORE 16 188+00.00 MATCHLINE



PIPELINE	MATERIAL	86' ②	1300' ① / 270' ② / 758' ①
	COATING		
	DESIGN FACTOR		
	CLASS LOCATION		
	MAOP		





LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

GENERAL NOTES

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DISTANCES SHOWN ARE GRID DISTANCES, USE A COMBINED SCALE FACTOR OF 1.000166337 TO GET GROUND DISTANCES.

INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2044'
2	10" .307 W.T. BORE PIPE FBE+ARO	356'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

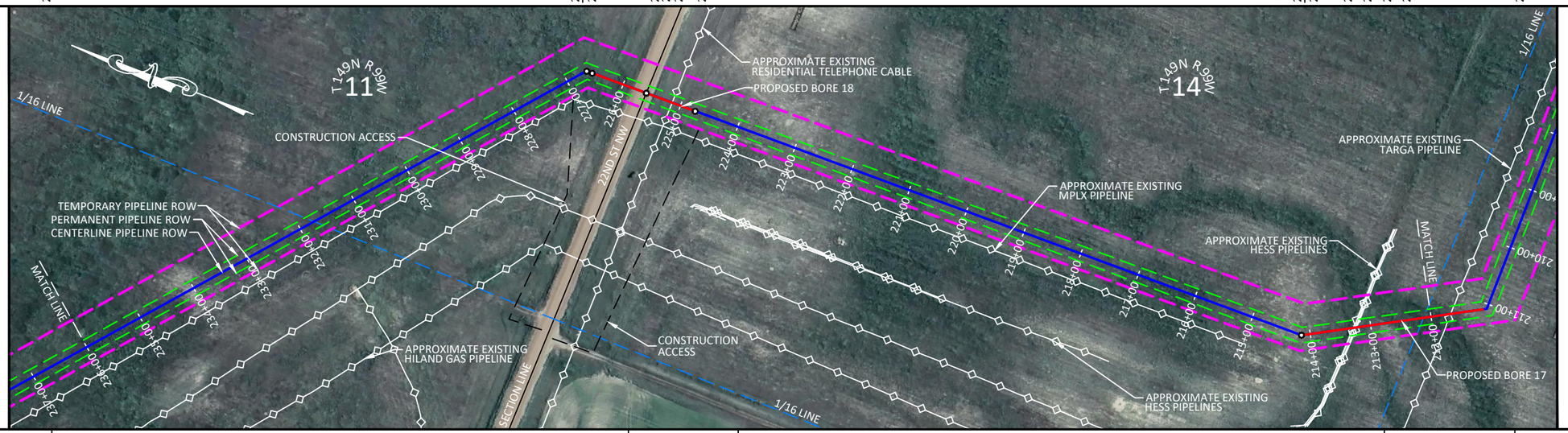
Facility Name:
HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 10 OF 66
188+00.00 TO 212+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

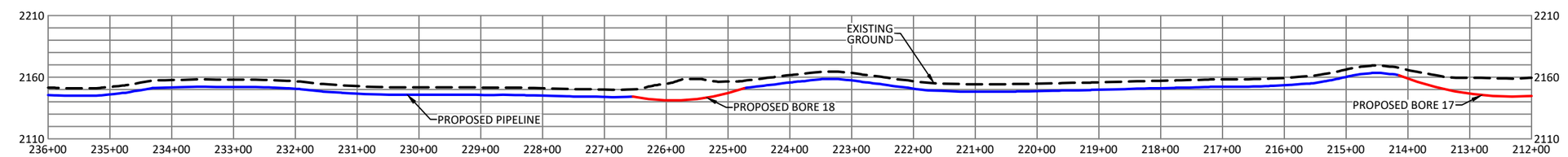
State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

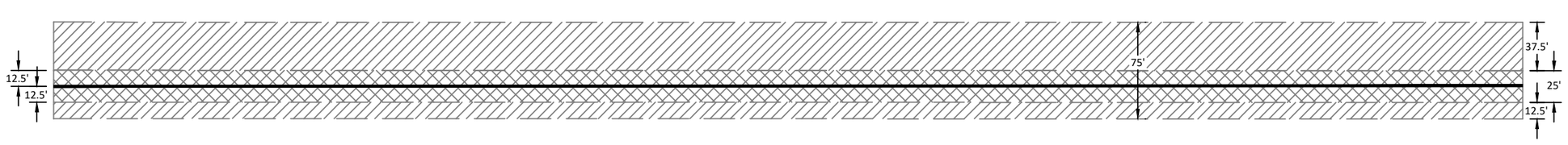
Feb 12, 2025 - 8:34PM

LAND																	
PROTECTION EASEMENT		TRACEY E CHRISTENSEN & TODD E SYVERSON 65-00-05700 63.05						TRACEY E CHRISTENSEN & TODD E SYVERSON 65-00-09150 82.40									
LAND PLAT RODS																	
STATION	236+00.00					225+59.67											212+00.00
PIPELINE STATIONING CROSSINGS	236+00.00 MATCHLINE			226+63.76 P.I. < 49°09'14" LT 226+54.30 END BORE 18		225+64.30 22ND ST NW 225+59.67 SECTION/OWNERSHIP LINE 225+14.20 APPROXIMATE EXISTING RESIDENTIAL TELEPHONE CABLE 224+74.30 BEGIN BORE 18						214+14.17 P.I. < 28°26'33" RT 214+14.17 END BORE 17	213+28.82 APPROXIMATE EXISTING HESS PIPELINE 213+27.90 APPROXIMATE EXISTING HESS PIPELINE 213+25.14 APPROXIMATE EXISTING HESS PIPELINE 213+23.01 APPROXIMATE EXISTING HESS PIPELINE			212+00.00 MATCHLINE



PIPELINE																	
MATERIAL	946' ①					180' ②		1060' ①								214' ②	
COATING																	
DESIGN FACTOR																	
CLASS LOCATION																	
MAOP																	





LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

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INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2006'
2	10" .307 W.T. BORE PIPE FBE+ARO	394'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

Facility Name

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 11 OF 66
212+00.00 TO 236+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

Feb 12, 2025 - 10:04am

LAND — PROTECTION EASEMENT / LAND PLAT / RODS / STATION

260+00.00 — TRACEY E CHRISTENSEN & TODD E SYVERSON, 65-00-05700, 145.45 — 236+00.00

PIPELINE STATIONING — CROSSINGS

260+00.00 MATCHLINE

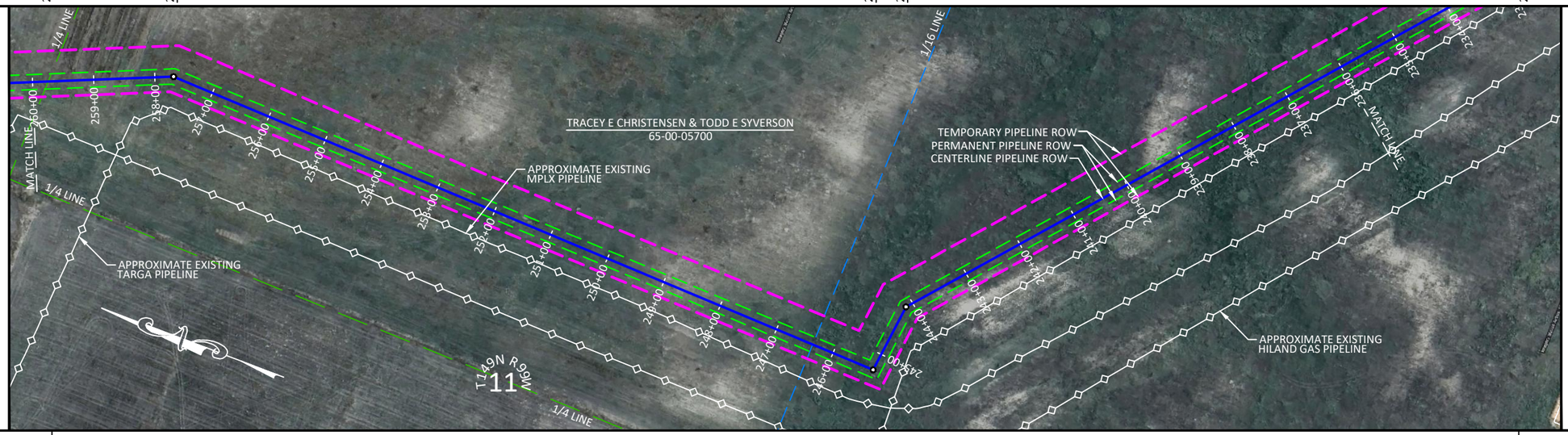
257+69.37 P.I. < 24°59'59" LT

245+28.52 P.I. < 85°13'37" RT

244+12.48 P.I. < 33°36'53" LT

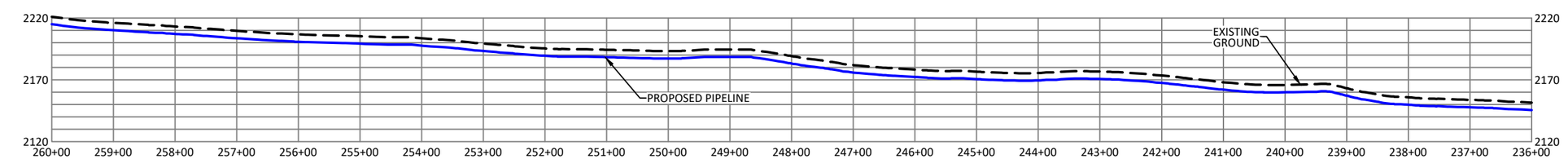
236+00.00 MATCHLINE

ALIGNMENT STRIP MAP — PLAN

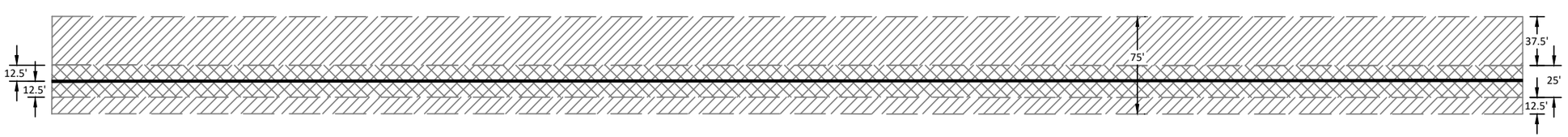


PIPELINE — MATERIAL: 2400' ①; COATING; DESIGN FACTOR; CLASS LOCATION; MAOP

PROFILE — ELEVATION



WORKSPACE — FOOTPRINT



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

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INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2400'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

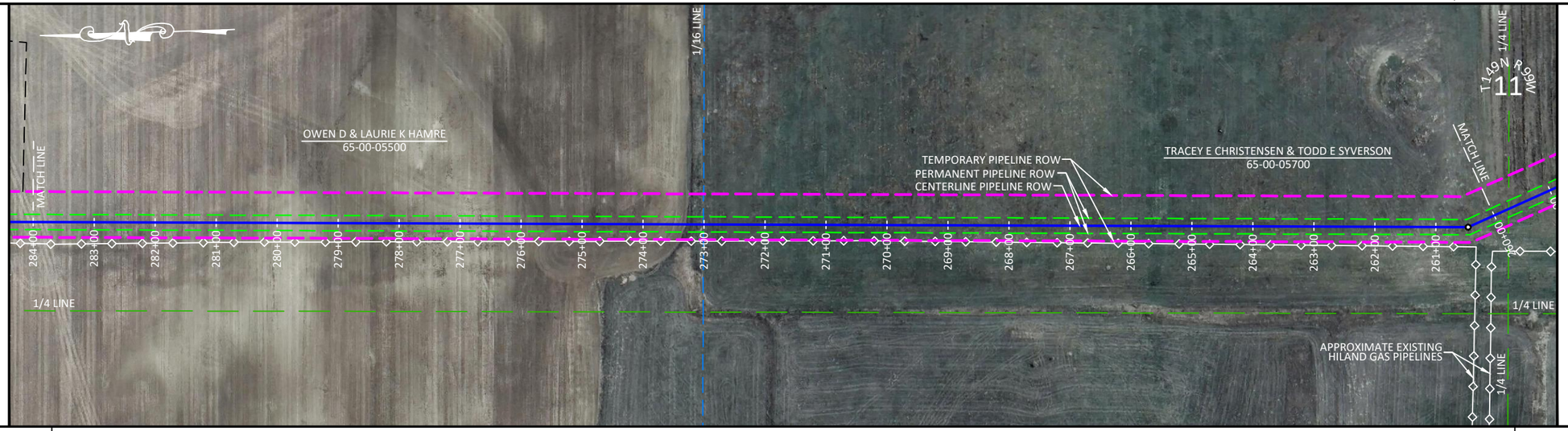
Facility Name:
HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 12 OF 66
236+00.00 TO 260+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

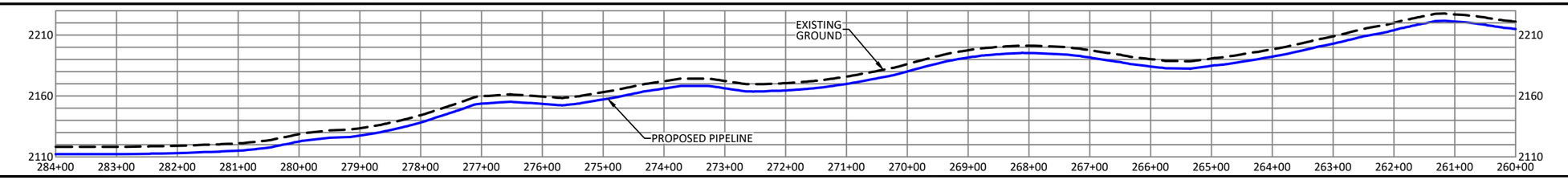
State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001		Rev

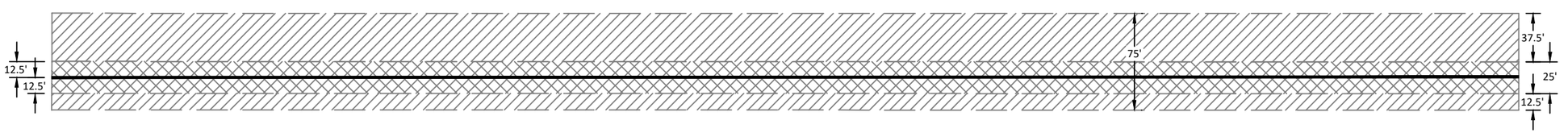
Feb 12, 2025 - 10:04am

LAND	PROTECTION EASEMENT		OWEN D & LAURIE K HAMRE 65-00-05500 66.62	TRACEY E CHRISTENSEN & TODD E SYVERSON 65-00-05700 78.83
	LAND PLAT			
	RODS			
	STATION	284+00.00	273+00.76	260+00.00
PIPELINE STATIONING	CROSSINGS	284+00.00 MATCHLINE	273+00.76 OWNERSHIP LINE	260+46.73 P.I. < 24°28'15" RT 260+00.00 MATCHLINE



PIPELINE	MATERIAL	2400'
		①
	COATING	
	DESIGN FACTOR	
	CLASS LOCATION	
	MAOP	





LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

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PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2400'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024
NO.	Revision Description	Project ID	Date

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 13 OF 66
260+00.00 TO 284+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Reference Drawings

Facility Name

Status: PROPOSED

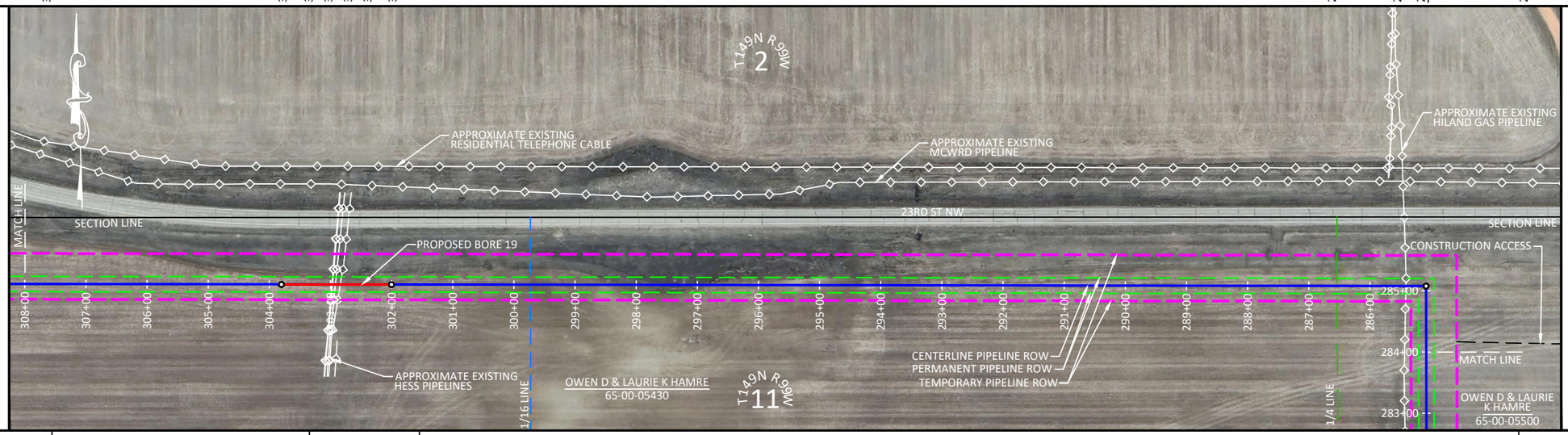
State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			

File Name: HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg

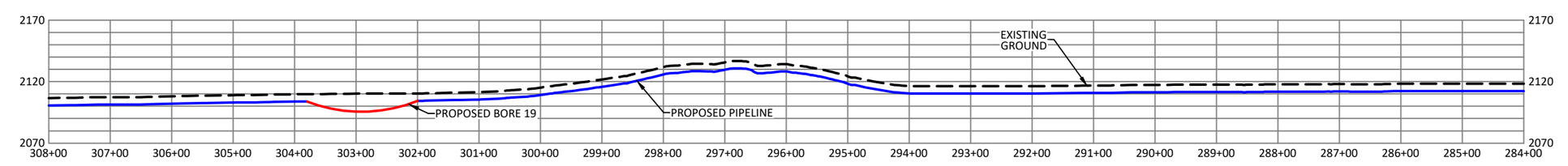
Drawing No: HILAND EXPRESS SPINE TIE-IN-PRO-001 Rev

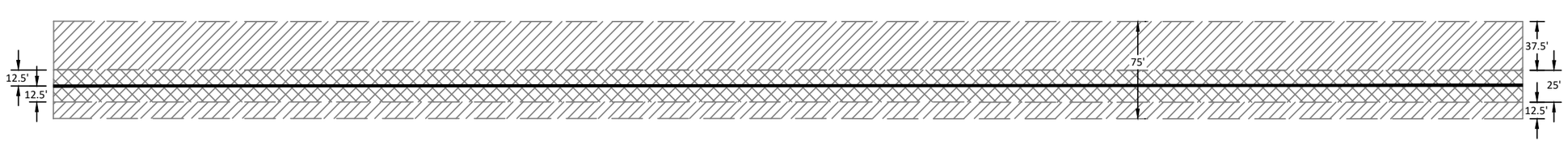
Feb 12, 2025 - 8:54am

LAND	PROTECTION EASEMENT		OWEN D & LAURIE K HAMRE 65-00-05430 130.07		OWEN D & LAURIE K HAMRE 65-00-05500 15.38	
	LAND PLAT					
	RODS					
	STATION	308+00.00		286+53.78		284+00.00
PIPELINE STATIONING	CROSSINGS	308+00.00 MATCHLINE 303+80.52 END BORE 19 302+97.85 APPROXIMATE EXISTING HESS PIPELINE 302+96.85 APPROXIMATE EXISTING HESS PIPELINE 302+92.09 APPROXIMATE EXISTING HESS PIPELINE 302+83.94 APPROXIMATE EXISTING HESS PIPELINE 302+00.52 BEGIN BORE 19		286+53.78 OWNERSHIP LINE 285+41.19 APPROXIMATE EXISTING HILAND GAS PIPELINE 285+08.10 P.I. < 89°52'06" LT		284+00.00 MATCHLINE



PIPELINE	MATERIAL	419' ①	180' ②	1801' ①
	COATING			
	DESIGN FACTOR			
	CLASS LOCATION			
	MAOP			





LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
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INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2220'
2	10" .307 W.T. BORE PIPE FBE+ARO	180'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

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307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

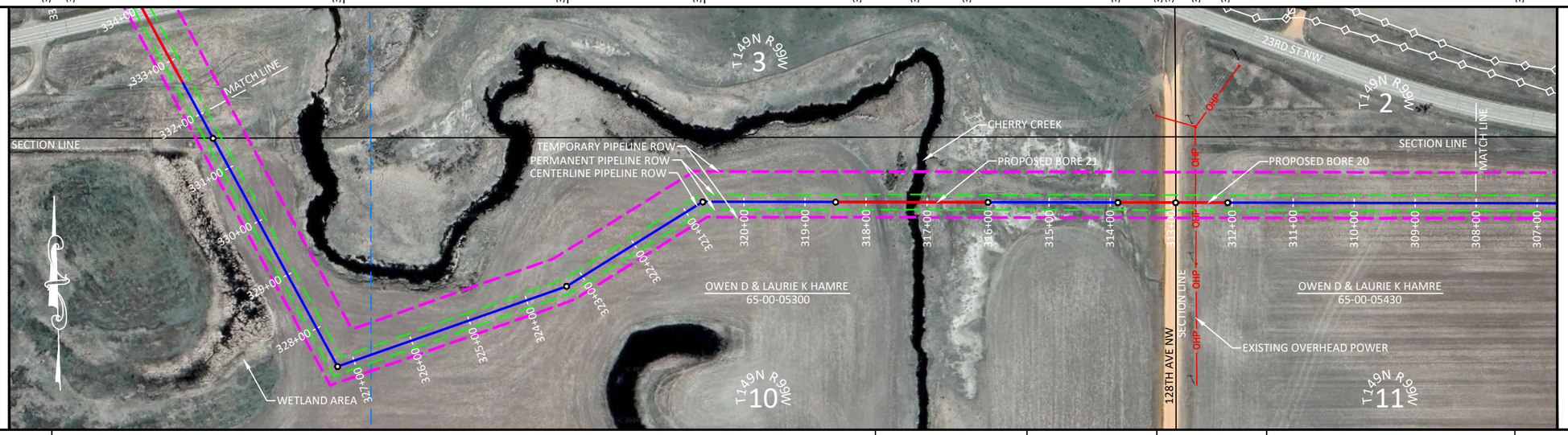
Facility Name

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 14 OF 66
284+00.00 TO 308+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

LAND	PROTECTION EASEMENT			RICHARD A. & NANCY L. WISNESS 65-00-01700 2.70		OWEN D & LAURIE K HAMRE 65-00-05300 112.92								OWEN D & LAURIE K HAMRE 65-00-05430 29.84					
	LAND PLAT																		
	RODS																		
	STATION	332+00.00	331+55.42										312+92.31					308+00.00	
PIPELINE STATIONING	CROSSINGS	332+00.00 MATCHLINE	331+55.42 SECTION/OWNERSHIP LINE		327+28.73 P.I. < 80°44'28" RT		323+30.58 P.I. < 12°29'44" RT		320+67.91 P.I. < 31°54'26" LT	318+50.00 END BORE 21	317.19.51 CHERRY CREEK	316+00.00 BEGIN BORE 21		313+87.11 END BORE 20	312+97.11 CENTERLINE 128TH AVE NW 312+92.31 SECTION/OWNERSHIP LINE	312+59.67 EXISTING OVERHEAD POWER	312+07.11 BEGIN BORE 20		308+00.00 MATCHLINE



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

GENERAL NOTES

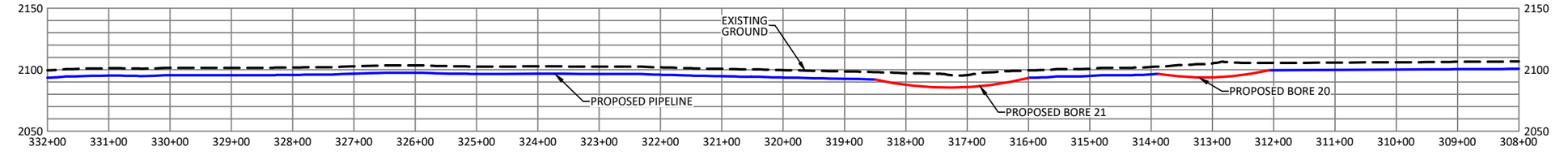
THIS DOCUMENT IS FOR PIPELINE EASEMENT PURPOSES AND DOES NOT CONSTITUTE AN ASBUILT OR BOUNDARY SURVEY.

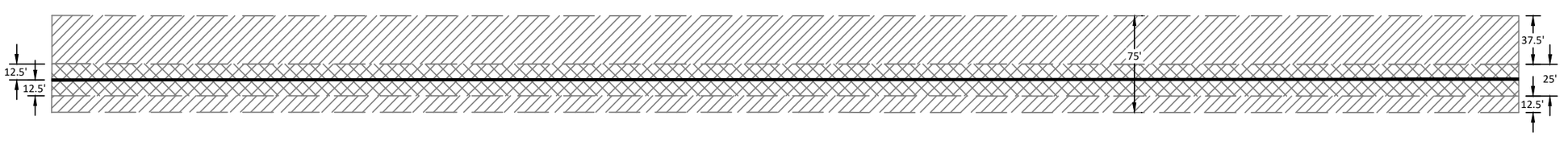
BEARINGS ARE ORIENTED TO THE NORTH DAKOTA STATE PLANE COORDINATE SYSTEM, NORTH ZONE, FROM GPS MEASUREMENTS AT A WHS CONTROL POINT (5/8" REBAR), LATITUDE: 47°50'53.379" NORTH, LONGITUDE: 103°27'47.616" WEST, HAVING A NAVD 88 ELEVATION OF 2374.789. PROJECT ELEVATIONS ARE BASED ON GPS OBSERVATIONS DERIVED USING GEOID 12B HELD ON THE CONTROL POINT.

DISTANCES SHOWN ARE GRID DISTANCES, USE A COMBINED SCALE FACTOR OF 1.000166337 TO GET GROUND DISTANCES.

INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPELINE						
MATERIAL	1350' ①		250' ②	213' ①	180' ②	407' ①
COATING						
DESIGN FACTOR						
CLASS LOCATION						
MAOP						





PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1970'
2	10" .307 W.T. BORE PIPE FBE+ARO	430'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

Facility Name

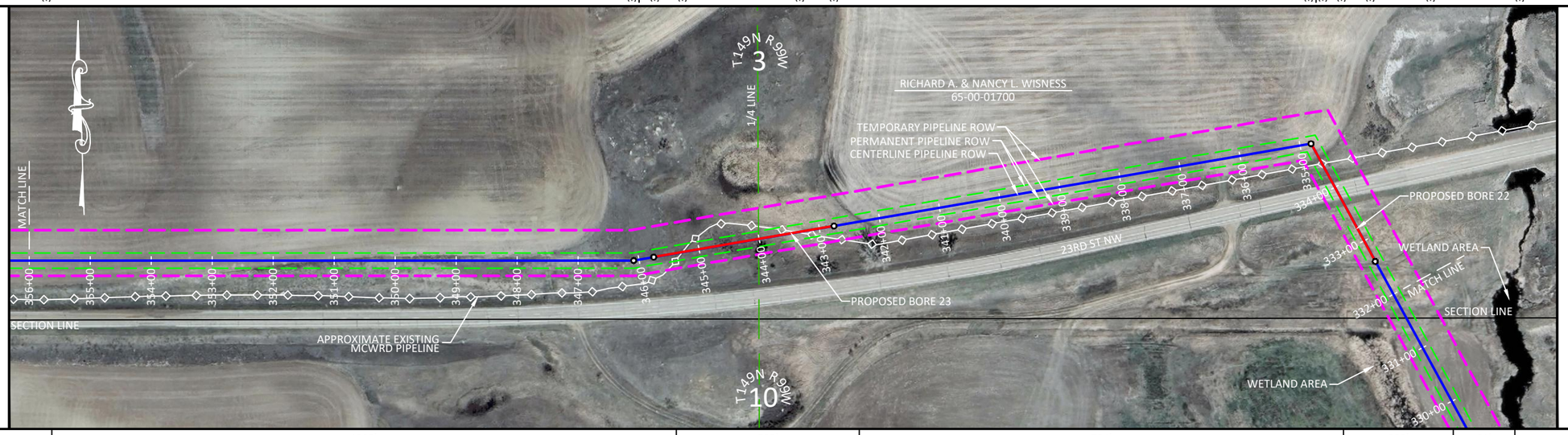
HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 15 OF 66
308+00.00 TO 332+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

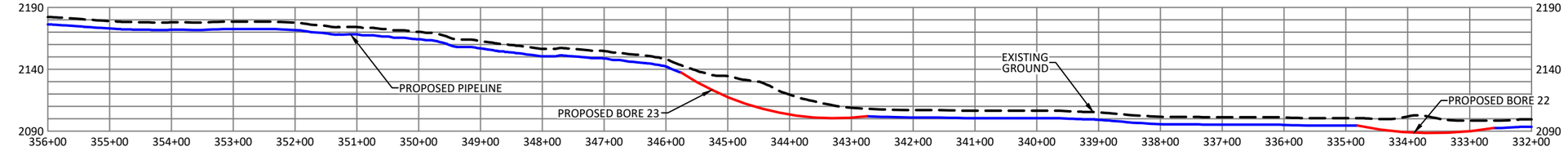
State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001		Rev

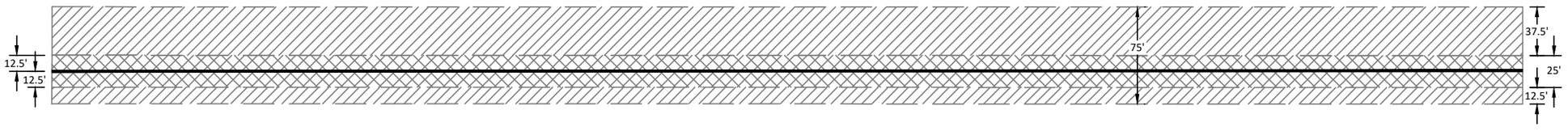
Feb 12, 2025 - 8:04am

LAND	PROTECTION EASEMENT																	
	LAND PLAT	RICHARD A. & NANCY L. WISNESS 65-00-01700 145.45																
	RODS																	
	STATION	356+00.00																332+00.00
PIPELINE STATIONING	CROSSINGS	356+00.00 MATCHLINE				346+08.75 P.I. < 9°46'44" RT	345+75.42 END BORE 23	345+27.28 APPROXIMATE EXISTING MCWRD PIPELINE		343+36.92 APPROXIMATE EXISTING MCWRD PIPELINE	342+75.42 BEGIN BORE 23					334+81.51 P.I. < 71°12'28" LT	334+81.51 END BORE 22	334+44.06 APPROXIMATE EXISTING MCWRD PIPELINE	33391.51 CENTERLINE 23RD ST NW	332+61.51 BEGIN BORE 22	332+00.00 MATCHLINE



PIPELINE	MATERIAL	1025'	300'	794'	220'	61'
		①	②	①	②	①
	COATING					
	DESIGN FACTOR					
	CLASS LOCATION					
	MAOP					





LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

GENERAL NOTES

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DISTANCES SHOWN ARE GRID DISTANCES, USE A COMBINED SCALE FACTOR OF 1.000166337 TO GET GROUND DISTANCES.

INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1880'
2	10" .307 W.T. BORE PIPE FBE+ARO	520'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024
	Revision Description	Project ID	Date

NOTES

Reference Drawings

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

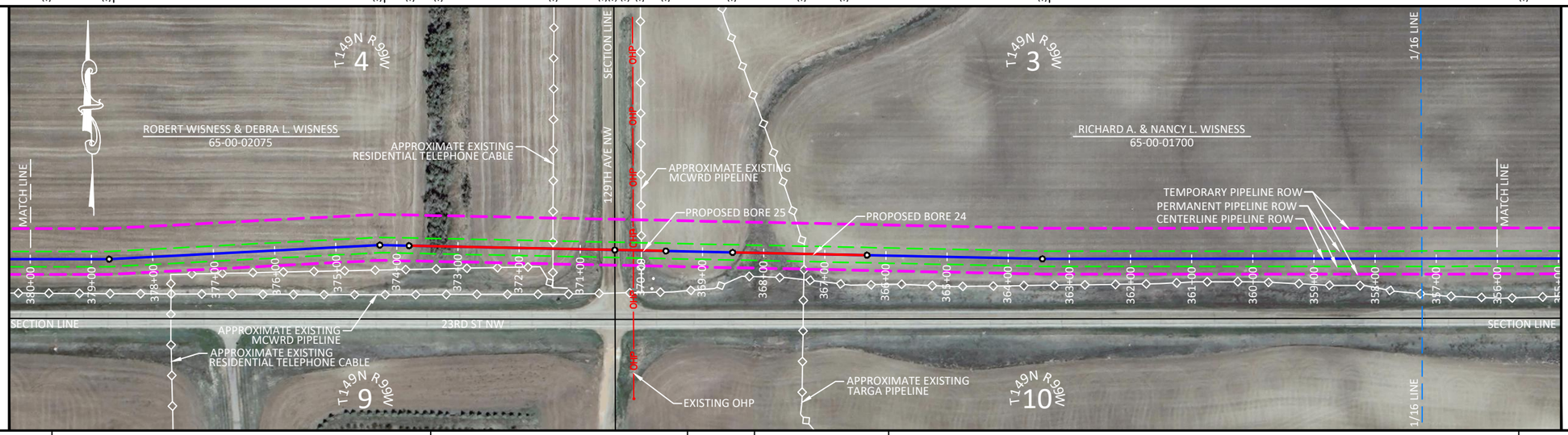
Facility Name

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 16 OF 66
332+00.00 TO 356+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

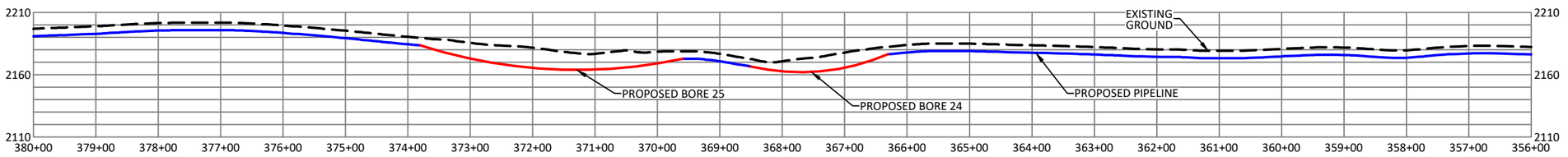
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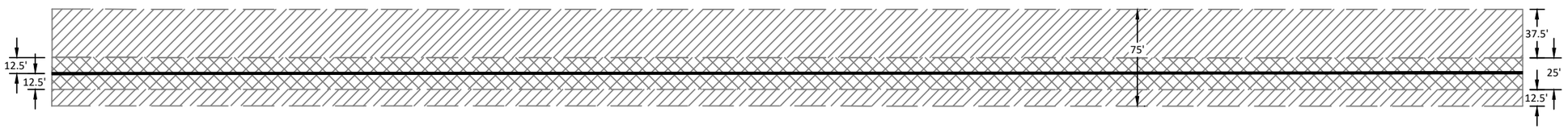
State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

LAND	PROTECTION EASEMENT		ROBERT WISNESS & DEBRA L. WISNESS					RICHARD A. & NANCY L. WISNESS									
	LAND PLAT		65-00-02075					65-00-01700									
	RODS		57.97					87.48									
	STATION	380+00.00					370+43.44										356+00.00
PIPELINE STATIONING	CROSSINGS	380+00.00 MATCHLINE	378+71.23 P.I. < 2°57'31" RT			374+27.92 P.I. < 4°10'05" LT	373+80.00 END BORE 25	373+33.98 TREE LINE	371+44.55 APPROXIMATE EXISTING RESIDENTIAL TELEPHONE CABLE	370+18.46 CENTERLINE 129TH AVE NW	370+43.44 SECTION/OWNERSHIP LINE	370+13.21 EXISTING OVERHEAD POWER	370+00.00 APPROXIMATE EXISTING MCWRD PIPELINE	369+60.00 BEGIN BORE 25	368+50.72 END BORE 24	367+33.67 APPROXIMATE EXISTING TARGA PIPELINE	366+30.72 BEGIN BORE 24	363+43.97 P.I. < 1°12'34" RT			356+00.00 MATCHLINE



PIPELINE							
MATERIAL	621'	420'	109'	220'	1030'		
	①	②	①	②	①		
COATING							
DESIGN FACTOR							
CLASS LOCATION							
MAOP							





LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

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INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1760'
2	10" .307 W.T. BORE PIPE FBE+ARO	640'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

Facility Name

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 17 OF 66
356+00.00 TO 380+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

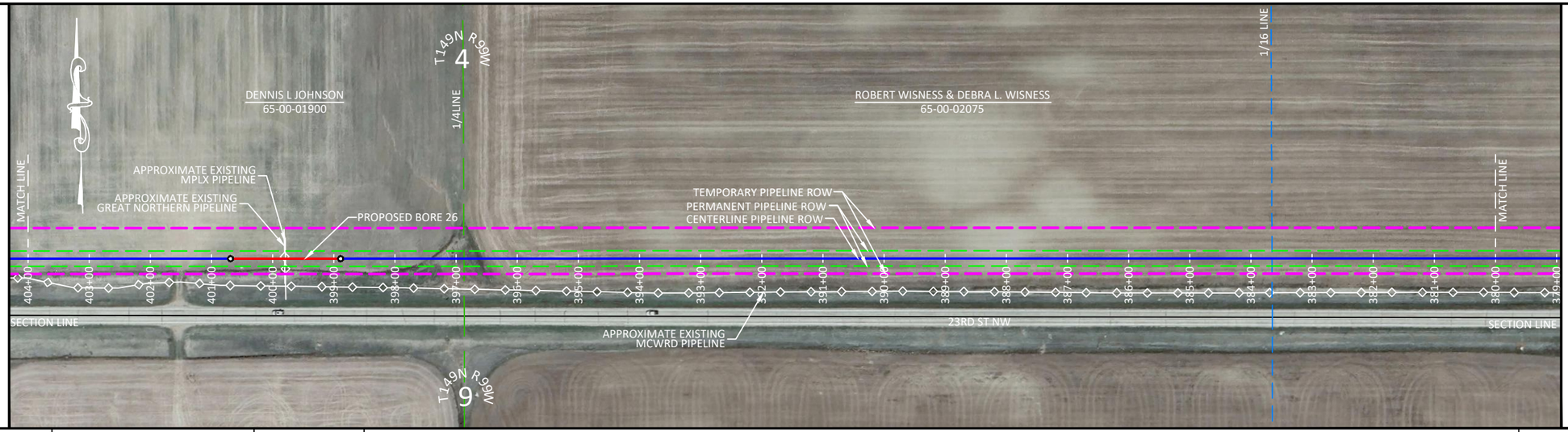
Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

Feb 12, 2025 - 8:34am

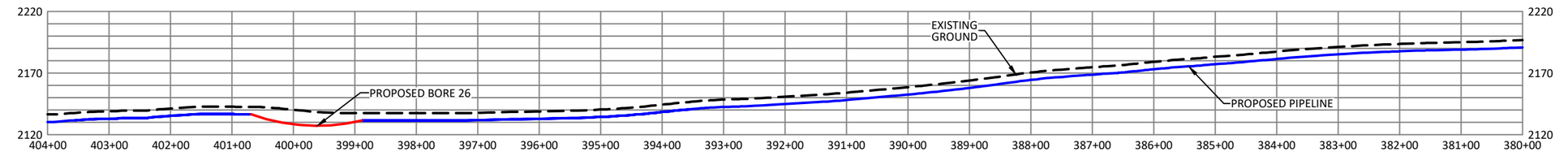
LAND	PROTECTION EASEMENT		DENNIS L JOHNSON 65-00-01900 43.57	ROBERT WISNESS & DEBRA L. WISNESS 65-00-02075 101.88
	LAND PLAT			
	RODS			
	STATION	404+00.00	396+81.10	380+00.00
PIPELINE STATIONING	CROSSINGS	404+00.00 MATCHLINE 400+69.01 END BORE 26 399+80.43 APPROXIMATE EXISTING GREAT NORTHERN PIPELINE 399+79.01 APPROXIMATE EXISTING MPLX PIPELINE 398+89.01 BEGIN BORE 26 396+81.10 OWNERSHIP LINE		380+00.00 MATCHLINE

ALIGNMENT STRIP MAP — PLAN

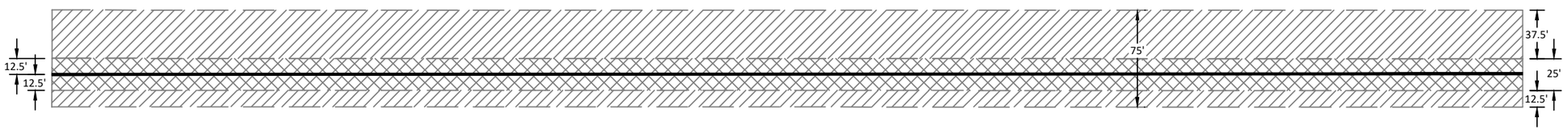


PIPELINE	MATERIAL	331' ①	180' ②	1889' ①
	COATING			
	DESIGN FACTOR			
	CLASS LOCATION			
	MAOP			

PROFILE — ELEVATION



WORKSPACE — FOOTPRINT



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
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PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2220'
2	10" .307 W.T. BORE PIPE FBE+ARO	180'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
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NOTES

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HILAND PARTNERS HOLDINGS, L.L.C.

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307.362.6065 | 866.938.3088 | www.whsmithpc.com

Facility Name

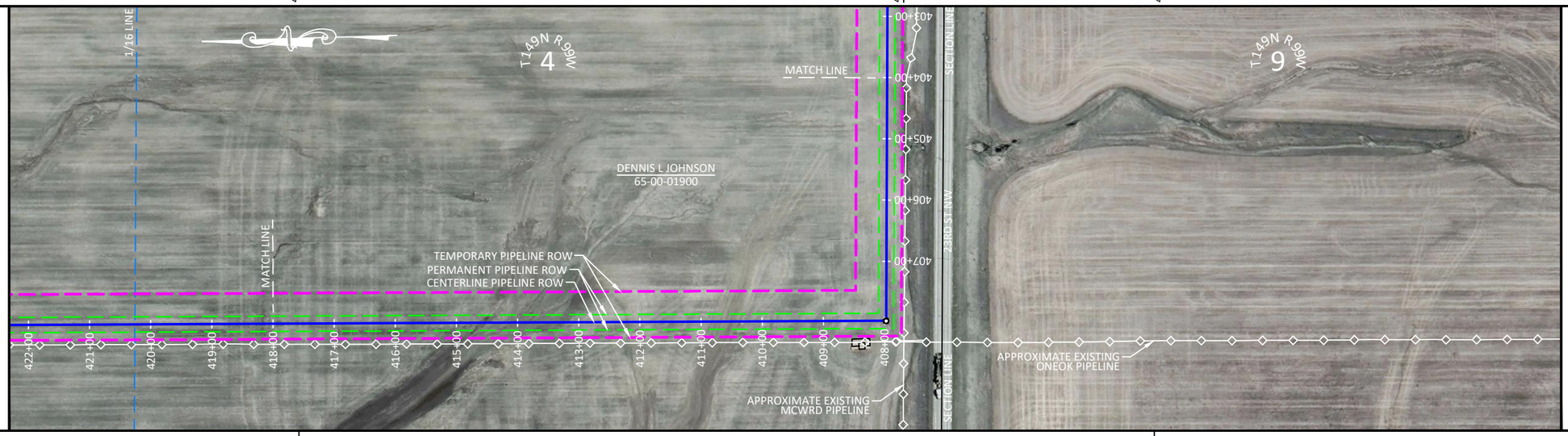
HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 18 OF 66
380+00.00 TO 404+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

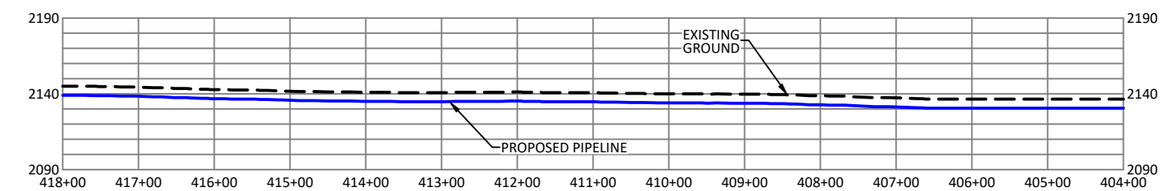
State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
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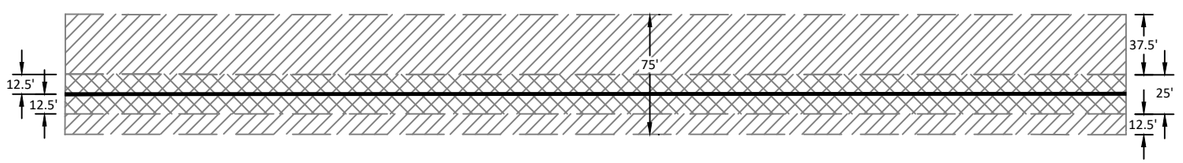
Feb 12, 2025 - 8:54am

LAND	PROTECTION EASEMENT		
	LAND PLAT	DENNIS L JOHNSON	
	RODS	65-00-01900	
	STATION	418+00.00	404+00.00
PIPELINE STATIONING	CROSSINGS	418+00.00 MATCHLINE; 407+97.40 P.I. < 89°29'20" RT; 404+00.00 MATCHLINE	



PIPELINE	MATERIAL	1400'
		①
	COATING	
	DESIGN FACTOR	
	CLASS LOCATION	
	MAOP	





LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
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- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
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PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1400'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024
	Revision Description	Project ID	Date

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HILAND PARTNERS HOLDINGS, L.L.C.

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307.362.6065 | 866.938.3088 | www.whsmithpc.com

Facility Name

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 19 OF 66
404+00.00 TO 418+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17			

LAND

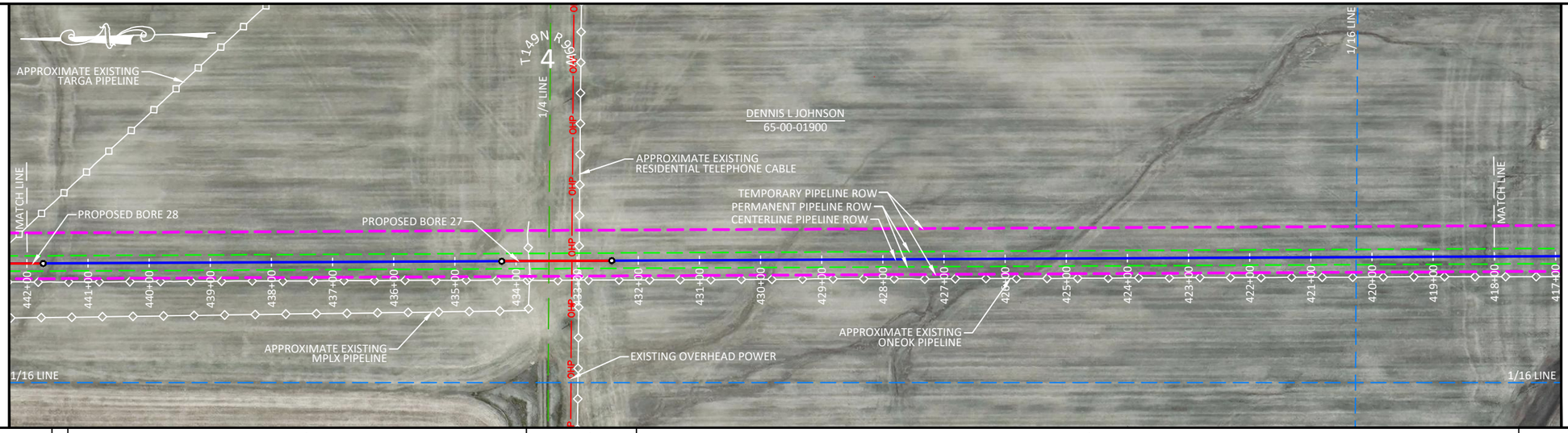
PROTECTION EASEMENT: DENNIS L JOHNSON
LAND PLAT: 65-00-01900
RODS: 145.45
STATION: 442+00.00 — 418+00.00

PIPELINE STATIONING

CROSSINGS:
- 442+00.00 MATCHLINE
- 441+73.84 BEGIN BORE 28
- 434+23.58 END BORE 27
- 433+69.96 APPROXIMATE EXISTING MPLX PIPELINE
- 433+08.84 OVERHEAD POWER LINE
- 432+97.07 APPROXIMATE EXISTING RTC CABLE LINE
- 432+43.58 BEGIN BORE 27
- 418+00.00 MATCHLINE

ALIGNMENT STRIP MAP

PLAN

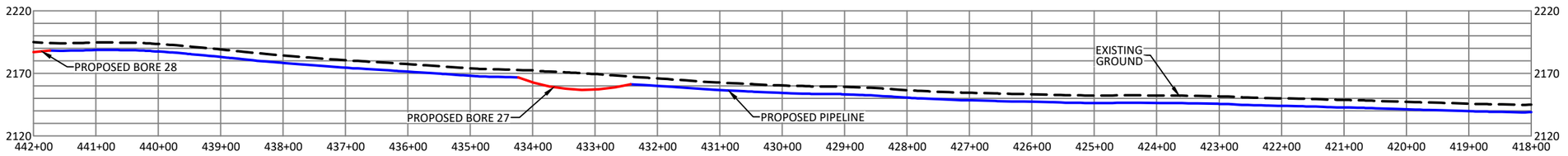


PIPELINE

MATERIAL	27"	750'	180'	1443'
	②	①	②	①
COATING				
DESIGN FACTOR				
CLASS LOCATION				
MAOP				

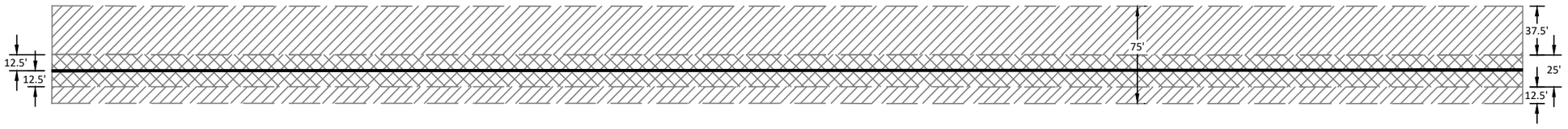
PROFILE

ELEVATION



WORKSPACE

FOOTPRINT



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

GENERAL NOTES

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DISTANCES SHOWN ARE GRID DISTANCES, USE A COMBINED SCALE FACTOR OF 1.000166337 TO GET GROUND DISTANCES.

INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2193'
2	10" .307 W.T. BORE PIPE FBE+ARO	207'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

Facility Name:
HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 20 OF 66
418+00.00 TO 442+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

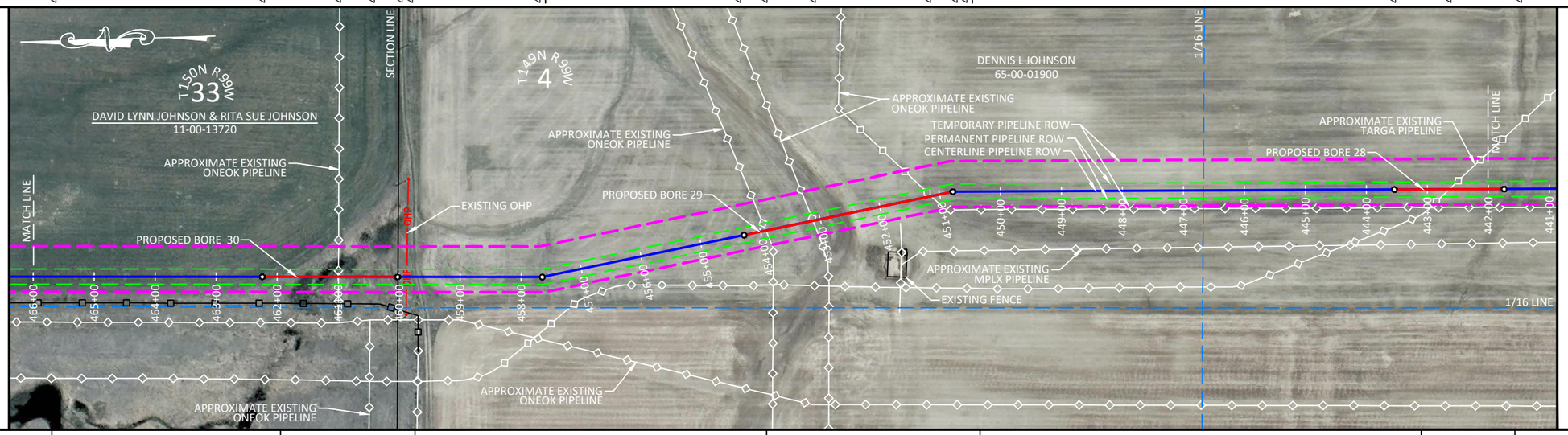
Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

LAND	PROTECTION EASEMENT		DAVID LYNN JOHNSON & RITA SUE JOHNSON 11-00-13720 36.23		DENNIS L JOHNSON 65-00-01900 109.22	
	LAND PLAT RODS	466+00.00		460+02.13		442+00.00
	STATION					

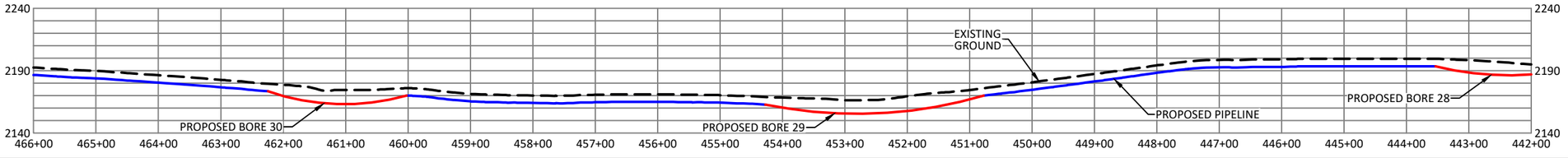
PIPELINE STATIONING	CROSSINGS
466+00.00	MATCHLINE
462+24.70	END BORE 30
460+99.70	APPROXIMATE EXISTING ONEOK PIPELINE
460+02.70	BEGIN BORE 30
460+02.13	SECTION/OWNERSHIP LINE
459+87.78	EXIST. OVERHEAD POWER
457+65.60	P.I. < 11°48'04" RT
454+27.81	END BORE 29
453+91.13	APPROXIMATE EXISTING ONEOK PIPELINE
453+12.11	APPROXIMATE EXISTING ONEOK PIPELINE
451+12.23	APPROXIMATE EXISTING ONEOK PIPELINE
450+77.81	BEGIN BORE 29
450+77.81	P.I. < 11°28'34" LT
443+53.84	END BORE 28
442+63.84	APPROXIMATE EXISTING TARGA PIPELINE
442+00.00	MATCHLINE

ALIGNMENT STRIP MAP — PLAN

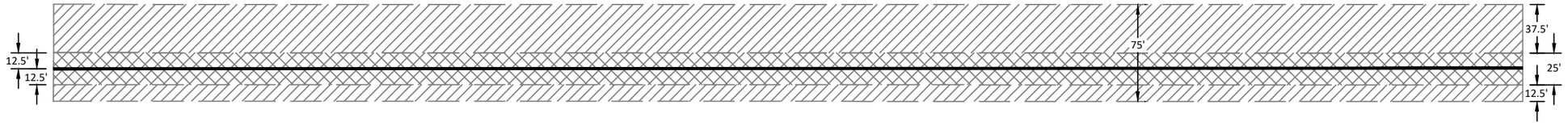


PIPELINE	MATERIAL	376'	222'	675'	350'	724'	153'
		①	②	①	②	①	②
	COATING						
	DESIGN FACTOR						
	CLASS LOCATION						
	MAOP						

PROFILE — ELEVATION



WORKSPACE — FOOTPRINT



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
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- POINT OF INTERSECTION

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PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1675'
2	10" .307 W.T. BORE PIPE FBE+ARO	725'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

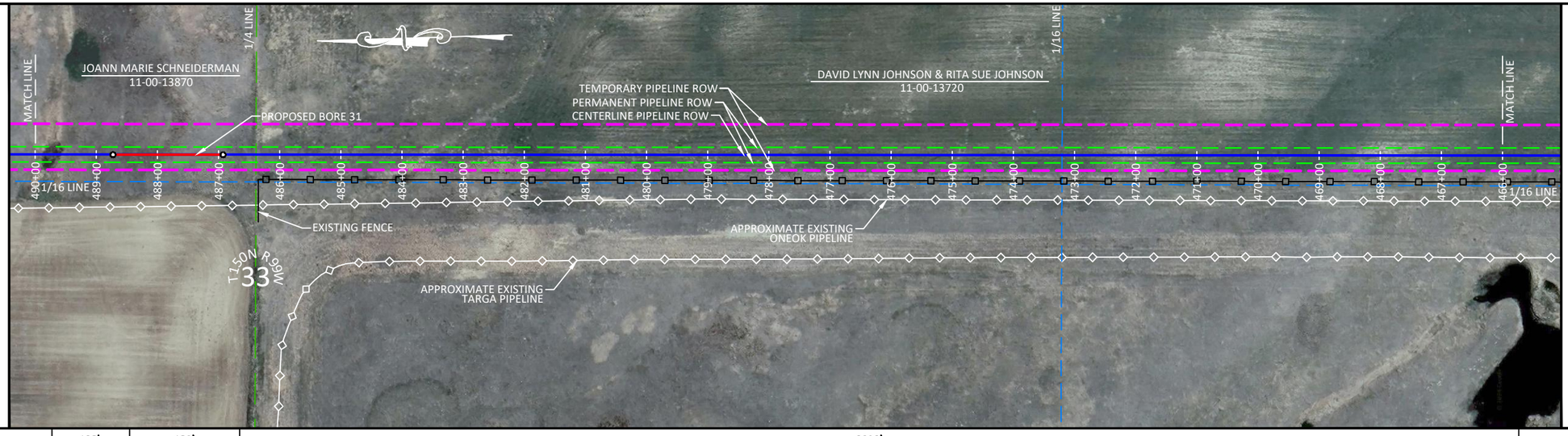
Facility Name:
HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 21 OF 66
442+00.00 TO 466+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

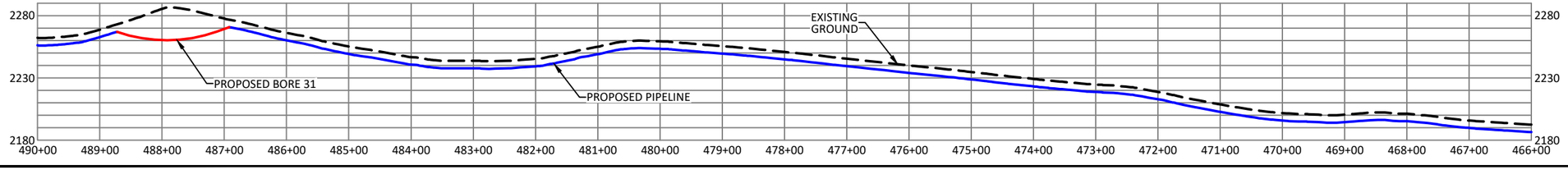
State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

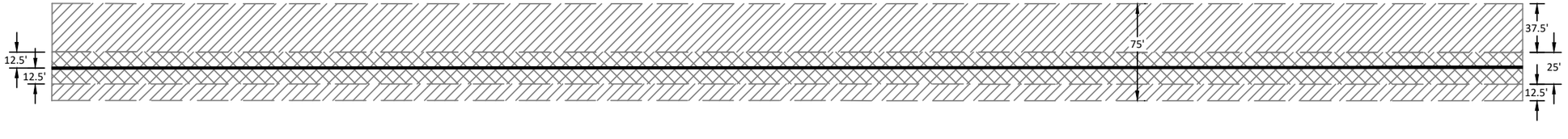
Feb 12, 2025 - 8:54AM

LAND	PROTECTION EASEMENT		JOANN MARIE SCHNEIDERMAN 11-00-13870 21.90	DAVID LYNN JOHNSON & RITA SUE JOHNSON 11-00-13720 123.56
	LAND PLAT RODS	490+00.00	486+38.71	466+00.00
PIPELINE STATIONING	CROSSINGS	490+00.00 MATCHLINE	488+72.81 END BORE 31 486+92.81 BEGIN BORE 31 486+38.71 OWNERSHIP LINE	466+00.00 MATCHLINE



PIPELINE				
MATERIAL	128'	180'	2092'	
	①	②	①	
COATING				
DESIGN FACTOR				
CLASS LOCATION				
MAOP				





LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

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INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2220'
2	10" .307 W.T. BORE PIPE FBE+ARO	180'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

Facility Name

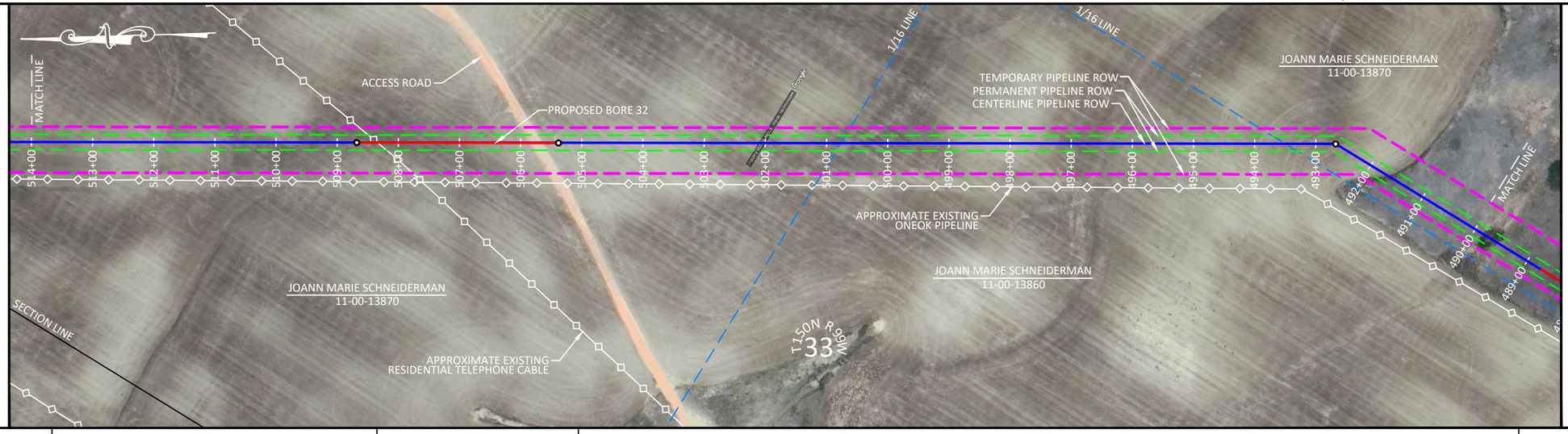
HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 22 OF 66
466+00.00 TO 490+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

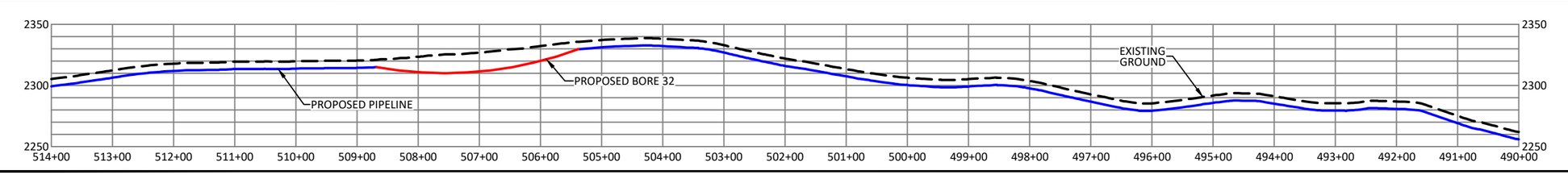
State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

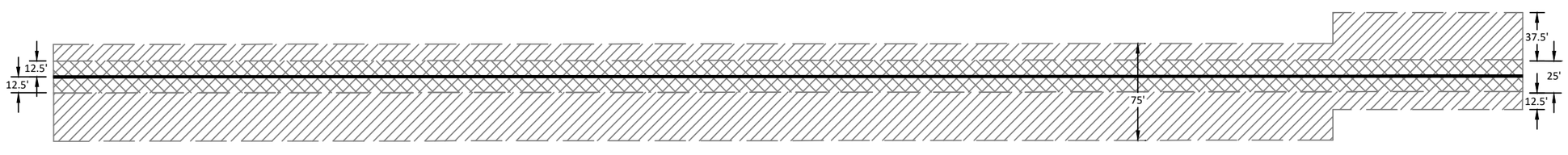
Feb 12, 2025 - 8:54am

LAND	PROTECTION EASEMENT		JOANN MARIE SCHNEIDERMAN 11-00-13870 80.21	JOANN MARIE SCHNEIDERMAN 11-00-13860 44.03	JOANN MARIE SCHNEIDERMAN 11-00-13870 21.22
	LAND PLAT				
	RODS				
	STATION	514+00.00	500+76.52	493+50.09	490+00.00
PIPELINE STATIONING	CROSSINGS	514+00.00 MATCHLINE	508+68.32 END BORE 32 508+34.56 APPROXIMATE EXISTING RESIDENTIAL TELEPHONE CABLE 505+78.33 EXISTING ACCESS ROAD 505+38.32 BEGIN BORE 32	500+76.52 OWNERSHIP LINE	493+50.09 OWNERSHIP LINE 492+67.10 P.I. < 31°22'17" LT	490+00.00 MATCHLINE



PIPELINE	MATERIAL	532' ①	330' ②	1538' ①
	COATING			
	DESIGN FACTOR			
	CLASS LOCATION			
	MAOP			





LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

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INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2070'
2	10" .307 W.T. BORE PIPE FBE+ARO	330'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024
NO.	Revision Description	Project ID	Date

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings:

Facility Name:
HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 23 OF 66
490+00.00 TO 514+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

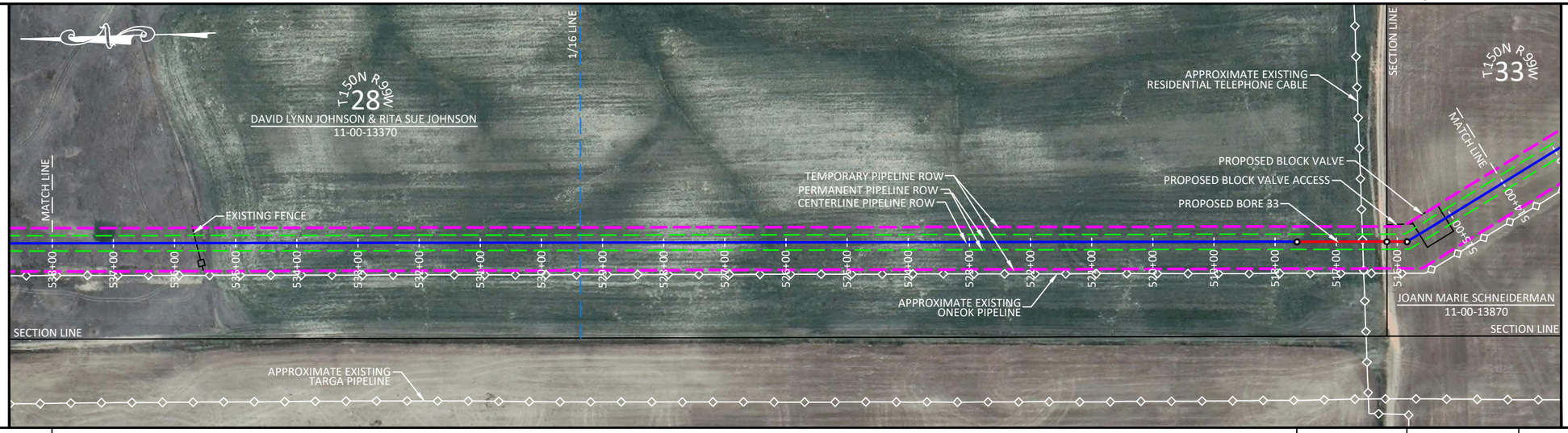
Feb 12, 2025 - 8:54am

LAND	PROTECTION EASEMENT		DAVID LYNN JOHNSON & RITA SUE JOHNSON 11-00-13370 132.31	JOANN MARIE SCHNEIDERMAN 11-00-13870 13.15
	LAND PLAT			
	RODS			
	STATION	538+00.00	516+16.95	514+00.00

PIPELINE STATIONING — CROSSINGS

- 538+00.00 MATCHLINE
- 535+64.06 EXISTING FENCE
- 517+63.76 END BORE 33
- 516+56.70 APPROXIMATE EXISTING RESIDENTIAL TELEPHONE CABLE
- 516+16.95 SECTION/OWNERSHIP LINE
- 515+83.76 BEGIN BORE 33
- 515+83.76 P.I. < 31°30'41" RT
- 515+38.39 PROPOSED BLOCK VALVE
- 514+00.00 MATCHLINE

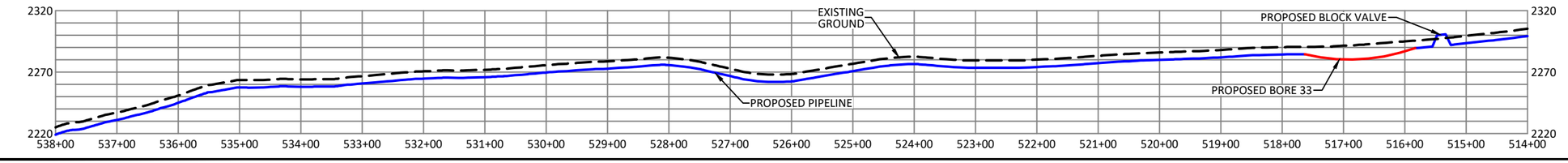
ALIGNMENT STRIP MAP — PLAN



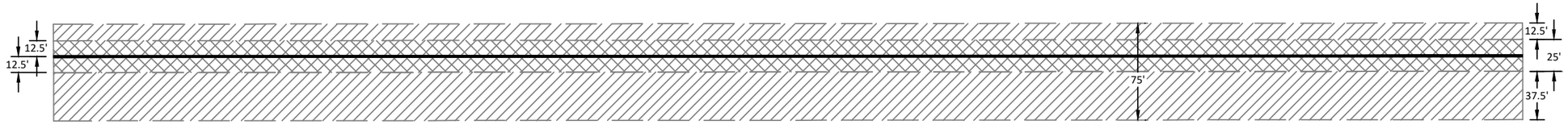
PIPELINE

MATERIAL	2037'	180'	183'
	①	②	①
COATING			
DESIGN FACTOR			
CLASS LOCATION			
MAOP			

PROFILE — ELEVATION



WORKSPACE — FOOTPRINT



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
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PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2220'
2	10" .307 W.T. BORE PIPE FBE+ARO	180'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

Reference Drawings

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Facility Name

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 24 OF 66
514+00.00 TO 538+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

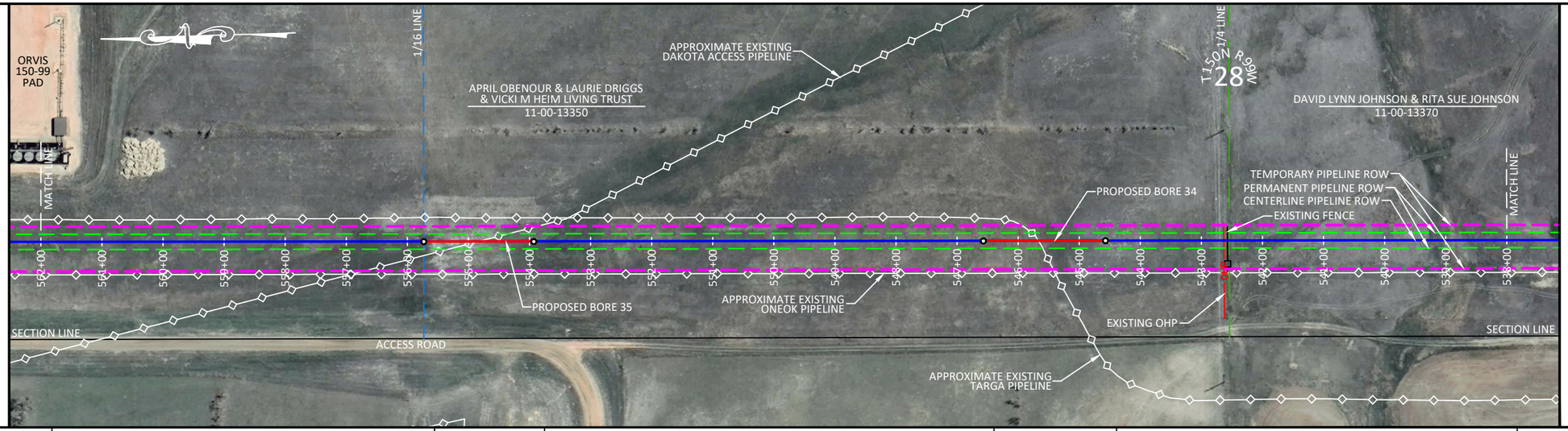
Feb 12, 2025 - 10:54am

LAND	PROTECTION EASEMENT		APRIL OBENOUR & LAURIE DRIGGS & VICKI M HEIM LIVING TRUST 11-00-13350 117.91		DAVID LYNN JOHNSON & RITA SUE JOHNSON 11-00-13370 27.54	
	LAND PLAT RODS					
	STATION	562+00.00		542+54.43		538+00.00

PIPELINE STATIONING — CROSSINGS

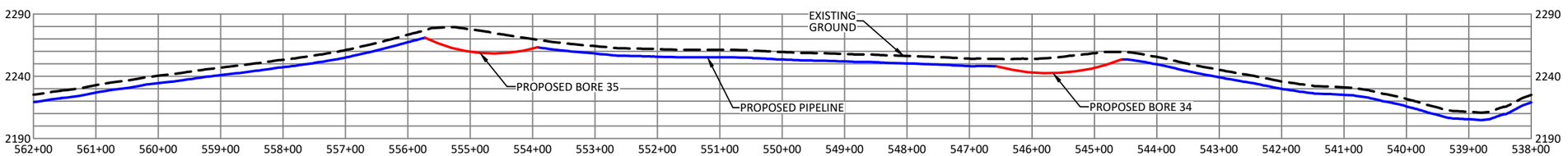
562+00.00 MATCHLINE
555+73.15 END BORE 35
554+83.15 APPROXIMATE EXISTING DAKOTA ACCESS PIPELINE
553+93.15 BEGIN BORE 35
546+56.96 END BORE 34
545+66.96 APPROXIMATE EXISTING TARGA PIPELINE
544+56.96 BEGIN BORE 34
542+63.27 EXISTING OHP
542+57.31 EXISTING FENCE
542+54.43 OWNERSHIP LINE
538+00.00 MATCHLINE

ALIGNMENT STRIP MAP — PLAN

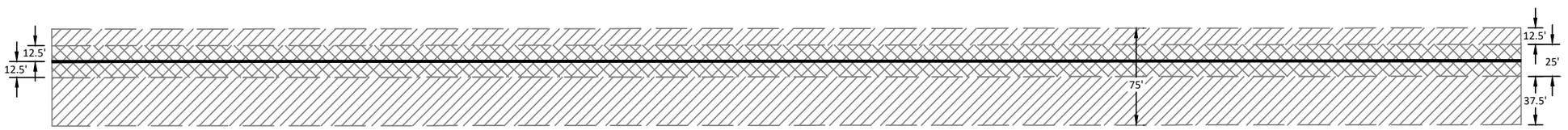


PIPELINE	MATERIAL	627'	180'	736'	200'	657'
		①	②	①	②	①
	COATING					
	DESIGN FACTOR					
	CLASS LOCATION					
	MAOP					

PROFILE — ELEVATION



WORKSPACE — FOOTPRINT



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

GENERAL NOTES

THIS DOCUMENT IS FOR PIPELINE EASEMENT PURPOSES AND DOES NOT CONSTITUTE AN ASBUILT OR BOUNDARY SURVEY.

BEARINGS ARE ORIENTED TO THE NORTH DAKOTA STATE PLANE COORDINATE SYSTEM, NORTH ZONE, FROM GPS MEASUREMENTS AT A WHS CONTROL POINT (5/8" REBAR), LATITUDE: 47°50'53.379" NORTH, LONGITUDE: 103°27'47.616" WEST, HAVING A NAVD 88 ELEVATION OF 2374.789. PROJECT ELEVATIONS ARE BASED ON GPS OBSERVATIONS DERIVED USING GEOID 12B HELD ON THE CONTROL POINT.

DISTANCES SHOWN ARE GRID DISTANCES, USE A COMBINED SCALE FACTOR OF 1.000166337 TO GET GROUND DISTANCES.

INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2020'
2	10" .307 W.T. BORE PIPE FBE+ARO	380'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024
	Revision Description	Project ID	Date

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

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Reference Drawings

Facility Name:
HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 25 OF 66
538+00.00 TO 562+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

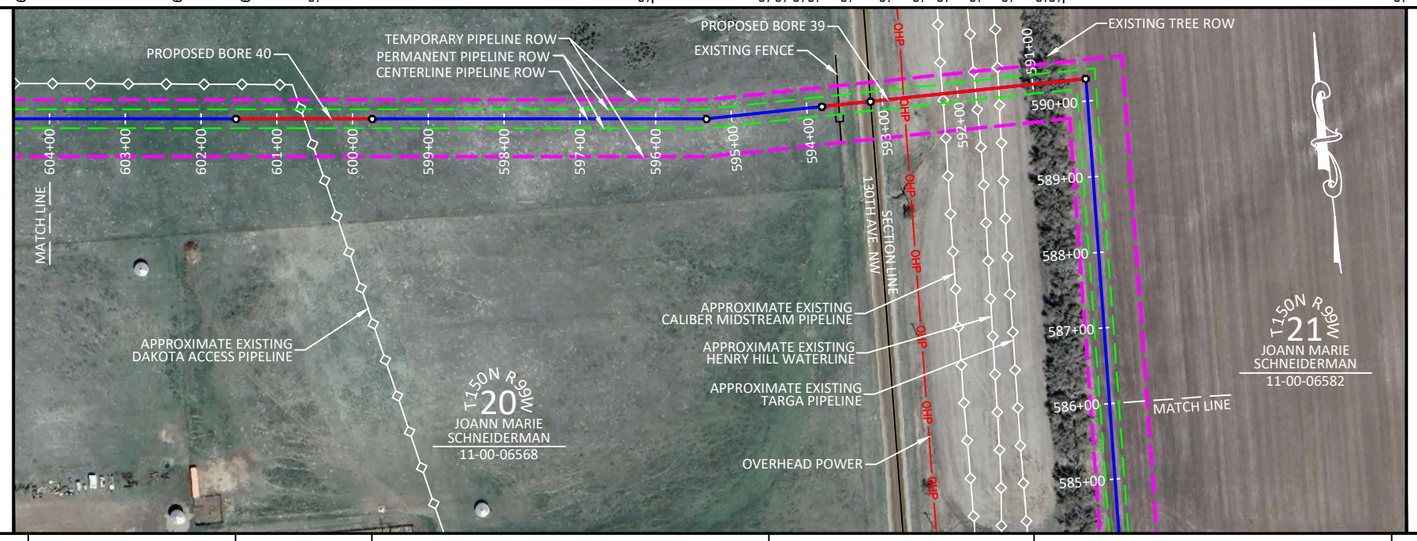
Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			

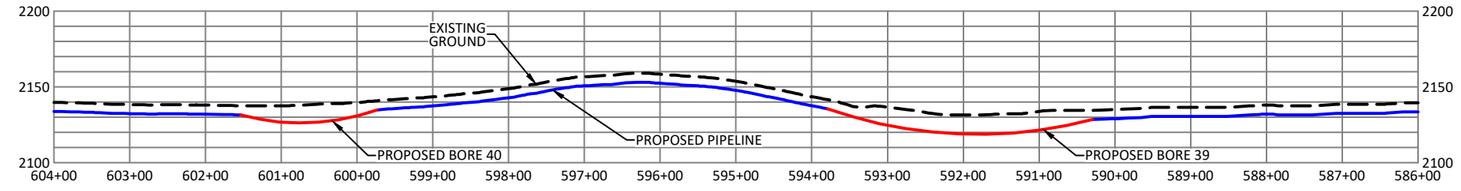
File Name: HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg
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Rev

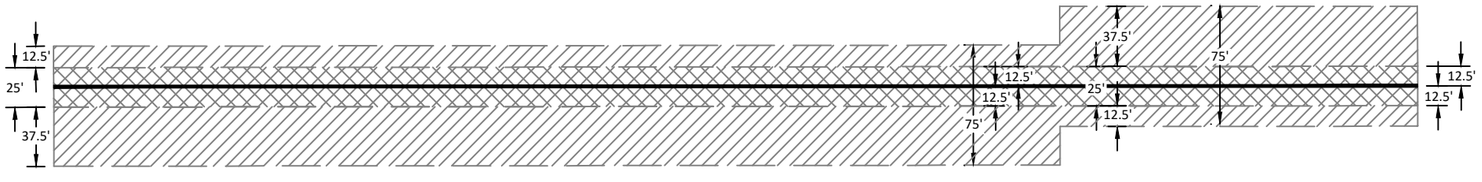
| | | |

LAND	PROTECTION EASEMENT			JOANN MARIE SCHNEIDERMAN 11-00-06568 65.73						JOANN MARIE SCHNEIDERMAN 11-00-06582 43.36								
	LAND PLAT RODS																	
	STATION	604+00.00						593+15.39									586+00.00	
PIPELINE STATIONING	CROSSINGS	604+00.00 MATCHLINE	601+54.32 END BORE 40	600+64.32 APPROXIMATE EXISTING DAKOTA ACCESS PIPELINE	599+74.32 BEGIN BORE 40		595+33.08 P.I. < 6°01'32" RT		593+79.73 END BORE 39 593+57.51 EXISTING FENCE 593+17.09 130TH AVE. NW 593+15.39 SECTION/OWNERSHIP LINE	592+71.26 OVERHEAD POWER	592+19.79 APPROXIMATE EXISTING CALIBER MIDSTREAM PIPELINE	591+76.07 APPROXIMATE EXISTING HENRY HILL WATER LINE 591+45.49 APPROXIMATE EXISTING TARGA PIPELINE	591+11.07 TREE ROW	590+60.54 TREE ROW	590+29.73 BEGIN BORE 39 590+29.73 P.I. < 91°51'40" LT		586+00.00 MATCHLINE	



PIPELINE						
	MATERIAL	245' ①	180' ②	595' ①	350' ②	430' ①
	COATING					
	DESIGN FACTOR					
	CLASS LOCATION					
	MAOP					





LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
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- OHP — OVERHEAD POWER LINE
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PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1270'
2	10" .307 W.T. BORE PIPE FBE+ARO	530'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024
NO.	Revision Description	Project ID	Date

NOTES

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307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

Facility Name

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 27 OF 66
586+00.00 TO 604+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

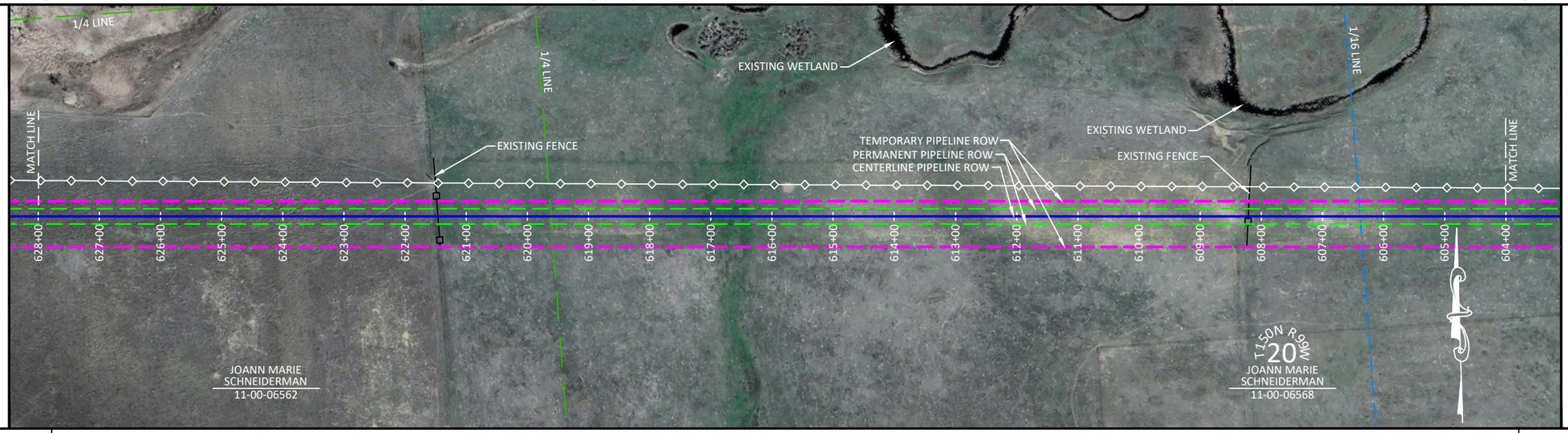
State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

Feb 12, 2025 - 8:05AM

LAND	PROTECTION EASEMENT	JOANN MARIE SCHNEIDERMAN 11-00-06562 50.81	JOANN MARIE SCHNEIDERMAN 11-00-06568 94.64
	LAND PLAT RODS		
	STATION	628+00.00	619+61.57	604+00.00

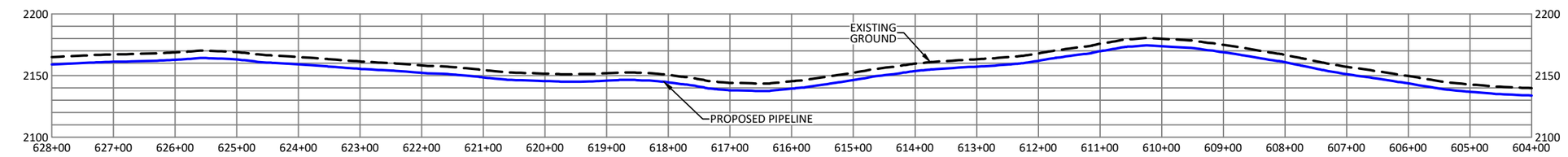
PIPELINE STATIONING	CROSSINGS
	628+00.00 MATCHLINE
	621+46.35 EXISTING FENCE
	619+61.57 OWNERSHIP LINE
	608+21.12 EXISTING FENCE
	604+00.00 MATCHLINE

ALIGNMENT STRIP MAP — PLAN

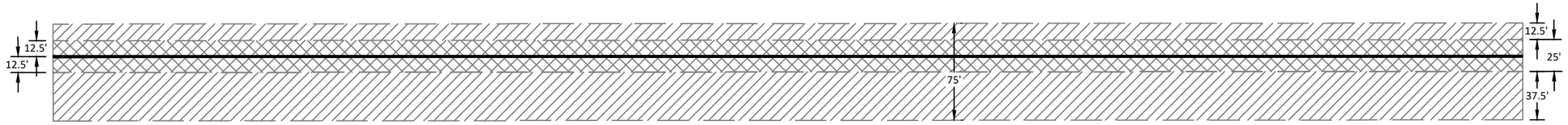


PIPELINE	MATERIAL	2400'
		①
	COATING	
	DESIGN FACTOR	
	CLASS LOCATION	
	MAOP	

PROFILE — ELEVATION



WORKSPACE — FOOTPRINT



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
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PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2400'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024
NO.	Revision Description	Project ID	Date

NOTES

Reference Drawings

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
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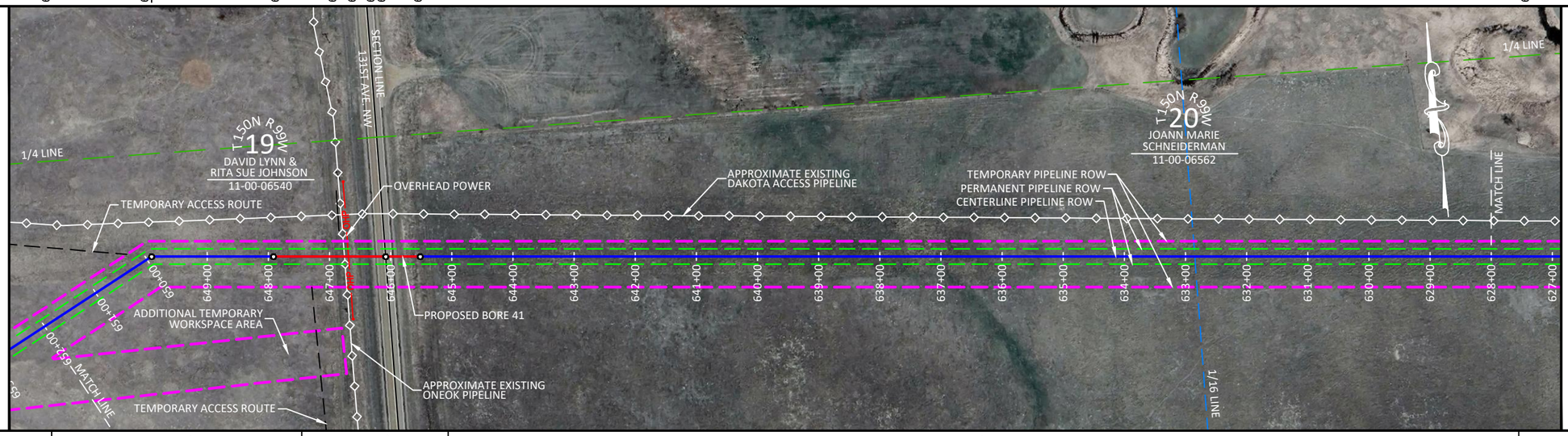
Facility Name

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 28 OF 66
604+00.00 TO 628+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

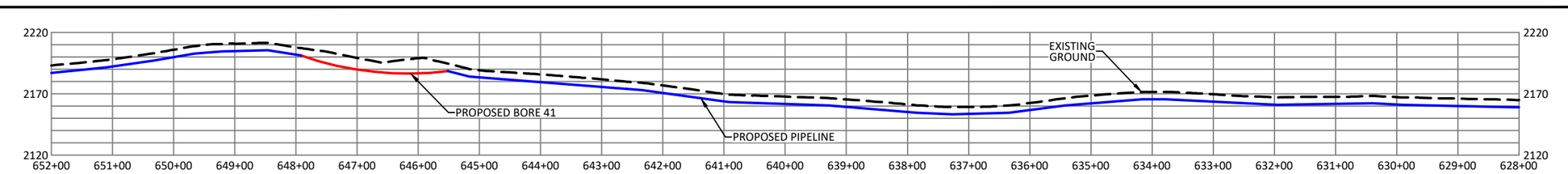
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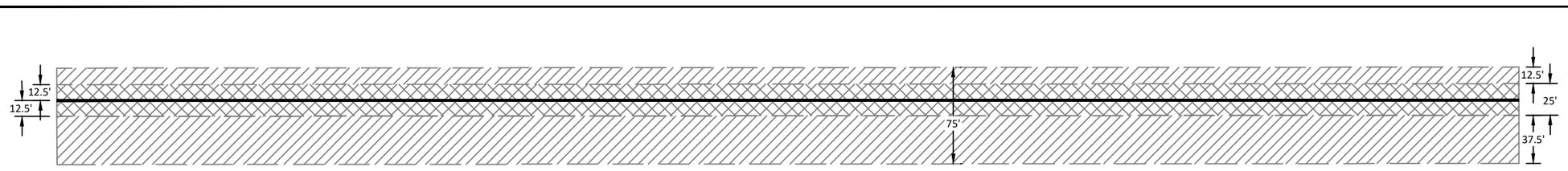
State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

LAND	PROTECTION EASEMENT		DAVID LYNN & RITA SUE JOHNSON 11-00-06544 35.86				JOANN MARIE SCHNEIDERMAN 11-00-06562 109.59										
	LAND PLAT RODS	652+00.00		646+08.24													628+00.00
	STATION																
PIPELINE STATIONING	CROSSINGS	652+00.00 MATCHLINE		649+91.18 P.I. < 33°05'22" LT		647+91.76 END BORE 41		646+75.64 APPROXIMATE EXISTING ONEOK PIPELINE 646+69.00 OVERHEAD POWER 646+10.23 131ST AVE NW 646+08.24 SECTION/OWNERSHIP LINE		645+51.76 BEGIN BORE 41							628+00.00 MATCHLINE



PIPELINE	MATERIAL	408'		240'		1752'											
		①		②		①											
	COATING																
	DESIGN FACTOR																
	CLASS LOCATION																
	MAOP																





LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
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PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2160'
2	10" .307 W.T. BORE PIPE FBE+ARO	240'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

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Facility Name

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10" HP STEEL GAS PIPELINE
SHEET 29 OF 66
628+00.00 TO 652+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

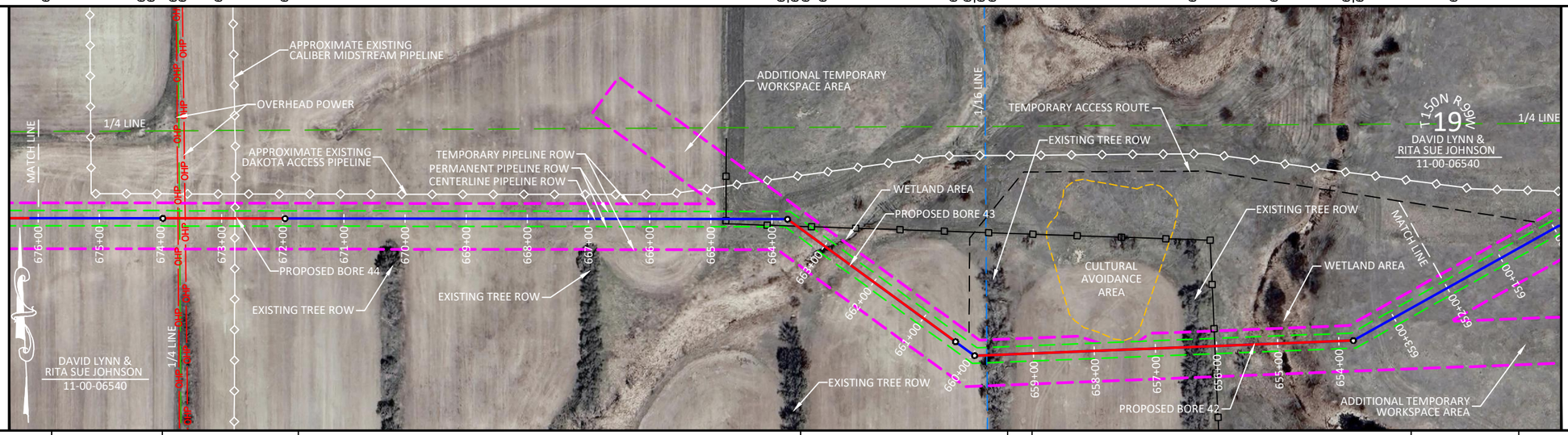
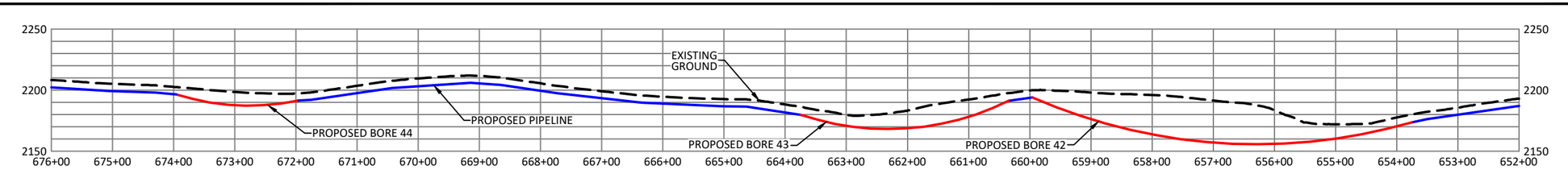
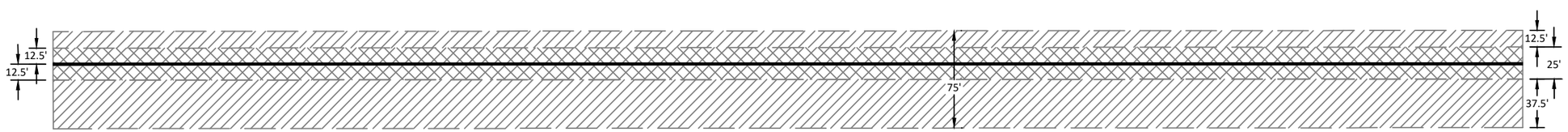
Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			

File Name: HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg

Drawing No: HILAND EXPRESS SPINE TIE-IN-PRO-001

Rev

LAND	PROTECTION EASEMENT			DAVID LYNN & RITA SUE JOHNSON 11-00-06540 13.99			DAVID LYNN & RITA SUE JOHNSON 11-00-06544 131.46												
	LAND PLAT RODS		676+00.00			673+69.12												652+00.00	
	STATION																		
PIPELINE STATIONING	CROSSINGS	676+00.00 MATCHLINE		673+96.59 END BORE 44 673+71.67 OVERHEAD POWER	673+69.12 OWNERSHIP LINE 673+59.87 OVERHEAD POWER	672+78.25 APPROXIMATE EXISTING CALIBER MIDSTREAM PIPELINE	671+96.59 BEGIN BORE 44					663+74.62 P.I. < 36°00'02" LT 663+74.62 END BORE 43 663+54.97 EXISTING FENCE	662+95.61 DRAINAGE		660+34.62 BEGIN BORE 43 659+95.98 P.I. < 38°20'47" RT 659+95.98 END BORE 42 659+61.16 TREE ROW		656+33.02 TREE ROW	654+98.75 DRAINAGE	653+75.98 P.I. < 26°56'44" RT 653+75.98 BEGIN BORE 42		652+00.00 MATCHLINE
ALIGNMENT STRIP MAP	PLAN																		
PIPELINE	MATERIAL		183' ①		200' ②		822' ①					340' ②		39' ①	620' ②			176' ①	
	COATING																		
	DESIGN FACTOR																		
	CLASS LOCATION																		
	MAOP																		
PROFILE	ELEVATION																		
WORKSPACE	FOOTPRINT																		

LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
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BEARINGS ARE ORIENTED TO THE NORTH DAKOTA STATE PLANE COORDINATE SYSTEM, NORTH ZONE, FROM GPS MEASUREMENTS AT A WHS CONTROL POINT (5/8" REBAR), LATITUDE: 47°50'53.379" NORTH, LONGITUDE: 103°27'47.616" WEST, HAVING A NAVD 88 ELEVATION OF 2374.789. PROJECT ELEVATIONS ARE BASED ON GPS OBSERVATIONS DERIVED USING GEOID 12B HELD ON THE CONTROL POINT.

DISTANCES SHOWN ARE GRID DISTANCES, USE A COMBINED SCALE FACTOR OF 1.000166337 TO GET GROUND DISTANCES.

INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1220'
2	10" .307 W.T. BORE PIPE FBE+ARO	1160'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

Reference Drawings

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Facility Name

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 30 OF 66
652+00.00 TO 676+00.00
T149N R98W, T149N R99W, T150N R99W, T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

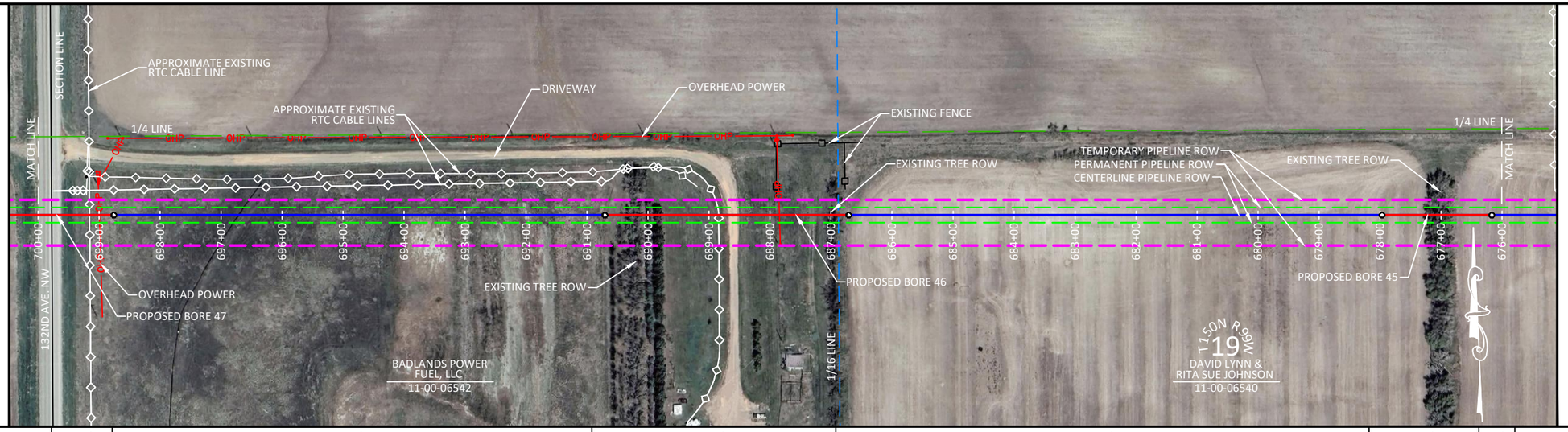
State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

LAND	PROTECTION EASEMENT		CHASE WISNESS & BEAU WISNESS 03-00-09800 1.34	BADLANDS POWER FUEL, LLC 11-00-06542 78.18	DAVID LYNN & RITA SUE JOHNSON 11-00-06540 65.94
	LAND PLAT RODS	700+00.00	699+77.84	686+87.95	676+00.00
	STATION				

PIPELINE STATIONING — CROSSINGS

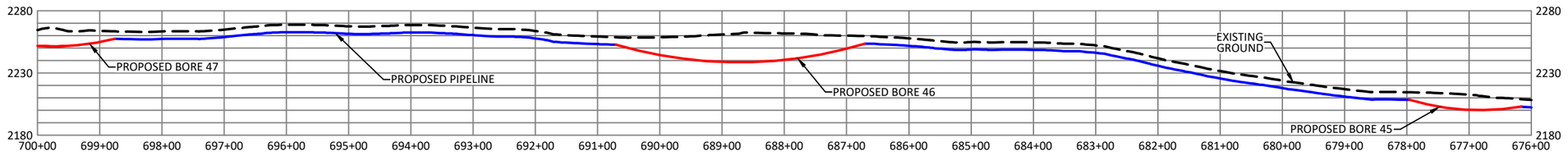
700+00.00 MATCHLINE
699+81.03 132ND AVE NW
699+77.84 SECTION/OWNERSHIP LINE
699+15.72 APPROXIMATE EXISTING RTC CABLE LINE
698+99.84 OVERHEAD POWER
698+76.13 BEGIN BORE 47
690+70.95 END BORE 46
690+36.89 TREE ROW
689+77.88 TREE ROW
688+84.06 APPROXIMATE EXISTING RTC CABLE LINE
688+60.46 DRIVEWAY
687+84.71 OVERHEAD POWER
687+06.86 TREE ROW
686+93.08 TREE ROW
686+87.95 OWNERSHIP LINE
686+70.95 BEGIN BORE 46
677+96.32 END BORE 45
677+27.83 TREE ROW
676+81.92 TREE ROW
676+16.32 BEGIN BORE 45
676+00.00 MATCHLINE

ALIGNMENT STRIP MAP — PLAN

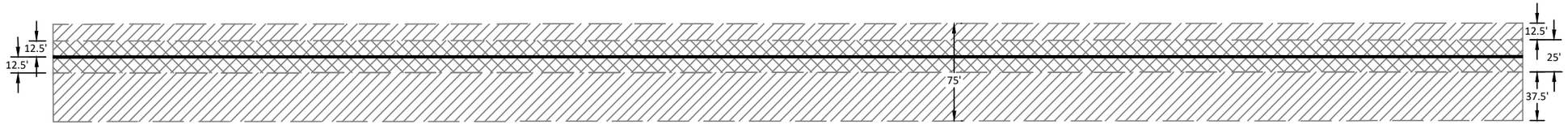


PIPELINE							
MATERIAL		124'	805'	400'	875'	180'	16'
		②	①	②	①	②	①
COATING							
DESIGN FACTOR							
CLASS LOCATION							
MAOP							

PROFILE — ELEVATION



WORKSPACE — FOOTPRINT



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

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INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1696'
2	10" .307 W.T. BORE PIPE FBE+ARO	704'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
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A	PROPOSED	16013	11/29/2024

NOTES

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HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Facility Name

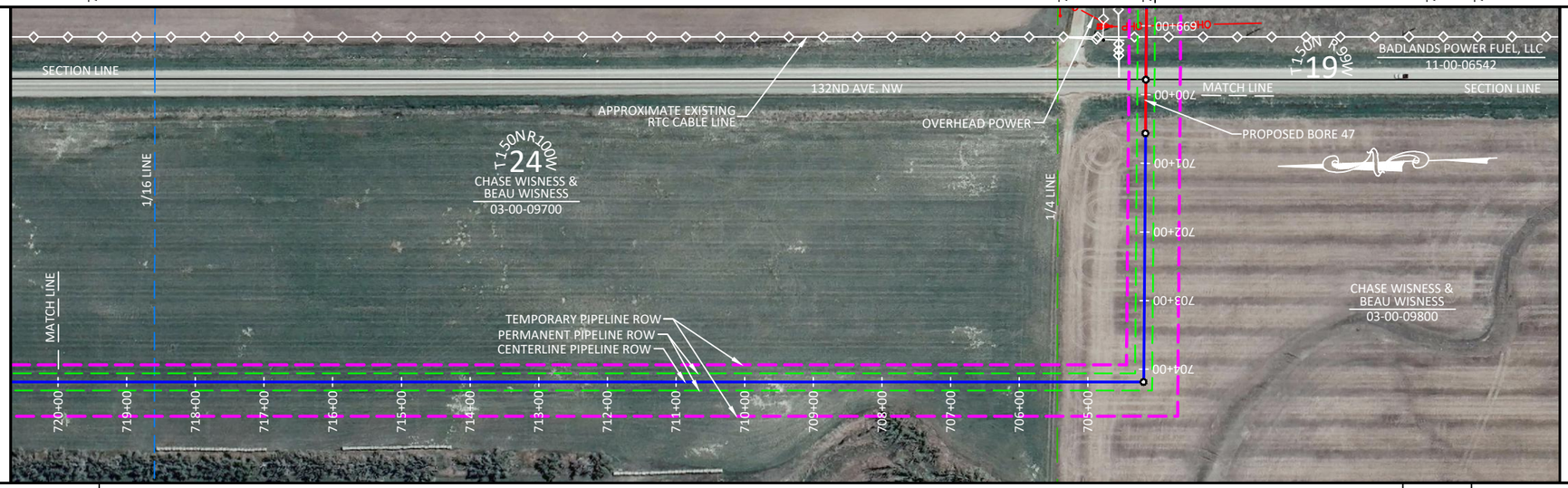
HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 31 OF 66
676+00.00 TO 700+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

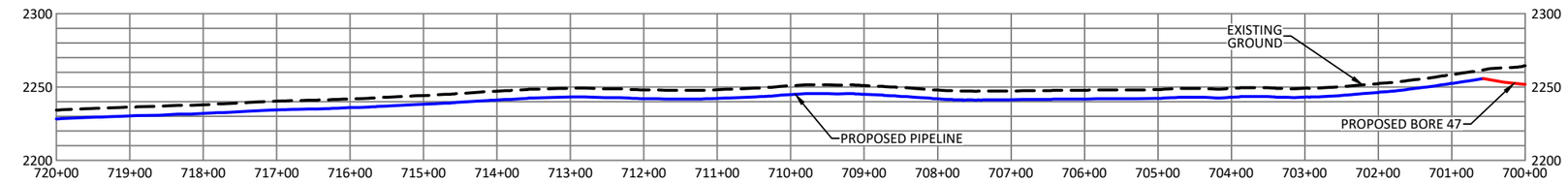
State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

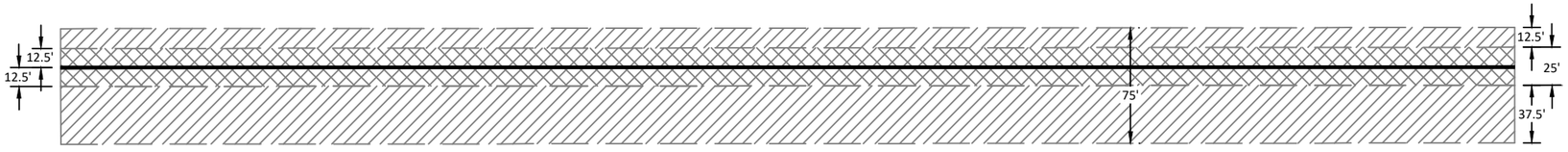
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LAND	PROTECTION EASEMENT		
	LAND PLAT	CHASE WISNESS & BEAU WISNESS 03-00-09700 88.22	CHASE WISNESS & BEAU WISNESS 03-00-09800 32.99
	RODS		
	STATION	720+00.00	705+44.29 / 700+00.00
PIPELINE STATIONING	CROSSINGS	720+00.00 MATCHLINE	705+44.29 OWNERSHIP LINE; 704+18.67 P.I. < 89°33'21" RT; 700+56.13 END BORE 47; 700+00.00 MATCHLINE



PIPELINE	MATERIAL	1944' ①	56' ②
	COATING		
	DESIGN FACTOR		
	CLASS LOCATION		
	MAOP		





LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

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PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1944'
2	10" .307 W.T. BORE PIPE FBE+ARO	56'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
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NOTES

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HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

Facility Name

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 32 OF 66
700+00.00 TO 720+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			

File Name: HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg

Drawing No: HILAND EXPRESS SPINE TIE-IN-PRO-001 Rev

Fri Jul 25 2025 - 10:30AM

LAND — PROTECTION EASEMENT / LAND PLAT / RODS / STATION

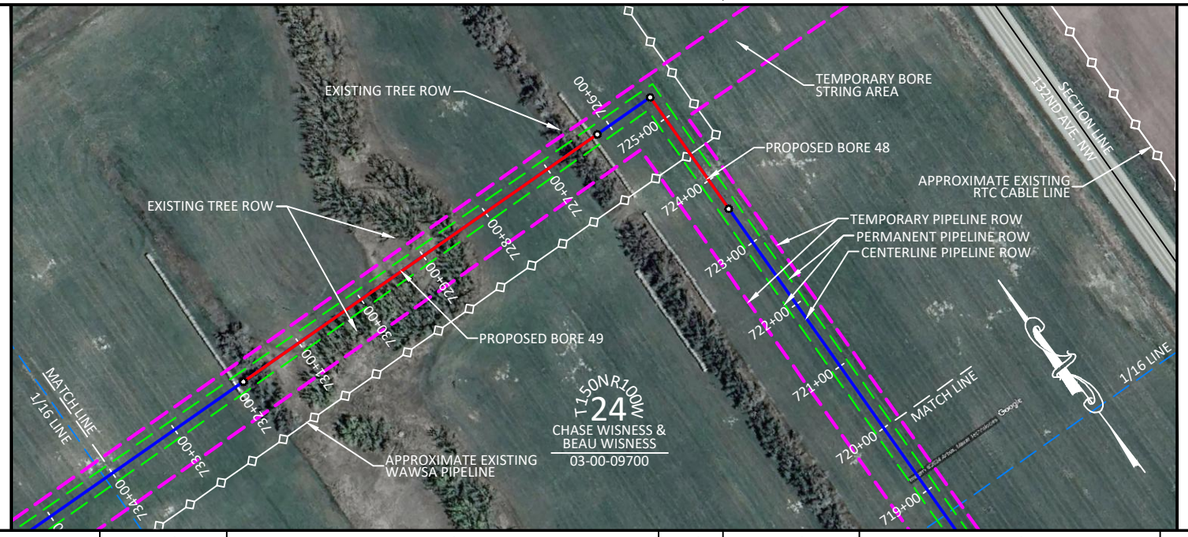
CHASE WISNESS & BEAU WISNESS
03-00-09700
84.85

734+00.00 — 720+00.00

PIPELINE STATIONING — CROSSINGS

734+00.00 MATCHLINE
731+89.69 END BORE 49
731+78.26 TREE ROW
731+53.58 TREE ROW
728+74.82 TREE ROW
728+44.21 TREE ROW
726+73.09 TREE ROW
726+33.74 TREE ROW
726+19.69 BEGIN BORE 49
725+34.49 P.I. < 89°44'52" LT
725+34.49 END BORE 48
724+42.25 APPROXIMATE EXISTING WAWSA PIPELINE
723+54.49 BEGIN BORE 48
720+00.00 MATCHLINE

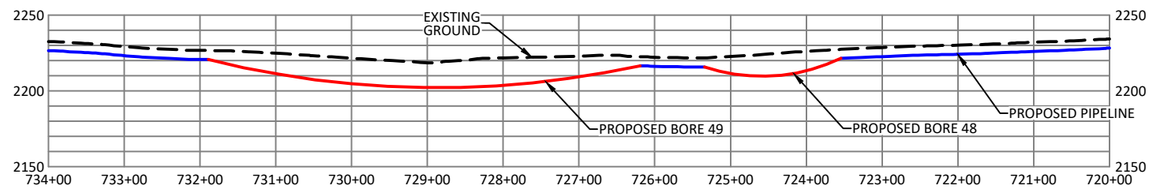
ALIGNMENT STRIP MAP — PLAN



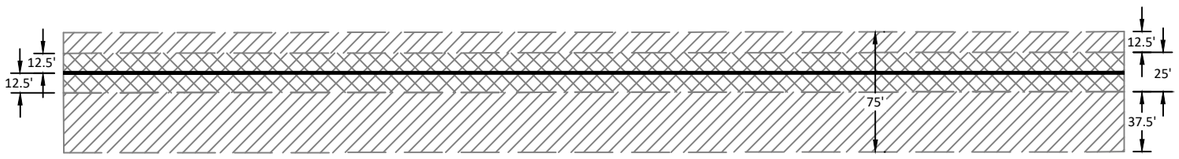
PIPELINE — MATERIAL / COATING / DESIGN FACTOR / CLASS LOCATION / MAOP

210'	570'	85'	180'	355'
①	②	①	②	①

PROFILE — ELEVATION



WORKSPACE — FOOTPRINT



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
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INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	650'
2	10" .307 W.T. BORE PIPE FBE+ARO	750'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 33 OF 66
720+00.00 TO 734+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Reference Drawings:

Facility Name:

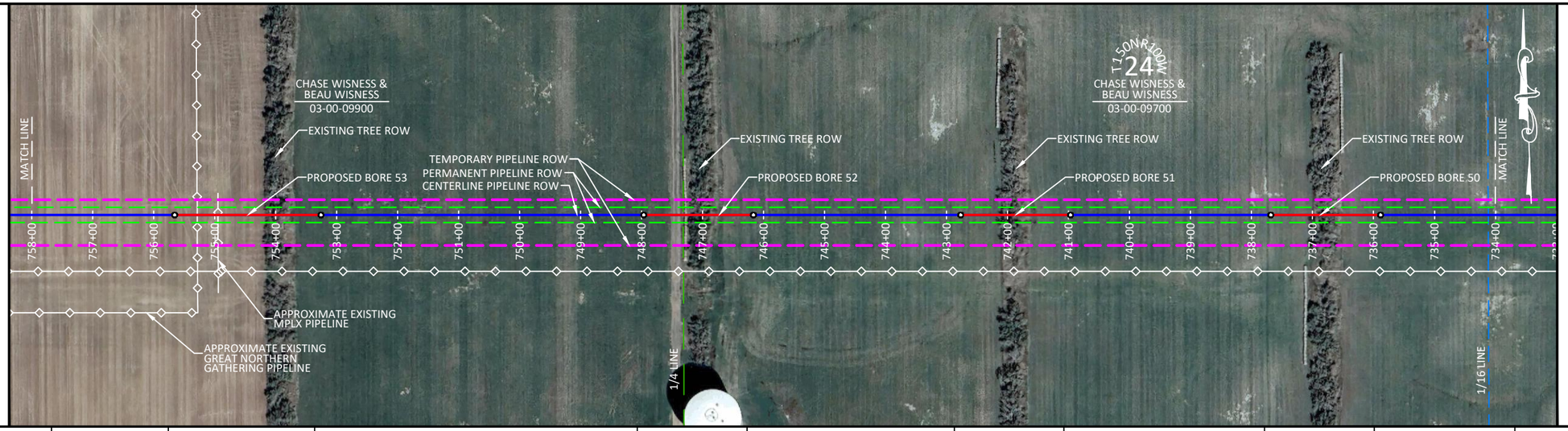
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State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			

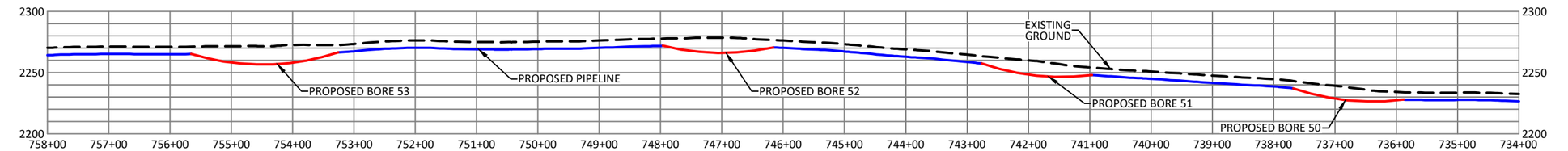
File Name: HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg
Drawing No: HILAND EXPRESS SPINE TIE-IN-PRO-001
Rev

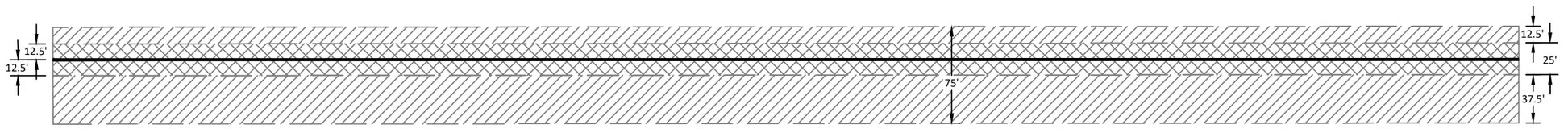
LAND	PROTECTION EASEMENT		CHASE WISNESS & BEAU WISNESS 03-00-09900 64.75			CHASE WISNESS & BEAU WISNESS 03-00-09700 80.71				
	LAND PLAT									
	RODS									
	STATION	758+00.00			747+31.65					734+00.00
PIPELINE STATIONING	CROSSINGS	758+00.00 MATCHLINE	755+65.88 END BORE 53	755+28.75 APPROX. EXIST. GREAT NORTHERN GATHERING PIPELINE 754+94.70 APPROXIMATE EXISTING MPLX PIPELINE	754+17.30 TREE ROW	753+75.99 TREE ROW	753+25.88 BEGIN BORE 53	747+96.64 END BORE 52	747+31.65 OWNERSHIP LINE 747+25.61 TREE ROW	746+88.66 TREE ROW	746+16.64 BEGIN BORE 52

		742+76.75 END BORE 51	742+07.78 TREE ROW	741+64.49 TREE ROW	740+96.75 BEGIN BORE 51	737+68.11 END BORE 50	737+00.88 TREE ROW	736+54.19 TREE ROW	735+88.11 BEGIN BORE 50	734+00.00 MATCHLINE



PIPELINE	MATERIAL	234'	240'	529'	180'	340'	180'	329'	180'	188'
		①	②	①	②	①	②	①	②	①
	COATING									
	DESIGN FACTOR									
	CLASS LOCATION									
	MAOP									





LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
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PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1620'
2	10" .307 W.T. BORE PIPE FBE+ARO	780'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

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Reference Drawings

Facility Name

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 34 OF 66
734+00.00 TO 758+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

Fri 12, 2025 - 9:30AM

LAND	PROTECTION EASEMENT		CHASE WISNESS & BEAU WISNESS 03-00-05400 29.82	STATE OF ND 12.12	CHASE WISNESS & BEAU WISNESS 03-00-09900 55.03
	LAND PLAT RODS				
	STATION	774+00.00	769+07.99	767+07.94	758+00.00
PIPELINE STATIONING	CROSSINGS	774+00.00 MATCHLINE	769+27.97 END BORE 55 769+07.99 STATE HWY ROW LINE	768+70.95 APPROXIMATE EXISTING RTC CABLE LINE 768+08.74 US 85/CAN AM HIGHWAY 768+07.97 SECTION LINE	767+07.94 STATE HWY ROW LINE 766+87.97 BEGIN BORE 55

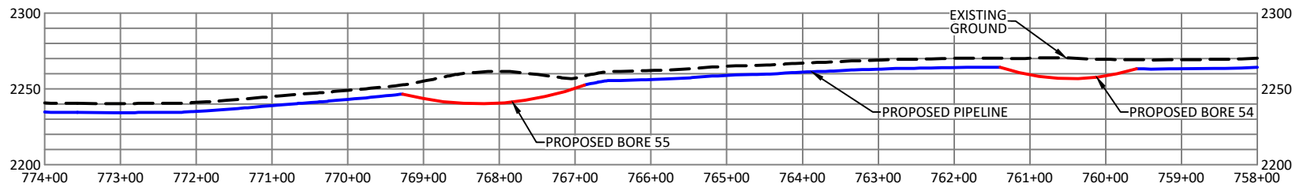
		761+78.89 P.I. < 91°08'59" RT	761+39.69 END BORE 54	760+75.26 TREE ROW 760+31.58 TREE ROW	759+59.69 BEGIN BORE 54
					758+00.00 MATCHLINE

ALIGNMENT STRIP MAP — PLAN

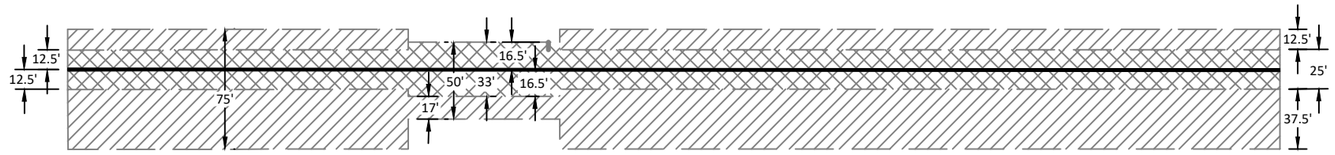


PIPELINE						
	MATERIAL	473' ①	240' ②	548' ①	180' ②	159' ①
	COATING					
	DESIGN FACTOR					
	CLASS LOCATION					
	MAOP					

PROFILE — ELEVATION



WORKSPACE — FOOTPRINT



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

GENERAL NOTES

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INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1180'
2	10" .307 W.T. BORE PIPE FBE+ARO	420'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024
NO.	Revision Description	Project ID	Date

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

Facility Name

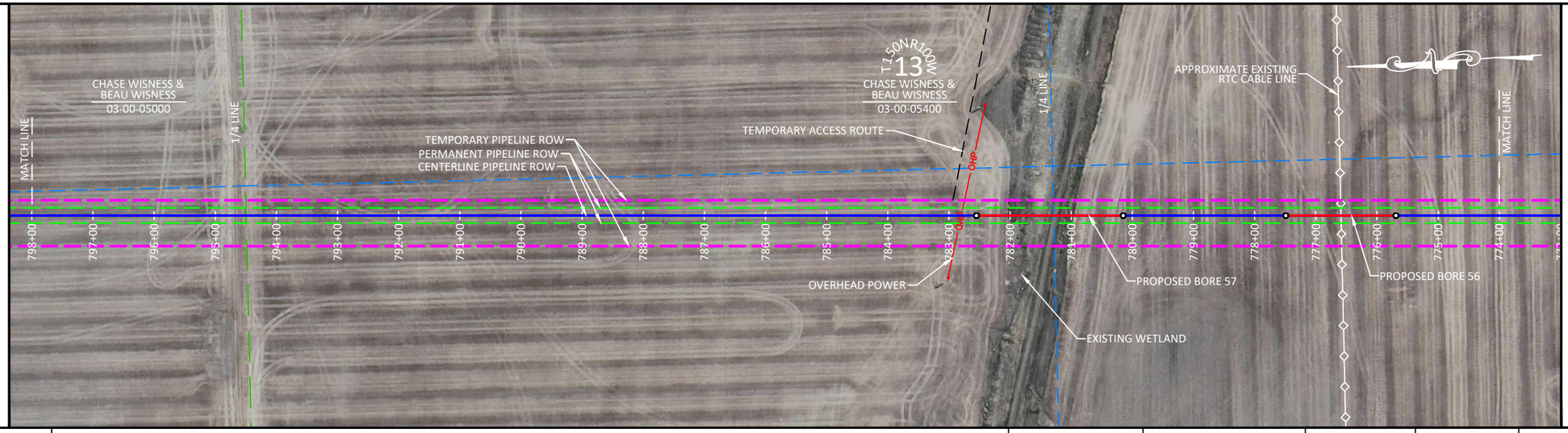
HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 35 OF 66
758+00.00 TO 774+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

Feb 12, 2025 - 8:59pm

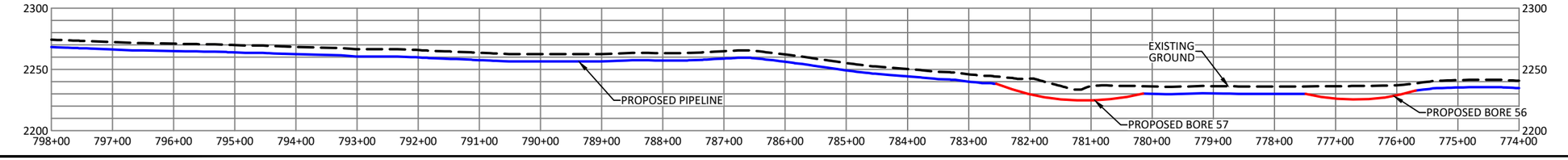
LAND	PROTECTION EASEMENT			CHASE WISNESS & BEAU WISNESS 03-00-05000 21.25				CHASE WISNESS & BEAU WISNESS 03-00-05400 124.21											
	LAND PLAT RODS																		
	STATION	798+00.00			794+49.44													774+00.00	
PIPELINE STATIONING	CROSSINGS	798+00.00 MATCHLINE			794+49.44 OWNERSHIP LINE					782+79.80 OVERHEAD POWER 782+54.93 END BORE 57	781+84.60 WETLAND EDGE	780+94.46 WETLAND EDGE	780+14.93 BEGIN BORE 57			777+48.96 END BORE 56	776+58.96 APPROXIMATE EXISTING RTC CABLE LINE	775+68.96 BEGIN BORE 56		774+00.00 MATCHLINE



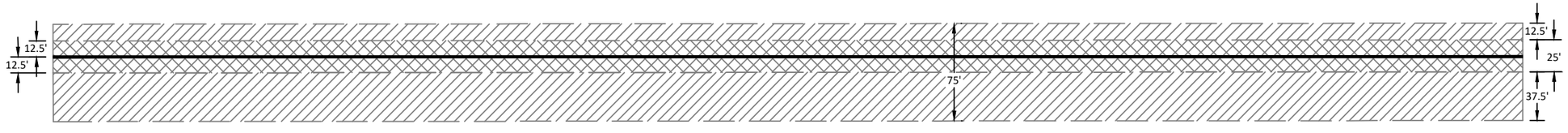
ALIGNMENT STRIP MAP — PLAN

PIPELINE	MATERIAL	1545'							240'	266'	180'	169'							
		①							②	①	②	①							
	COATING																		
	DESIGN FACTOR																		
	CLASS LOCATION																		
	MAOP																		

PROFILE — ELEVATION



WORKSPACE — FOOTPRINT



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- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
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PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1980'
2	10" .307 W.T. BORE PIPE FBE+ARO	420'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

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1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 36 OF 66
774+00.00 TO 798+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Facility Name

Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

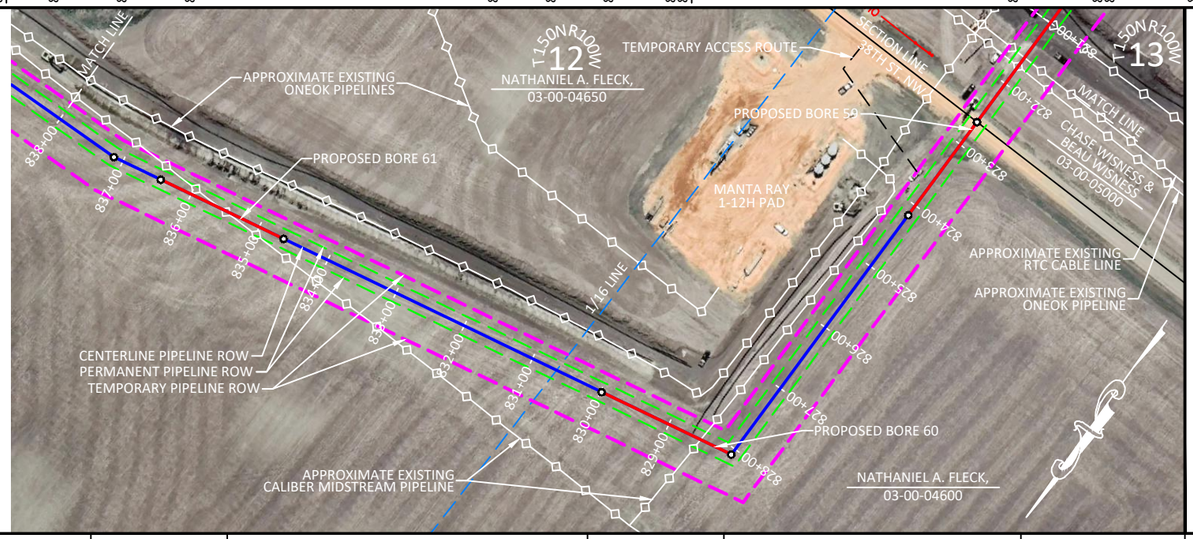
Feb 12, 2025 - 8:59PM

| | | |

LAND	PROTECTION EASEMENT		NATHANIEL A. FLECK 03-00-04650 44.57		NATHANIEL A. FLECK 03-00-04600 48.60	CHASE WISNESS & BEAU WISNESS 03-00-05000 3.81
	LAND PLAT					
	RODS					
	STATION	838+00.00	830+64.66		822+62.79	822+00.00

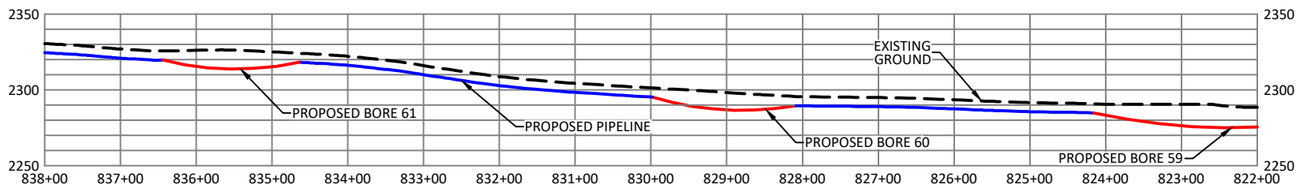
PIPELINE STATIONING	CROSSINGS
	838+00.00 MATCHLINE
	837+13.14 P.I. < 9°24'39" RT
	836+44.57 END BORE 61
	835+54.57 APPROXIMATE EXISTING CALIBER MIDSTREAM PIPELINE
	834+64.57 BEGIN BORE 61
	830+64.66 OWNERSHIP LINE
	829+98.58 END BORE 60
	828+53.42 APPROXIMATE EXISTING CALIBER MIDSTREAM PIPELINE
	828+08.58 BEGIN BORE 60
	828+08.58 P.I. < 79°15'29" RT
	824+15.61 END BORE 59
	822+62.79 SECTION/OWNERSHIP LINE
	822+57.34 28TH ST. NW
	822+00.00 MATCHLINE

ALIGNMENT STRIP MAP — PLAN

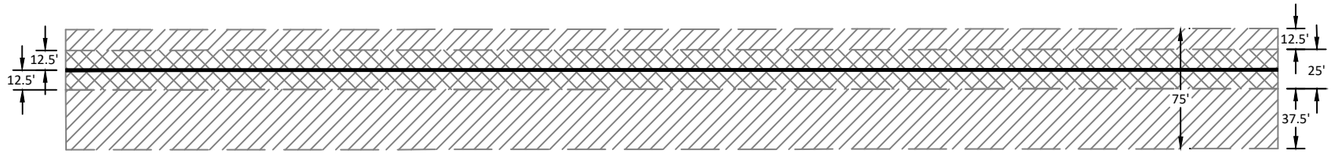


PIPELINE							
	MATERIAL	156'	180'	466'	190'	393'	215'
		①	②	①	②	①	②
	COATING						
	DESIGN FACTOR						
	CLASS LOCATION						
	MAOP						

PROFILE — ELEVATION



WORKSPACE — FOOTPRINT



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
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PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1015'
2	10" .307 W.T. BORE PIPE FBE+ARO	585'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
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B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

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HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

Facility Name:
HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 38 OF 66
822+00.00 TO 838+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

Fri Jul 25 2025 - 8:30AM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		

LAND

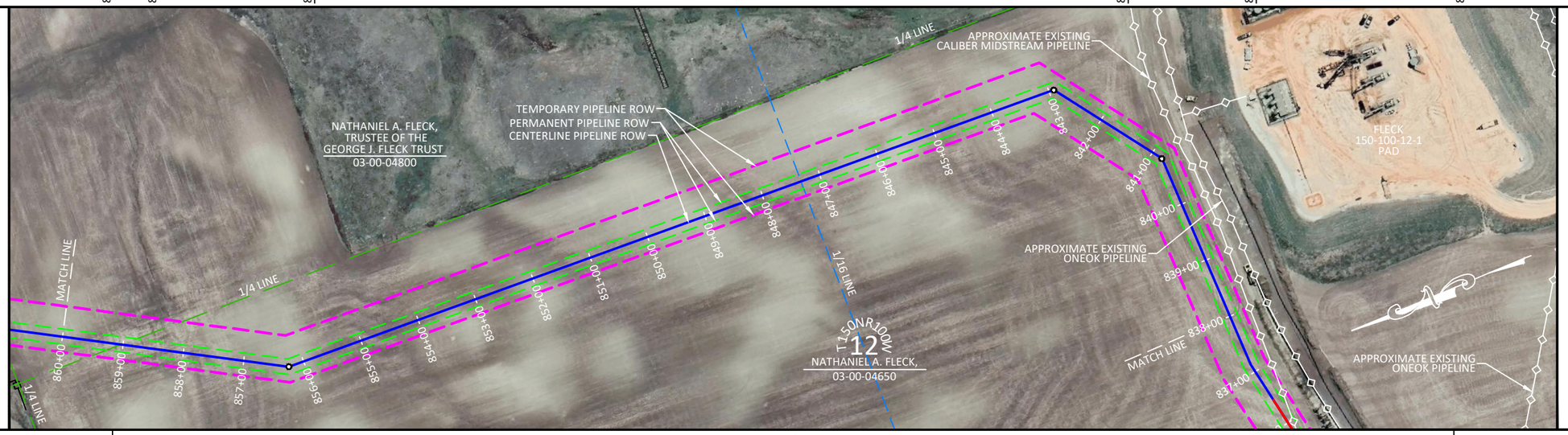
PROTECTION EASEMENT		NATHANIEL A. FLECK, TRUSTEE OF THE GEORGE J. FLECK TRUST 03-00-04800 5.94	NATHANIEL A. FLECK 03-00-04650 127.40
LAND PLAT RODS	860+00.00	859+02.05	838+00.00
STATION			

PIPELINE STATIONING

CROSSINGS	860+00.00 MATCHLINE	859+02.05 OWNERSHIP LINE	856+25.78 P.I. < 27°27'31" RT	842+91.52 P.I. < 52°19'02" LT	840+81.62 P.I. < 34°19'31" LT	838+00.00 MATCHLINE

ALIGNMENT STRIP MAP

PLAN

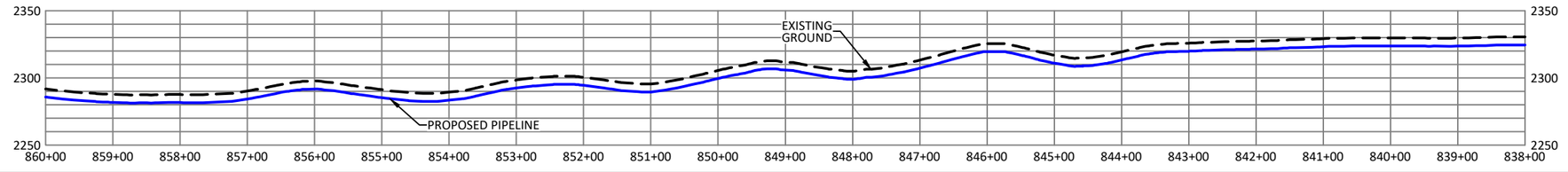


PIPELINE

MATERIAL	2200' ①
COATING	
DESIGN FACTOR	
CLASS LOCATION	
MAOP	

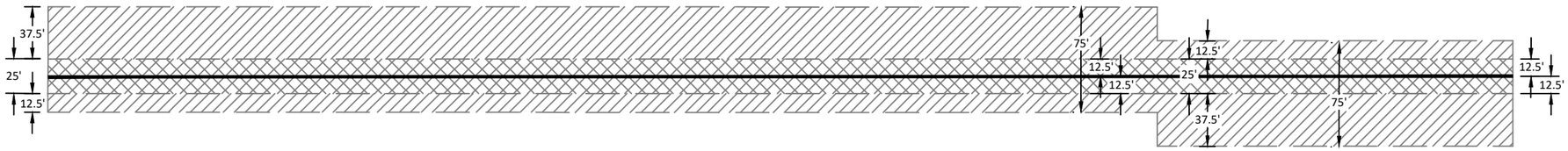
PROFILE

ELEVATION



WORKSPACE

FOOTPRINT



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
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PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2200'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
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A	PROPOSED	16013	11/29/2024

NOTES

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307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 39 OF 66
838+00.00 TO 860+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Facility Name

Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

Feb 12, 2025 - 3:05PM

LAND — PROTECTION EASEMENT / LAND PLAT / RODS / STATION

884+00.00

NATHANIEL A. FLECK, TRUSTEE OF THE GEORGE J. FLECK TRUST
03-00-04700
138.91

NATHANIEL A. FLECK, TRUSTEE OF THE GEORGE J. FLECK TRUST
03-00-04800
6.55

861+08.05

860+00.00

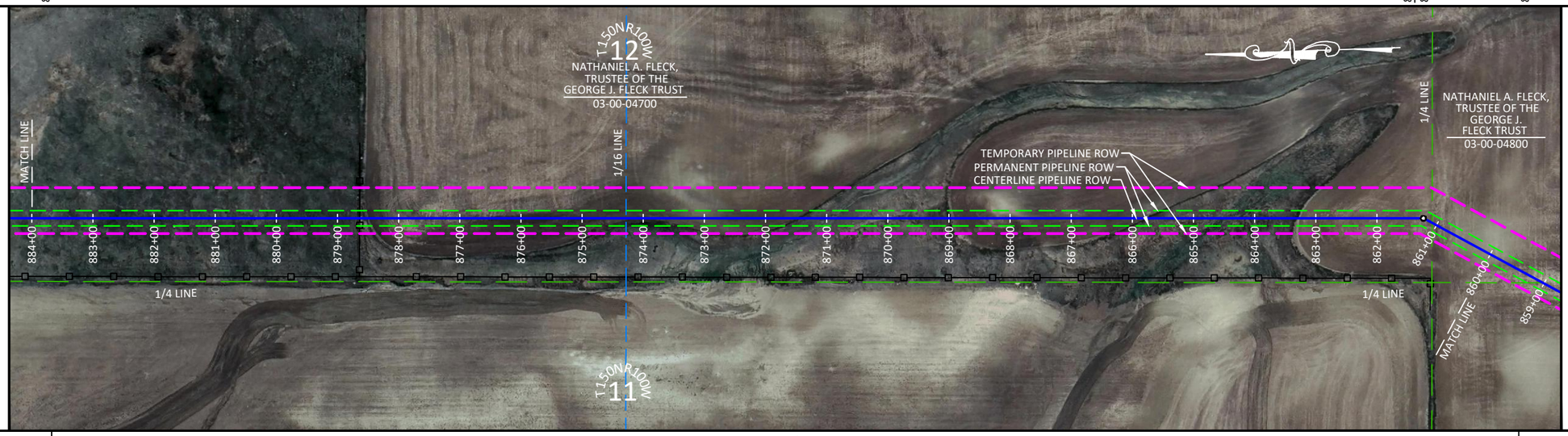
PIPELINE STATIONING — CROSSINGS

884+00.00 MATCHLINE

861+23.96 P.I. < 28°19'04" LT
861+08.05 OWNERSHIP LINE

860+00.00 MATCHLINE

ALIGNMENT STRIP MAP — PLAN



PIPELINE — MATERIAL: 2400'; ①

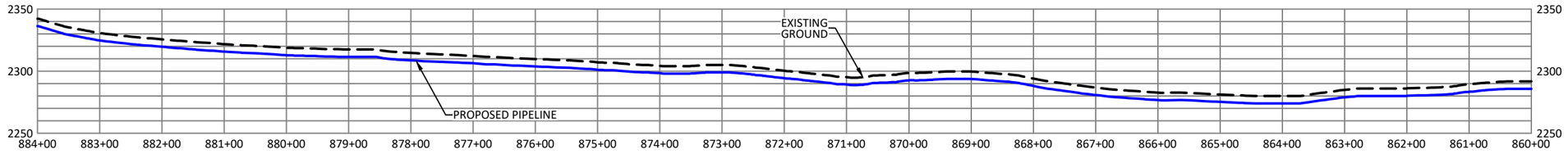
COATING

DESIGN FACTOR

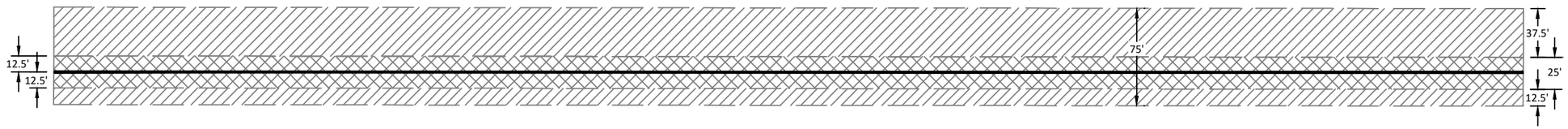
CLASS LOCATION

MAOP

PROFILE — ELEVATION



WORKSPACE — FOOTPRINT



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
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- PROPOSED BORE
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PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2400'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

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307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

Facility Name

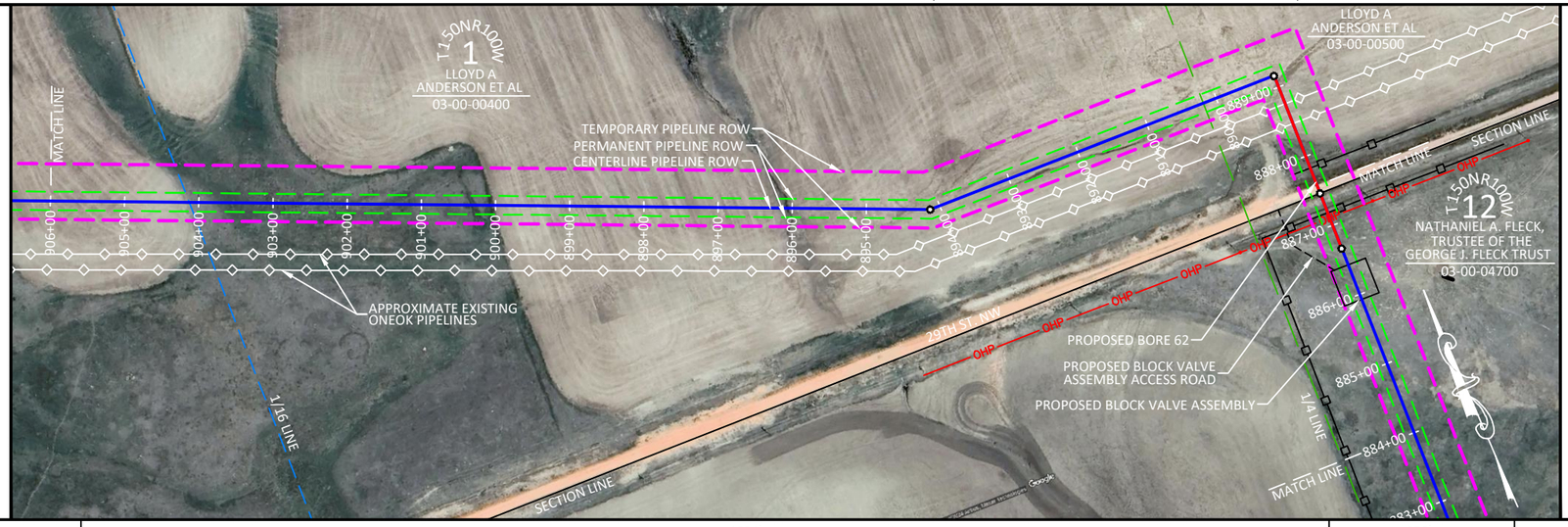
HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 40 OF 66
860+00.00 TO 884+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

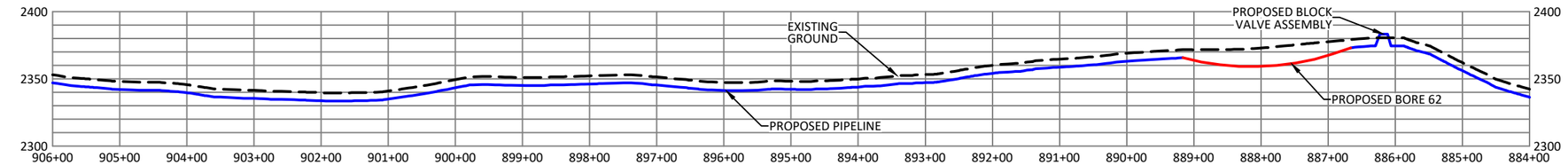
State: NORTH DAKOTA | PIN No:
County: MCKENZIE | Scale: 1"=200'
Category:
File Name: HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg
Drawing No: HILAND EXPRESS SPINE TIE-IN-PRO-001 | Rev

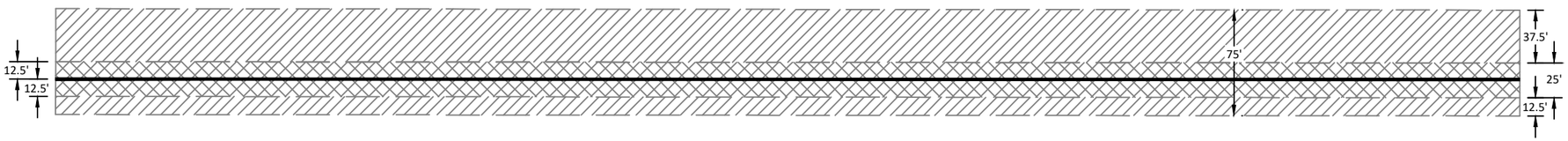
Feb 12, 2025 - 8:30AM

LAND	PROTECTION EASEMENT				LLOYD A ANDERSON ET AL 03-00-00400 112.35								NATHANIEL A. FLECK, TRUSTEE OF THE GEORGE J. FLECK TRUST 03-00-04700 20.98						
	LAND PLAT RODS		906+00.00									887+46.23					884+00.00		
	STATION																		
PIPELINE STATIONING	CROSSINGS	906+00.00 MATCHLINE				894+13.77 P.I. < 21°46'33" RT			889+16.45 P.I. < 89°46'46" LT 889+16.45 END BORE 62 888+76.02 APPROXIMATE EXISTING ONEOK PIPELINE 888+47.01 APPROXIMATE EXISTING ONEOK PIPELINE		887+82.98 EXISTING FENCE	887+48.53 29TH ST. NW 887+46.23 SECTION/OWNERSHIP LINE	887+18.14 EXISTING FENCE 887+10.78 OVERHEAD POWER	886+66.45 BEGIN BORE 62	886+17.76 PROPOSED BLOCK VALVE		884+00.00 MATCHLINE		



PIPELINE					
MATERIAL	1684' ①		250' ②	266' ①	
COATING					
DESIGN FACTOR					
CLASS LOCATION					
MAOP					





LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

GENERAL NOTES

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BEARINGS ARE ORIENTED TO THE NORTH DAKOTA STATE PLANE COORDINATE SYSTEM, NORTH ZONE, FROM GPS MEASUREMENTS AT A WHS CONTROL POINT (5/8" REBAR), LATITUDE: 47°50'53.379" NORTH, LONGITUDE: 103°27'47.616" WEST, HAVING A NAVD 88 ELEVATION OF 2374.789. PROJECT ELEVATIONS ARE BASED ON GPS OBSERVATIONS DERIVED USING GEOID 12B HELD ON THE CONTROL POINT.

DISTANCES SHOWN ARE GRID DISTANCES, USE A COMBINED SCALE FACTOR OF 1.000166337 TO GET GROUND DISTANCES.

INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1950'
2	10" .307 W.T. BORE PIPE FBE+ARO	250'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

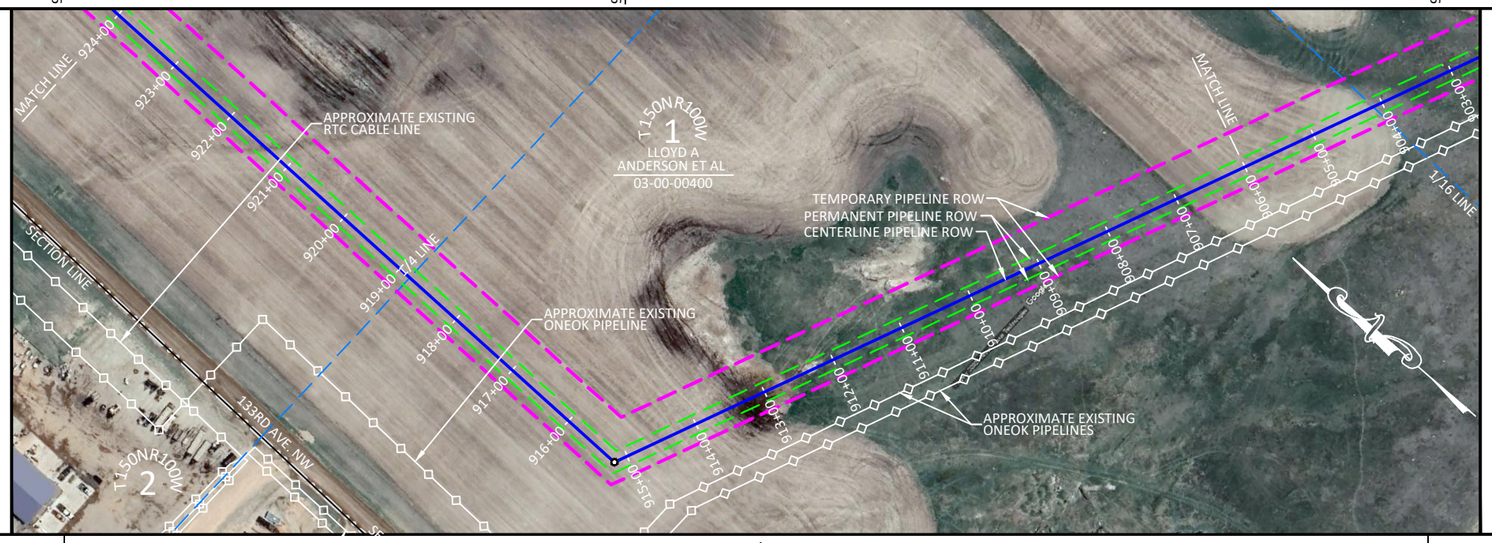
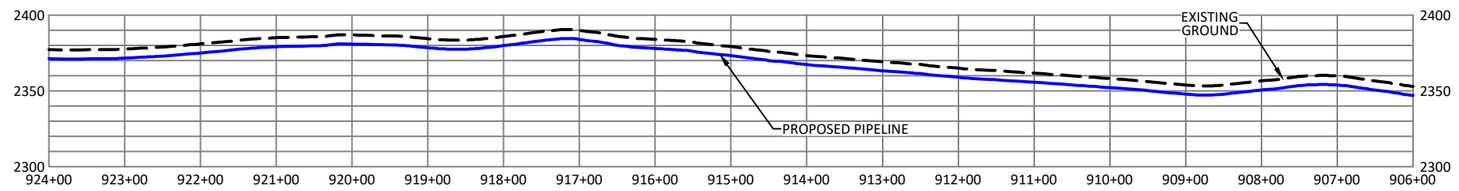
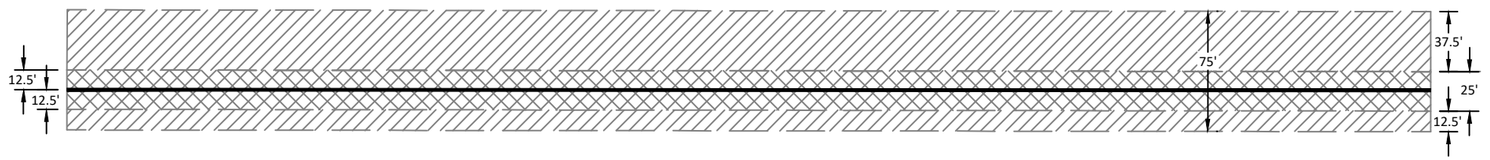
Reference Drawings:

Facility Name:
HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 41 OF 66
884+00.00 TO 906+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED
State: NORTH DAKOTA | PIN No:
County: MCKENZIE | Scale: 1"=200'
Category:
File Name: HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg
Drawing No: HILAND EXPRESS SPINE TIE-IN-PRO-001 | Rev

598+90 90 END BORE 38

Plot By: BOB - 8:30PM

LAND	PROTECTION EASEMENT	LLOYD A ANDERSON ET AL 03-00-00400 109.09	
	LAND PLAT RODS		
	STATION	924+00.00	906+00.00
PIPELINE STATIONING	CROSSINGS	924+00.00 MATCHLINE 915+18.60 P.I. < 67°06'36" RT	906+00.00 MATCHLINE
ALIGNMENT STRIP MAP	PLAN		
PIPELINE	MATERIAL	1800' ①	
	COATING		
	DESIGN FACTOR		
	CLASS LOCATION		
	MAOP		
PROFILE	ELEVATION		
WORKSPACE	FOOTPRINT		

LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

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DISTANCES SHOWN ARE GRID DISTANCES, USE A COMBINED SCALE FACTOR OF 1.000166337 TO GET GROUND DISTANCES.

INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1800'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

Reference Drawings

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Facility Name

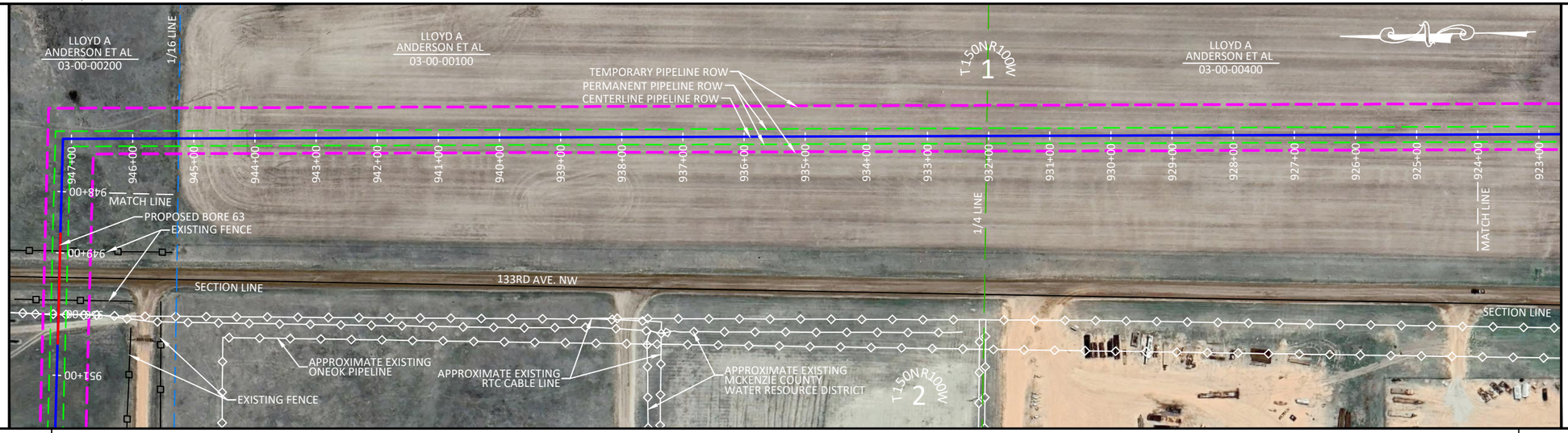
HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 42 OF 66
906+00.00 TO 924+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

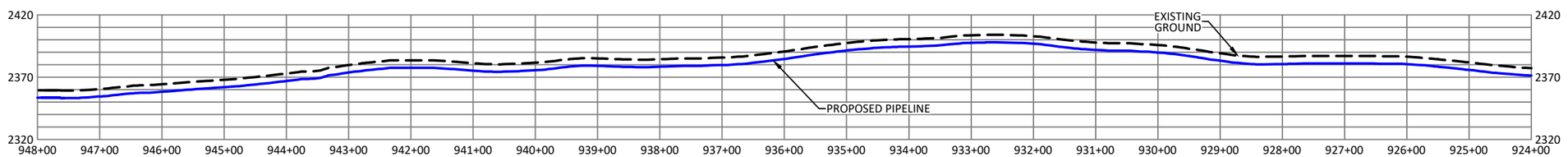
State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001		Rev

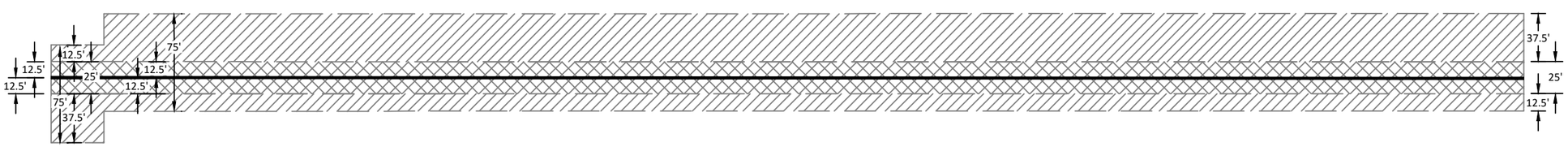
Feb 12, 2025 - 8:30AM

LAND	PROTECTION EASEMENT																	
	LAND PLAT		LLOYD A ANDERSON ET AL 03-00-00200 16.68			LLOYD A ANDERSON ET AL 03-00-00100 80.10							LLOYD A ANDERSON ET AL 03-00-00400 48.68					
	RODS	948+00.00			945+24.85							932+03.23						924+00.00
	STATION																	
PIPELINE STATIONING	CROSSINGS	948+00.00 MATCHLINE	947+13.82 P.I. < 88°18'07" LT		945+24.85 OWNERSHIP LINE							932+03.23 OWNERSHIP LINE						924+00.00 MATCHLINE



PIPELINE	MATERIAL	2400'
		①
	COATING	
	DESIGN FACTOR	
	CLASS LOCATION	
	MAOP	





LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

GENERAL NOTES

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DISTANCES SHOWN ARE GRID DISTANCES, USE A COMBINED SCALE FACTOR OF 1.000166337 TO GET GROUND DISTANCES.

INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2400'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

Reference Drawings:

Facility Name:

D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2024
A	PROPOSED	16013	11/29/2024
NO.	Revision Description	Project ID	Date

NOTES:

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

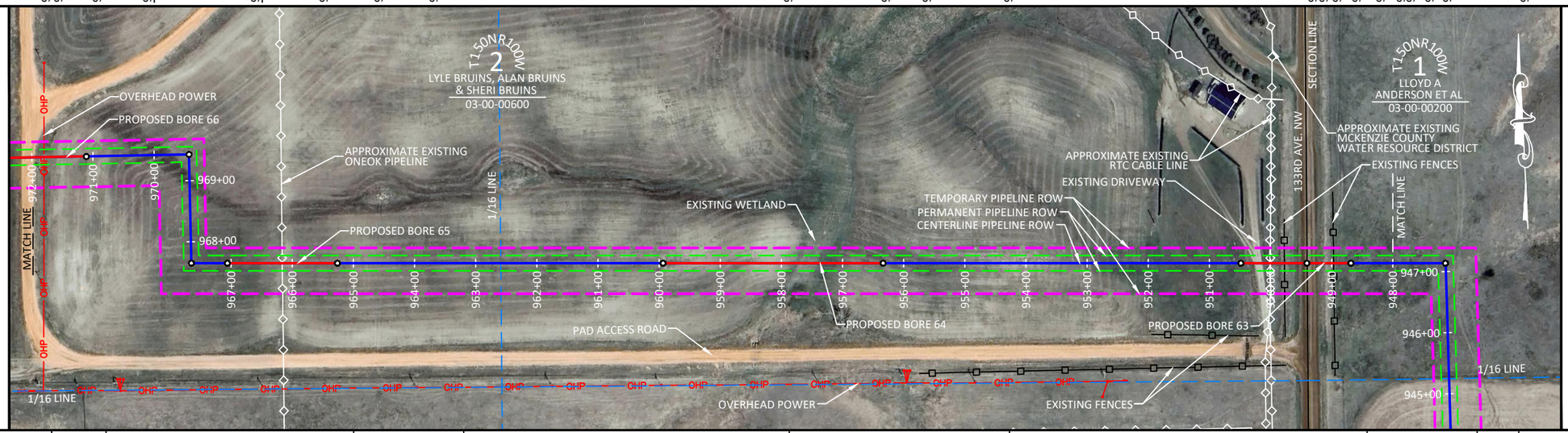
WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 43 OF 66
924+00.00 TO 948+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

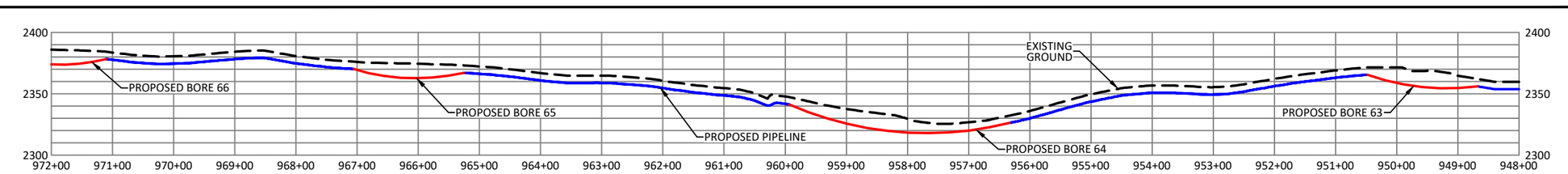
Status: PROPOSED

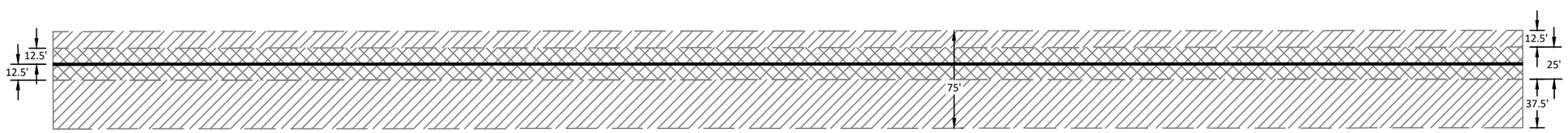
State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001		Rev

LAND	PROTECTION EASEMENT				LYLE BRUINS, ALAN BRUINS & SHERI BRUINS 03-00-00600 136.95										LLOYD A ANDERSON ET AL 03-00-00200 8.50		
	LAND PLAT RODS																
	STATION	972+00.00												949+40.31		948+00.00	
PIPELINE STATIONING	CROSSINGS	972+00.00 MATCHLINE 971+80.31 OVERHEAD POWER	971+11.13 BEGIN BORE 66	969+43.05 P.I. < 89°49'15" LT	967+65.03 P.I. < 88°44'14" RT	967+06.25 END BORE 65	966+16.25 APPROXIMATE EXISTING ONEOK PIPELINE	965+26.25 BEGIN BORE 65	959+93.56 END BORE 64	958+24.66 WETLAND EDGE	957+72.59 WETLAND EDGE	956+33.56 BEGIN BORE 64	950+48.31 END BORE 63 950+23.25 DRIVEWAY	950+01.19 APPROXIMATE EXISTING MCKENZIE CO. WATER RESOURCE DIST. 950+00.37 APPROXIMATE EXISTING RTC CABLE LINE	949+77.18 EXISTING FENCE	949+40.31 SECTION/OWNERSHIP LINE 949+34.84 133RD AVE. NW	948+96.89 EXISTING FENCE	948+68.31 BEGIN BORE 63	948+00.00 MATCHLINE



PIPELINE									
MATERIAL		89' ②	405' ①	180' ②	533' ①	360' ②	585' ①	180' ②	68' ①
COATING									
DESIGN FACTOR									
CLASS LOCATION									
MAOP									





LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
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- EXISTING FENCE
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- FOUND CORNER MONUMENT
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DISTANCES SHOWN ARE GRID DISTANCES, USE A COMBINED SCALE FACTOR OF 1.000166337 TO GET GROUND DISTANCES.

INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1591'
2	10" .307 W.T. BORE PIPE FBE+ARO	809'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

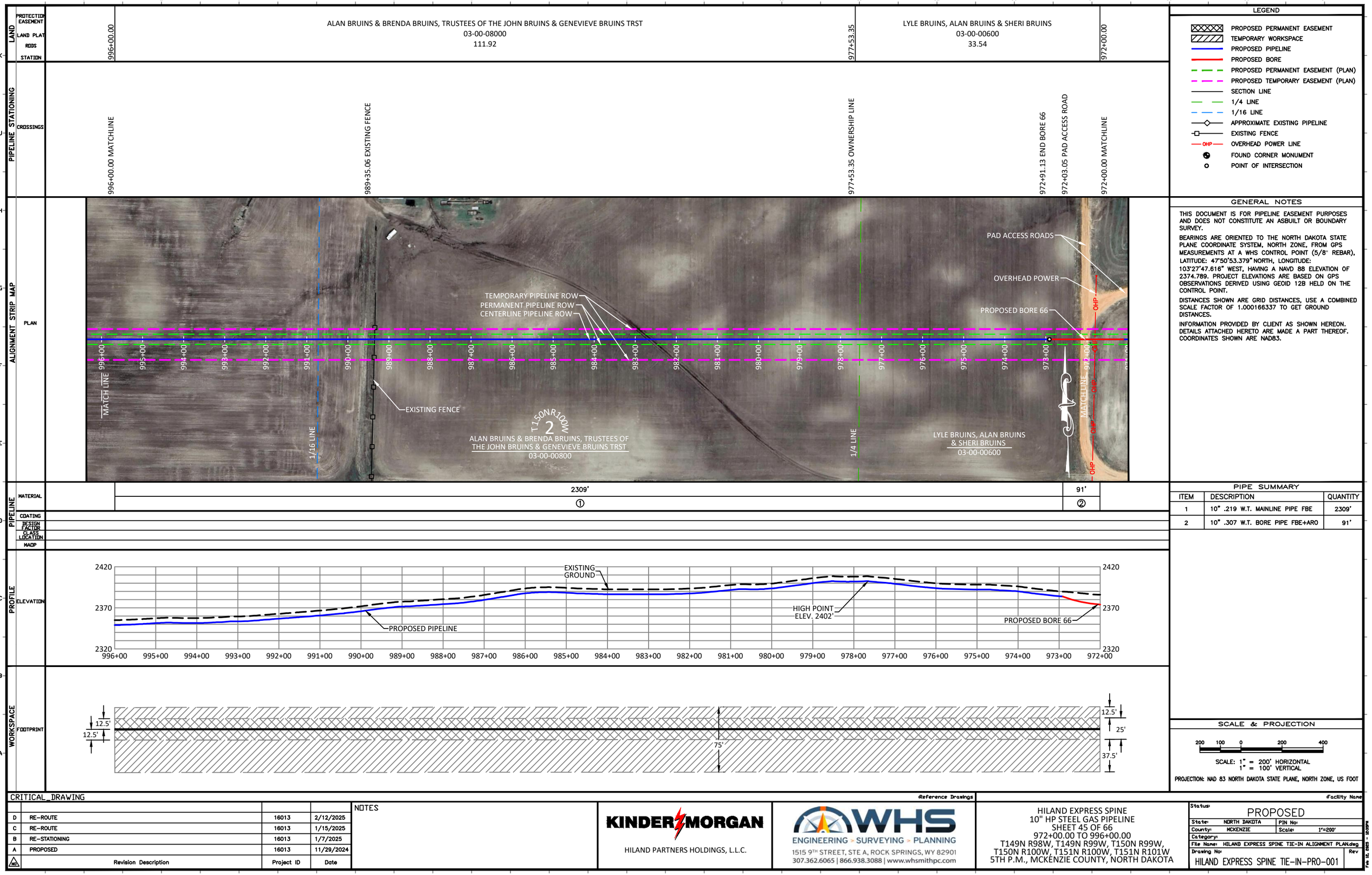
HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 44 OF 66
948+00.00 TO 972+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Facility Name

Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

Feb 12, 2025 - 10:30AM



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
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INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2309'
2	10" .307 W.T. BORE PIPE FBE+ARO	91'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

Reference Drawings

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Facility Name

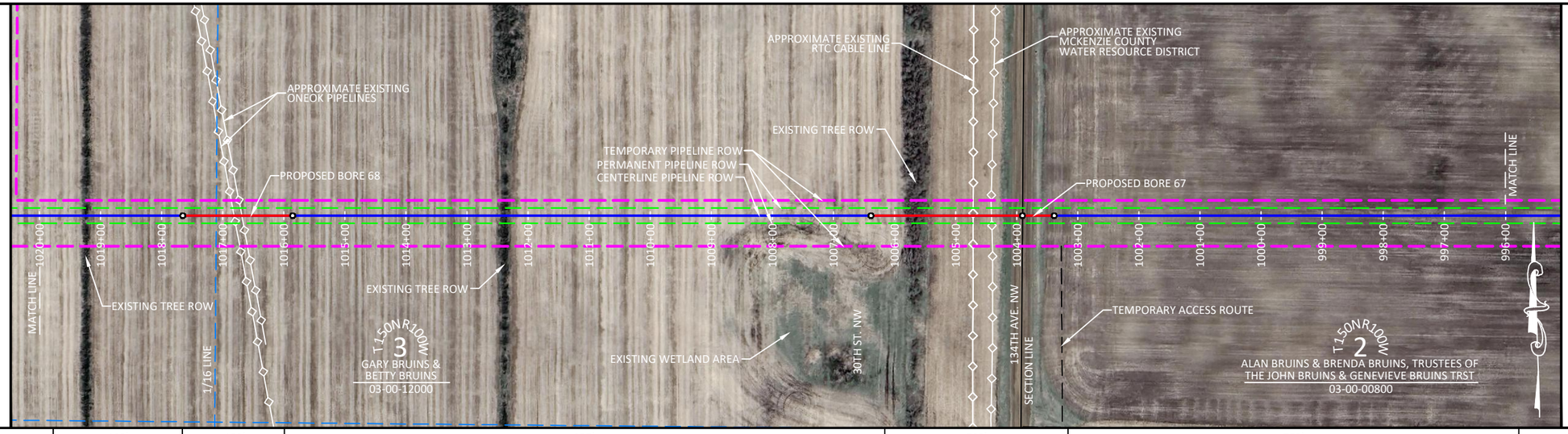
HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 45 OF 66
972+00.00 TO 996+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

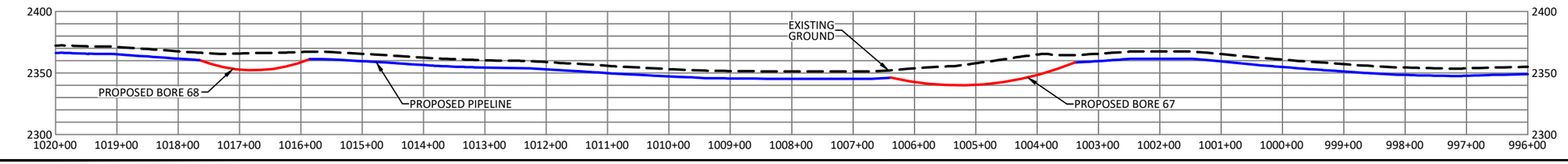
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County:	MCKENZIE	Scale:	1"=200'
Category:			

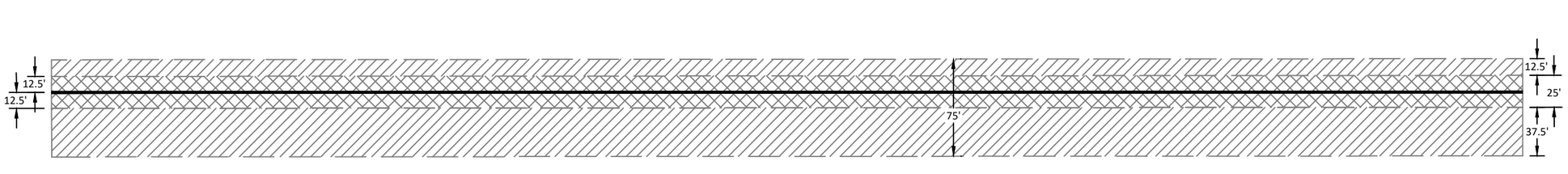
File Name: HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg
Drawing No: HILAND EXPRESS SPINE TIE-IN-PRO-001
Rev

LAND	PROTECTION EASEMENT				GARY BRUINS & BETTY BRUINS 03-00-01200 97.53									ALAN BRUINS & BRENDA BRUINS, TRUSTEES OF THE JOHN BRUINS & GENEVIEVE BRUINS TRST 03-00-08000 47.93					
	LAND PLAT																
	RODS																
	STATION	1020+00.00									1003+90.83						996+00.00
PIPELINE STATIONING	CROSSINGS	1020+00.00 MATCHLINE	1019+22.36 FIRE DAMAGED TREE ROW	1017+65.75 END BORE 68	1016+81.45 APPROXIMATE EXISTING ONEOK PIPELINE 1016+68.85 APPROXIMATE EXISTING ONEOK PIPELINE	1015+85.75 BEGIN BORE 68			1012+26.39 FIRE DAMAGED TREE ROW			1006+38.75 END BORE 67	1005+85.01 TREE ROW	1005+43.66 TREE ROW	1004+71.51 APPROXIMATE EXISTING RTC CABLE LINE 1004+41.32 APPROXIMATE EXISTING MCKENZIE CO. WATER RESOURCE DIST.	1003+90.83 SECTION/OWNERSHIP LINE 1003+89.33 134TH AVE. NW	1003+38.75 BEGIN BORE 67			996+00.00 MATCHLINE



PIPELINE	MATERIAL	198'	180'	983'	300'	739'
		①	②	①	②	①
	COATING					
	DESIGN FACTOR					
	CLASS LOCATION					
	MAOP					





LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

GENERAL NOTES

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DISTANCES SHOWN ARE GRID DISTANCES, USE A COMBINED SCALE FACTOR OF 1.000166337 TO GET GROUND DISTANCES.

INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1920'
2	10" .307 W.T. BORE PIPE FBE+ARO	480'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

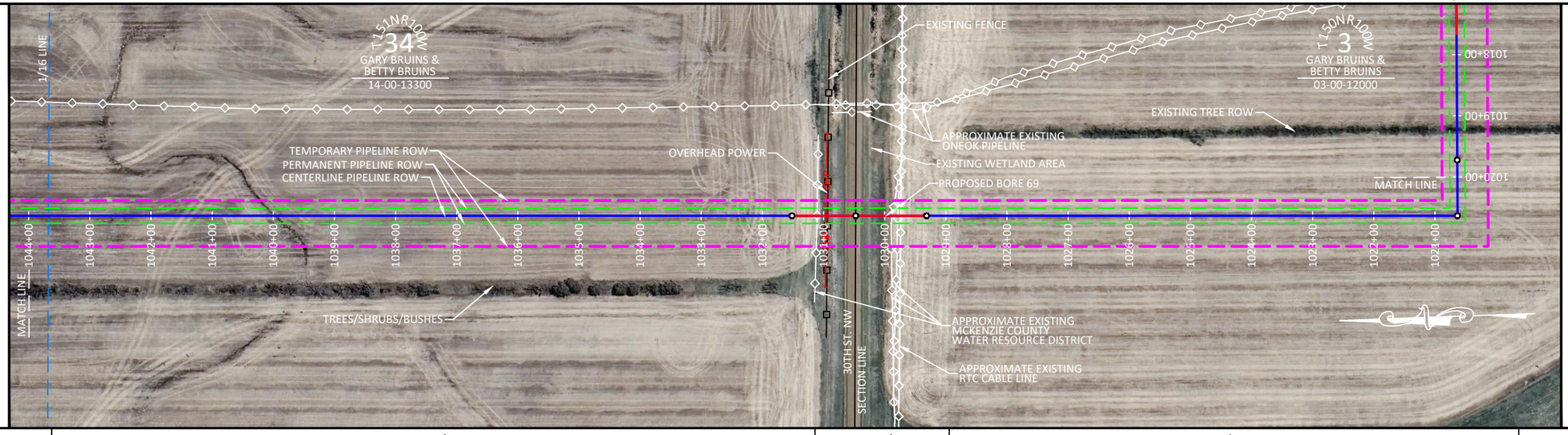
Facility Name
HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 46 OF 66
996+00.00 TO 1020+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

LAND	PROTECTION EASEMENT		GARY BRUINS & BETTY BRUINS 14-00-13300 81.96		GARY BRUINS & BETTY BRUINS 03-00-01200 63.49	
	LAND PLAT					
	RODS					
	STATION	1044+00.00		1030+47.59		1020+00.00

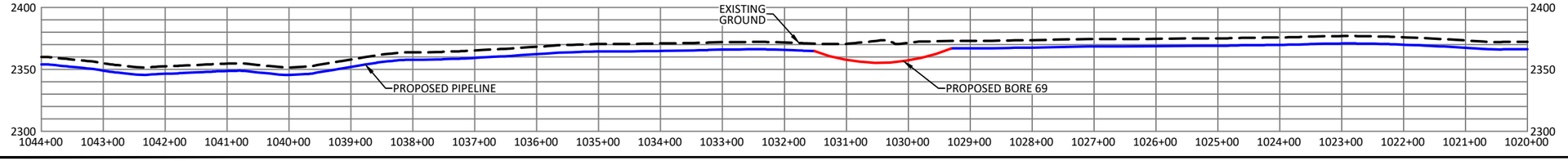
PIPELINE STATIONING	CROSSINGS	1044+00.00 MATCHLINE	1031+51.79 END BORE 69 1031+10.70 APPROXIMATE EXISTING MCKENZIE CO. WATER RESOURCE DIST. 1030+95.88 OVERHEAD POWER 1030+93.76 EXISTING FENCE	1030+47.59 SECTION/OWNERSHIP LINE 1030+45.47 30TH ST. NW 1030+31.28 WETLAND EDGE	1030+09.23 WETLAND EDGE 1029+87.79 APPROXIMATE EXISTING MCKENZIE CO. WATER RESOURCE DIST. 1029+78.61 APPROXIMATE EXISTING MCKENZIE CO. WATER RESOURCE DIST. 1029+73.90 APPROXIMATE EXISTING RTC CABLE LINE 1029+31.79 BEGIN BORE 69	1020+63.27 P.I. < 90°17'21" RT	1020+00.00 MATCHLINE



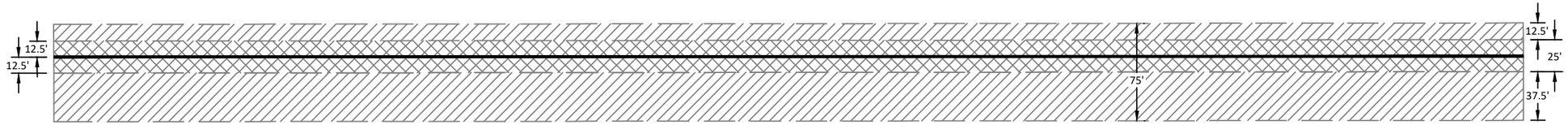
ALIGNMENT STRIP MAP — PLAN

PIPELINE	MATERIAL	1249' ①	220' ②	931' ①
	COATING			
	DESIGN FACTOR			
	CLASS LOCATION			
	MAOP			

PROFILE — ELEVATION



WORKSPACE — FOOTPRINT



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
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INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2180'
2	10" .307 W.T. BORE PIPE FBE+ARO	220'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

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Reference Drawings

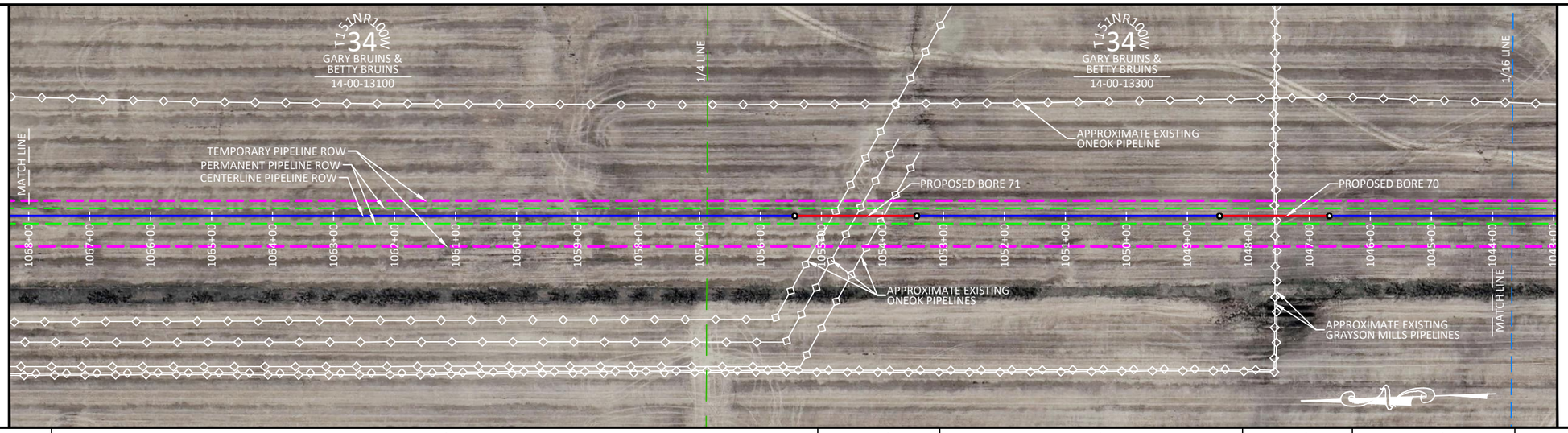
Facility Name:
HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 47 OF 66
1020+00.00 TO 1044+00.00
T149N R98W, T149N R99W, T150N R99W, T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

Feb 12, 2025 - 8:58AM

LAND	PROTECTION EASEMENT		GARY BRUINS & BETTY BRUINS 14-00-13100 67.40						GARY BRUINS & BETTY BRUINS 14-00-13300 78.06							
	LAND PLAT RODS	1068+00.00					1056+87.94								1044+00.00	
	STATION															
PIPELINE STATIONING	CROSSINGS	1068+00.00 MATCHLINE					1056+87.94 OWNERSHIP LINE	1055+43.69 END BORE 71	1054+81.38 APPROXIMATE EXISTING ONEOK PIPELINE	1054+43.69 APPROXIMATE EXISTING ONEOK PIPELINE	1053+97.93 APPROXIMATE EXISTING ONEOK PIPELINE	1053+43.69 BEGIN BORE 71			1048+47.09 END BORE 70	1047+57.09 APPROXIMATE EXISTING GRAYSON MILLS PRODUCED WATER 1047+54.09 APPROXIMATE EXISTING GRAYSON MILLS CRUDE	1046+67.09 BEGIN BORE 70	1044+00.00 MATCHLINE



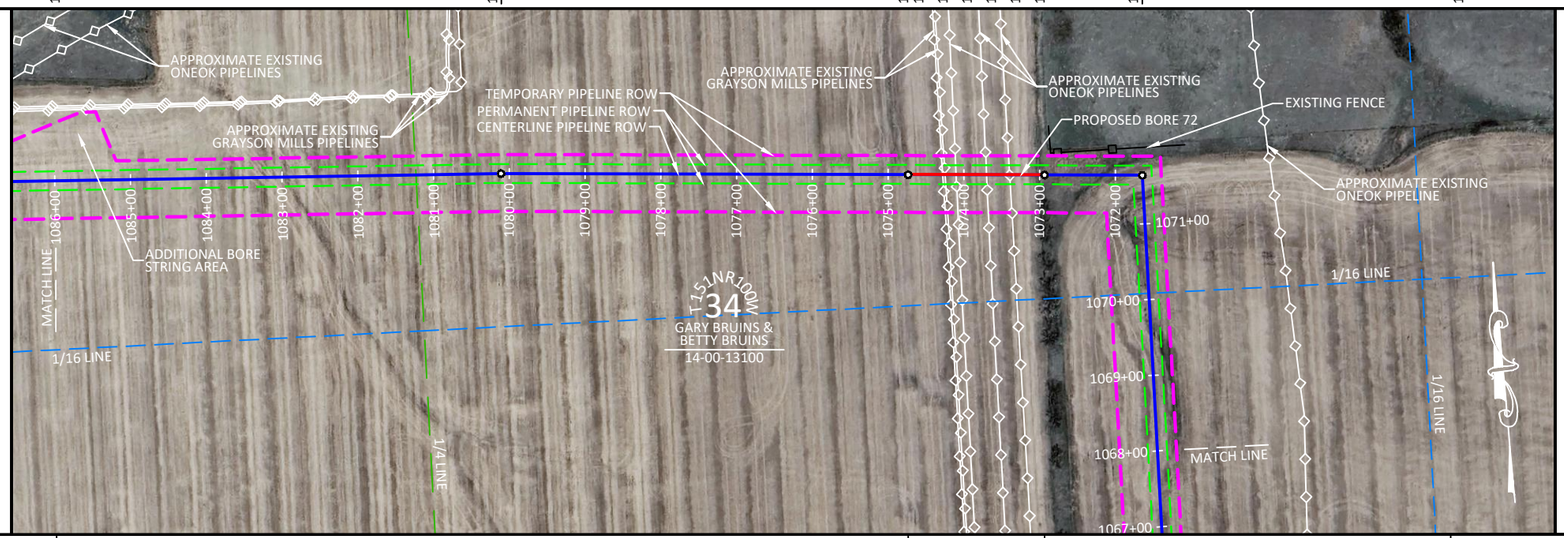
| PIPELINE | | | | | | | | | | | | | | | |

LAND — PROTECTION EASEMENT: GARY BRUINS & BETTY BRUINS, 14-00-13100, 109.09

LAND — LAND PLAT RODS STATION: 1086+00.00 | 1068+00.00

PIPELINE STATIONING — CROSSINGS:
- 1086+00.00 MATCHLINE
- 1080+10.86 P.I. < 1°05'21" LT
- 1074+73.62 END BORE 72
- 1074+27.83 APPROXIMATE EXISTING GRAYSON MILLS CRUDE
- 1074+24.83 APPROXIMATE EXISTING GRAYSON MILLS PRODUCED WATER
- 1074+10.18 APPROXIMATE EXISTING ONEOK PIPELINE
- 1073+70.13 APPROXIMATE EXISTING ONEOK PIPELINE
- 1073+39.60 APPROXIMATE EXISTING ONEOK PIPELINE
- 1072+93.62 BEGIN BORE 72
- 1071+64.37 P.I. < 86°42'08" LT
- 1068+00.00 MATCHLINE

ALIGNMENT STRIP MAP — PLAN



PIPELINE — MATERIAL

1126'	180'	494'
①	②	①

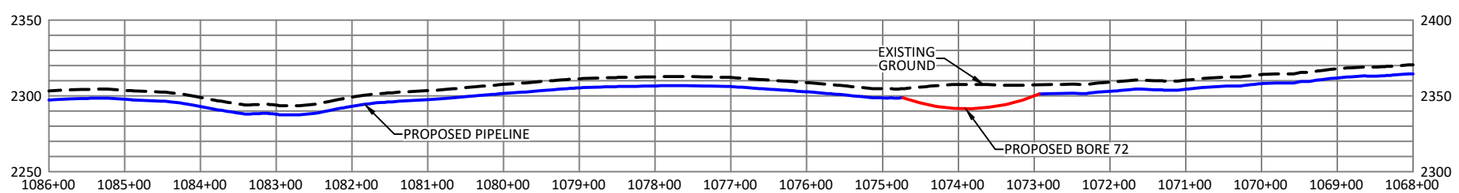
PIPELINE — COATING

PIPELINE — DESIGN FACTOR

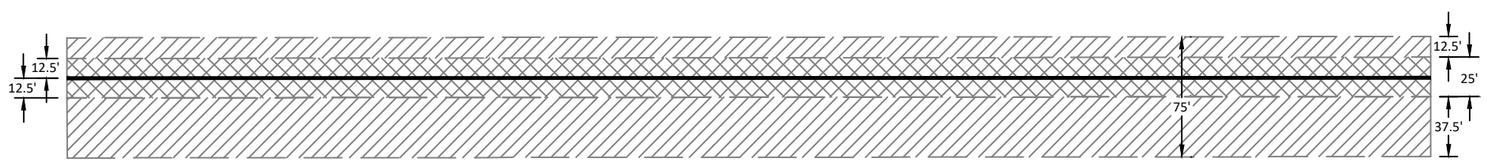
PIPELINE — CLASS LOCATION

PIPELINE — MAOP

PROFILE — ELEVATION



WORKSPACE — FOOTPRINT



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
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PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1620'
2	10" .307 W.T. BORE PIPE FBE+ARO	180'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings:

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 49 OF 66
1068+00.00 TO 1086+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

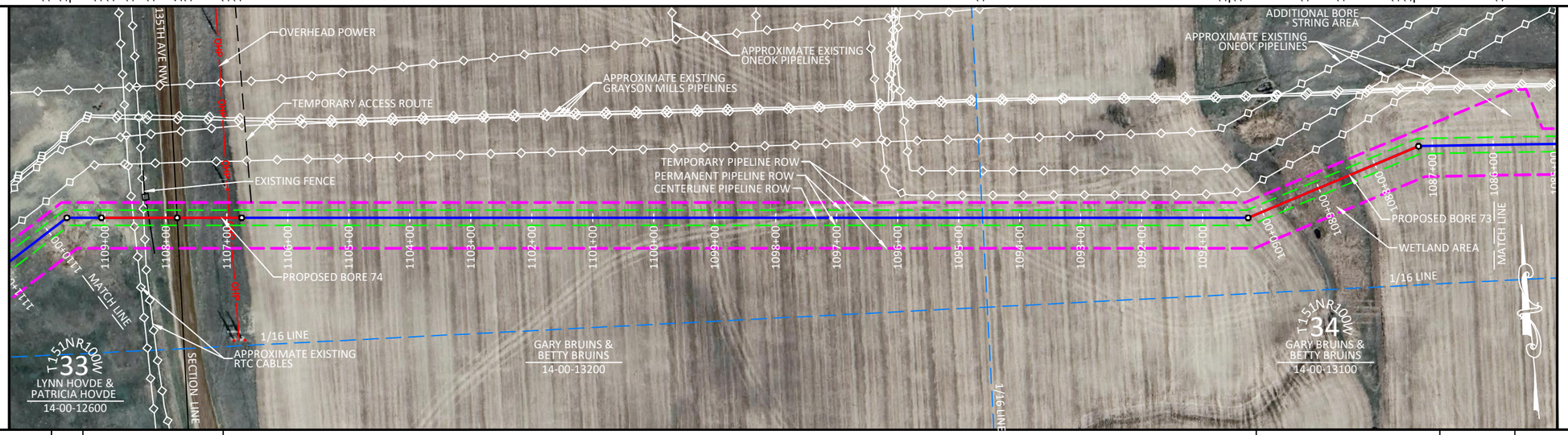
Facility Name:

Status: PROPOSED

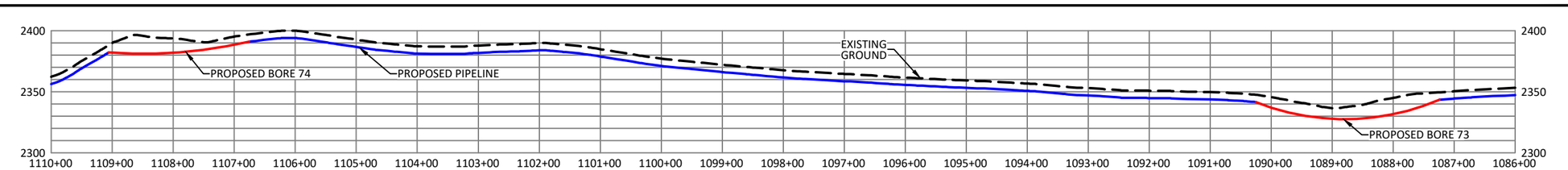
State: NORTH DAKOTA | PIN No:
County: MCKENZIE | Scale: 1"=200'
Category:
File Name: HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg
Drawing No: HILAND EXPRESS SPINE TIE-IN-PRO-001 | Rev

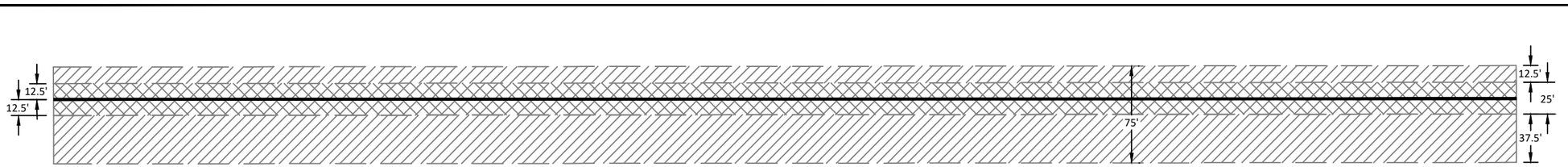
Fax to: 8.5x11 - 100%

LAND	PROTECTION EASEMENT																
	LAND PLAT		LYNN HOVDE & PATRICIA HOVDE 14-00-12600 13.23		GARY BRUINS & BETTY BRUINS 14-00-13200 80.04						GARY BRUINS & BETTY BRUINS 14-00-13100 52.18						
	RODS STATION	1110+00.00		1107+81.67					1094+60.98							1086+00.00	
PIPELINE STATIONING	CROSSINGS	1110+00.00 MATCHLINE 1109+62.61 P.I. < 37°22'57" LT	1109+05.97 END BORE 74 1108+53.16 APPROXIMATE EXISTING RTC CABLE LINE 1108+36.18 APPROXIMATE EXISTING RTC CABLE LINE 1108+28.01 EXISTING FENCE	1107+81.67 SECTION/OWNERSHIP LINE 1107+82.50 135TH AVE. NW	1106+95.58 OVERHEAD POWER 1106+75.97 BEGIN BORE 74				1094+60.98 OWNERSHIP LINE		1090+25.41 P.I. < 22°46'22" RT 1090+25.41 END BORE 73	1088+87.34 WETLAND EDGE	1088+67.11 WETLAND EDGE	1087+22.23 BEGIN BORE 73 1087+22.23 P.I. < 21°49'43" LT		1086+00.00 MATCHLINE	



PIPELINE	MATERIAL	94'	230'	1651'	303'	122'
		①	②	①	②	①
	COATING					
	DESIGN FACTOR					
	CLASS LOCATION					
	MAOP					





LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
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PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1867'
2	10" .307 W.T. BORE PIPE FBE+ARO	533'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
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Reference Drawings

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 50 OF 66
1086+00.00TO 1110+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Facility Name

Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

Feb 12, 2025 - 2:56PM

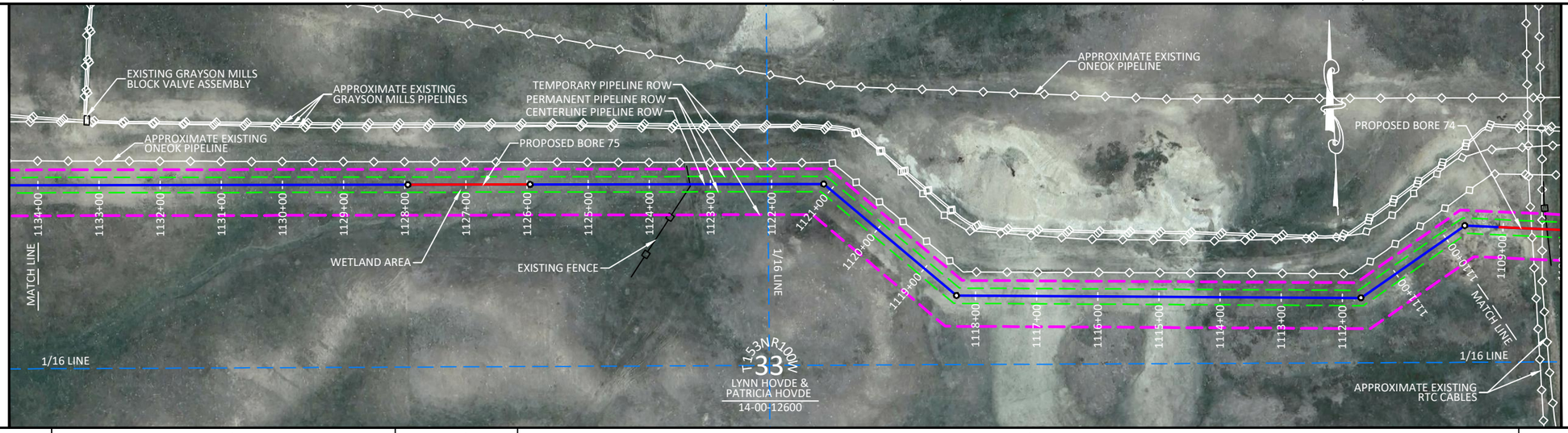
LAND — PROTECTION EASEMENT / LAND PLAT / RODS / STATION

1134+00.00 — LYNN HOVDE & PATRICIA HOVDE, 14-00-12600, 145.45 — 1110+00.00

PIPELINE STATIONING — CROSSINGS

1134+00.00 MATCHLINE
1127+95.20 END BORE 75
1126+96.96 WETLAND EDGE
1126+83.44 WETLAND EDGE
1125+95.20 BEGIN BORE 75
1123+33.95 EXISTING FENCE
1121+14.90 P.I. < 40°08'32" LT
1118+31.22 P.I. < 39°44'19" RT
1111+69.57 P.I. < 35°10'34" RT
1110+00.00 MATCHLINE

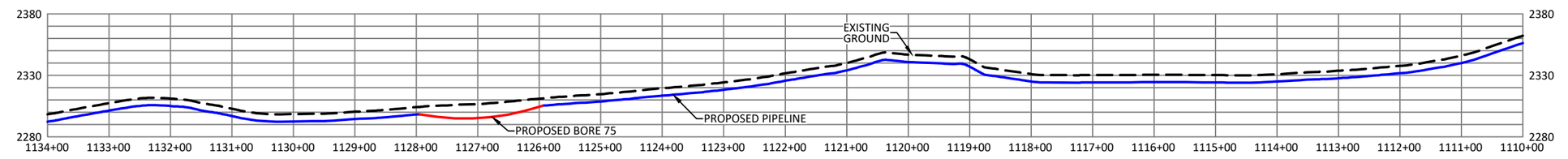
ALIGNMENT STRIP MAP — PLAN



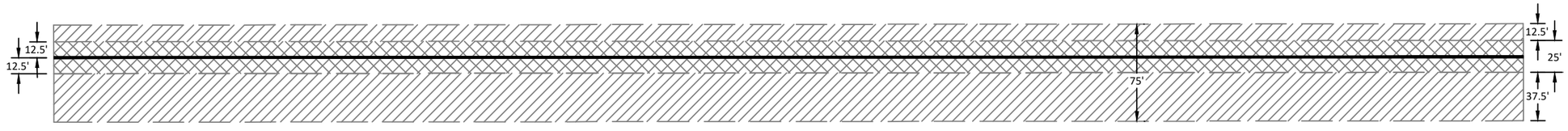
PIPELINE

MATERIAL	605'	200'	1595'
	①	②	①
COATING			
DESIGN FACTOR			
CLASS LOCATION			
MAOP			

PROFILE — ELEVATION



WORKSPACE — FOOTPRINT



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
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DISTANCES SHOWN ARE GRID DISTANCES, USE A COMBINED SCALE FACTOR OF 1.000166337 TO GET GROUND DISTANCES.

INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2200'
2	10" .307 W.T. BORE PIPE FBE+ARO	200'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

Facility Name

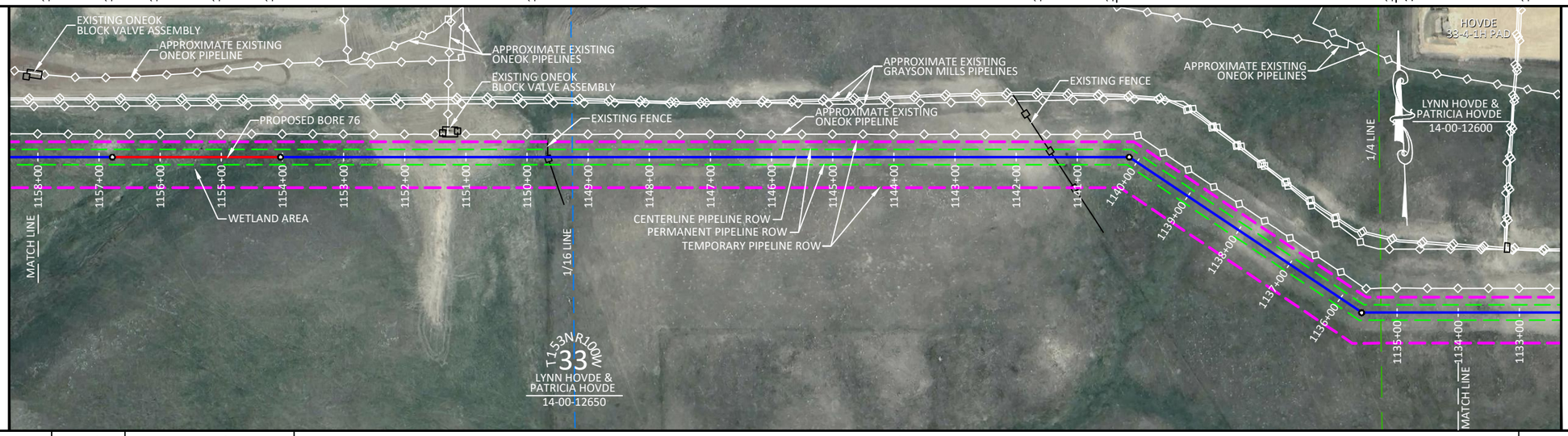
HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 51 OF 66
1110+00.00 TO 1134+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

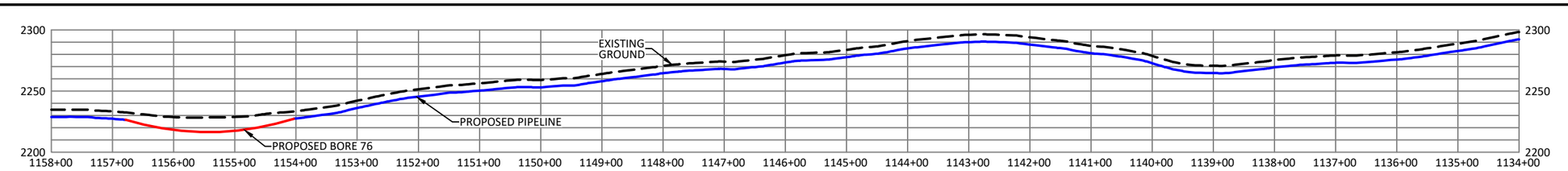
State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

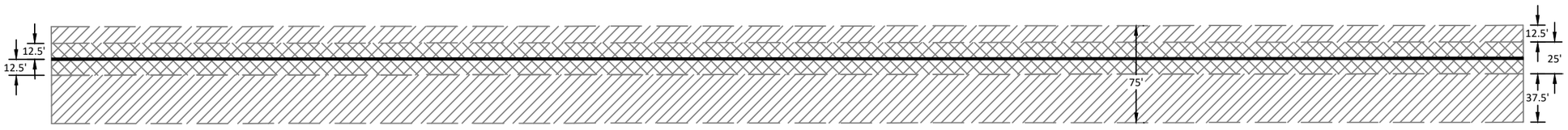
Feb 12, 2025 - 8:36PM

LAND	PROTECTION EASEMENT		LYNN HOVDE & PATRICIA HOVDE 14-00-12650 137.79	LYNN HOVDE & PATRICIA HOVDE 14-00-12600 7.67	
	LAND PLAT RODS	1158+00.00		1135+26.53	1134+00.00
PIPELINE STATIONING	CROSSINGS	1158+00.00 MATCHLINE	1149+66.05 EXISTING FENCE	1141+38.41 EXISTING FENCE 1140+15.14 P.I. < 33°45'44" LT	1135+57.79 P.I. < 33°50'38" RT 1135+26.53 SECTION/OWNERSHIP LINE 1134+00.00 MATCHLINE
		1156+78.50 END BORE 76			
		1155+84.09 WETLAND EDGE			
		1154+82.07 WETLAND EDGE			
		1154+03.50 BEGIN BORE 76			



PIPELINE	MATERIAL	122'	275'	2003'
		①	②	①
	COATING			
	DESIGN FACTOR			
	CLASS LOCATION			
	MAOP			





LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

GENERAL NOTES

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INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2125'
2	10" .307 W.T. BORE PIPE FBE+ARO	275'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024
	Revision Description	Project ID	Date

NOTES

Reference Drawings

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
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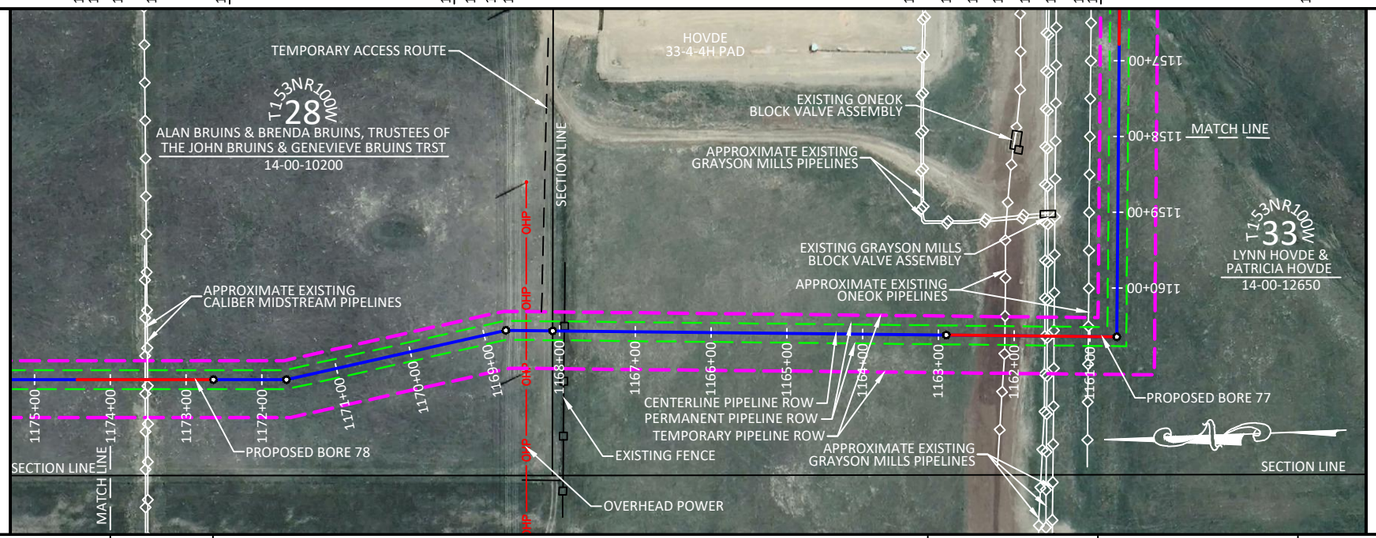
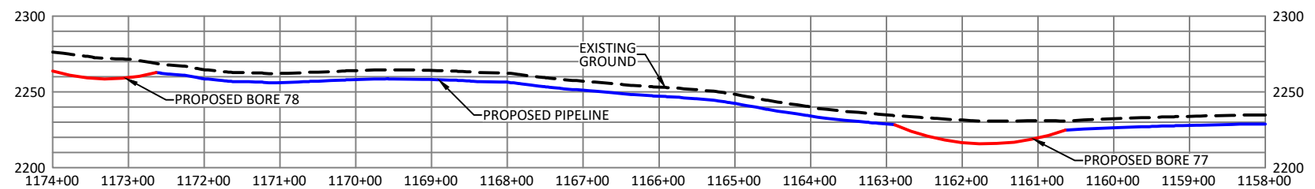
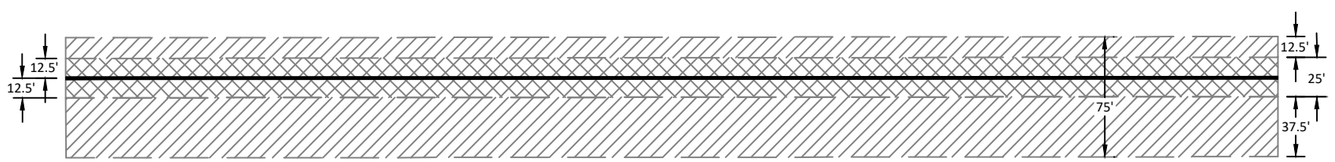
Facility Name

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 52 OF 66
1134+00.00 TO 1158+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

Fri 12, 2025 - 10:04am

LAND	PROTECTION EASEMENT		ALAN BRUINS & BRENDA BRUINS, TRUSTEES OF THE JOHN BRUINS & GENEVIEVE BRUINS TRST 14-00-10200 35.82	LYNN HOVDE & PATRICIA HOVDE 14-00-12650 61.15
	LAND PLAT			
	RODS			
	STATION	1174+00.00	1168+09.05	1158+00.00
PIPELINE STATIONING	CROSSINGS	1174+00.00 MATCHLINE 1173+53.97 APPROXIMATE EXISTING CALIBER MIDSTREAM PIPELINE 1173+50.87 APPROXIMATE EXISTING CALIBER MIDSTREAM PIPELINE 1172+63.97 BEGIN BORE 78 1171+67.80 P.I. < 12°39'12" RT 1168+70.87 P.I. < 13°15'32" LT 1168+43.85 OVERHEAD POWER 1168+09.05 SECTION/OWNERSHIP LINE 1167+93.57 EXISTING FENCE		1162+89.31 END BORE 77 1162+12.23 APPROXIMATE EXISTING ONEOK PIPELINE 1161+59.46 APPROXIMATE EXISTING GRAYSON MILLS CRUDE 1161+56.13 APPROXIMATE EXISTING GRAYSON MILL PRODUCED WATER 1161+47.29 APPROXIMATE EXISTING GRAYSON MILLS FRESH WATER 1161+01.97 APPROXIMATE EXISTING ONEOK PIPELINE 1160+64.31 BEGIN BORE 77 1160+64.31 P.I. < 90°08'07" RT	1158+00.00 MATCHLINE
ALIGNMENT STRIP MAP	PLAN			
PIPELINE	MATERIAL	136' ②	975' ①	225' ② 264' ①
	COATING			
	DESIGN FACTOR			
	CLASS LOCATION			
	MAOP			
PROFILE	ELEVATION			
WORKSPACE	FOOTPRINT			

LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

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INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1239'
2	10" .307 W.T. BORE PIPE FBE+ARO	361'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024
WO	Revision Description	Project ID	Date

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

Facility Name

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 53 OF 66
1158+00.00 TO 1174+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

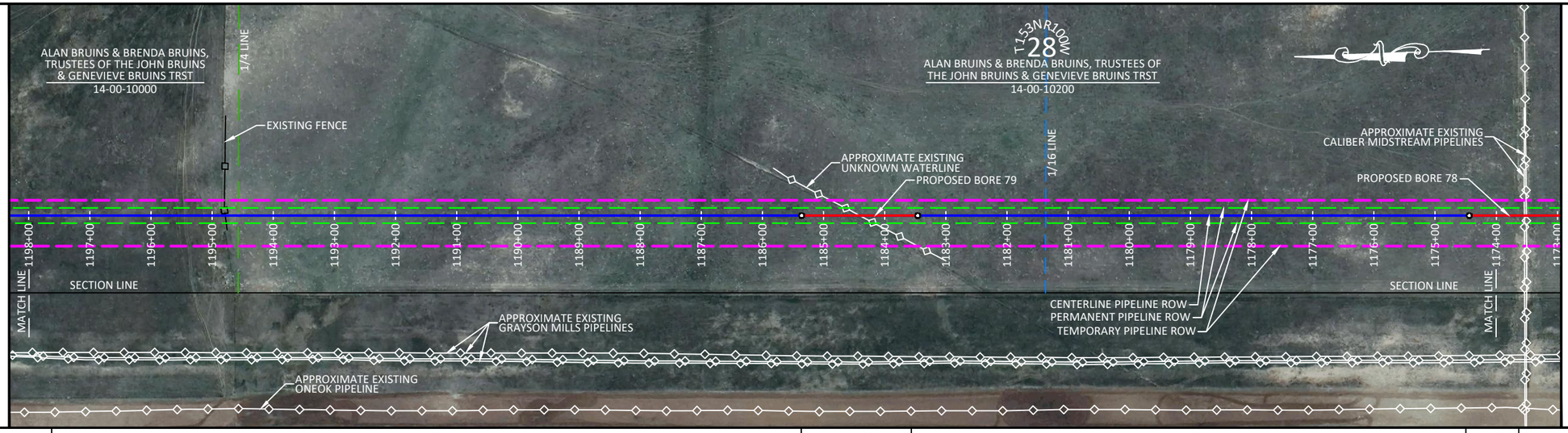
State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

LAND	PROTECTION EASEMENT	ALAN BRUINS & BRENDA BRUINS, TRUSTEES OF THE JOHN BRUINS & GENEVIEVE BRUINS TRST 14-00-10000 20.76	ALAN BRUINS & BRENDA BRUINS, TRUSTEES OF THE JOHN BRUINS & GENEVIEVE BRUINS TRST 14-00-10200 124.69
	LAND PLAT RODS	1198+00.00 — 1194+57.39	1174+00.00

PIPELINE STATIONING — CROSSINGS

- 1198+00.00 MATCHLINE
- 1194+78.79 EXISTING FENCE
- 1194+57.39 OWNERSHIP LINE
- 1185+35.97 END BORE 79
- 1184+40.97 APPROXIMATE EXISTING UNKNOWN WATERLINE
- 1183+45.97 BEGIN BORE 79
- 1174+43.97 END BORE 78
- 1174+00.00 MATCHLINE

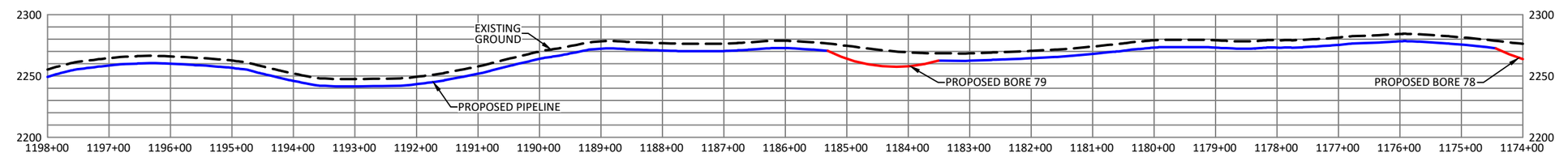
ALIGNMENT STRIP MAP — PLAN



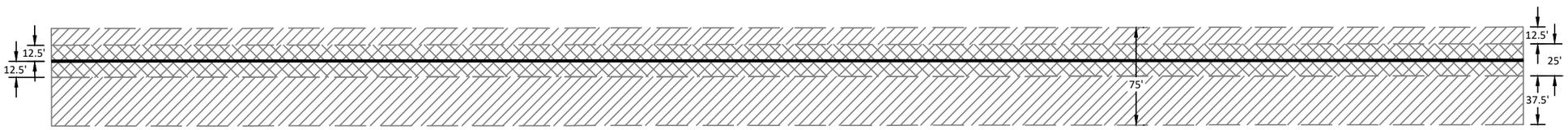
PIPELINE

MATERIAL	1264'	190'	902'	44'
	①	②	①	②
COATING				
DESIGN FACTOR				
CLASS LOCATION				
MAOP				

PROFILE — ELEVATION



WORKSPACE — FOOTPRINT



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
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INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2166'
2	10" .307 W.T. BORE PIPE FBE+ARO	234'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

Facility Name:
HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 54 OF 66
1174+00.00 TO 1198+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

Feb 12, 2025 - 10:04am

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17			

LAND

PROTECTION EASEMENT: LYNN HOVDE & PATRICIA HOVDE, 14-00-07200, 6.44 | ALAN BRUINS & BRENDA BRUINS, TRUSTEES OF THE JOHN BRUINS & GENEVIEVE BRUINS TRST, 14-00-10000, 139.02

LAND PLAT RODS STATION: 1222+00.00 | 1220+93.75 | 1198+00.00

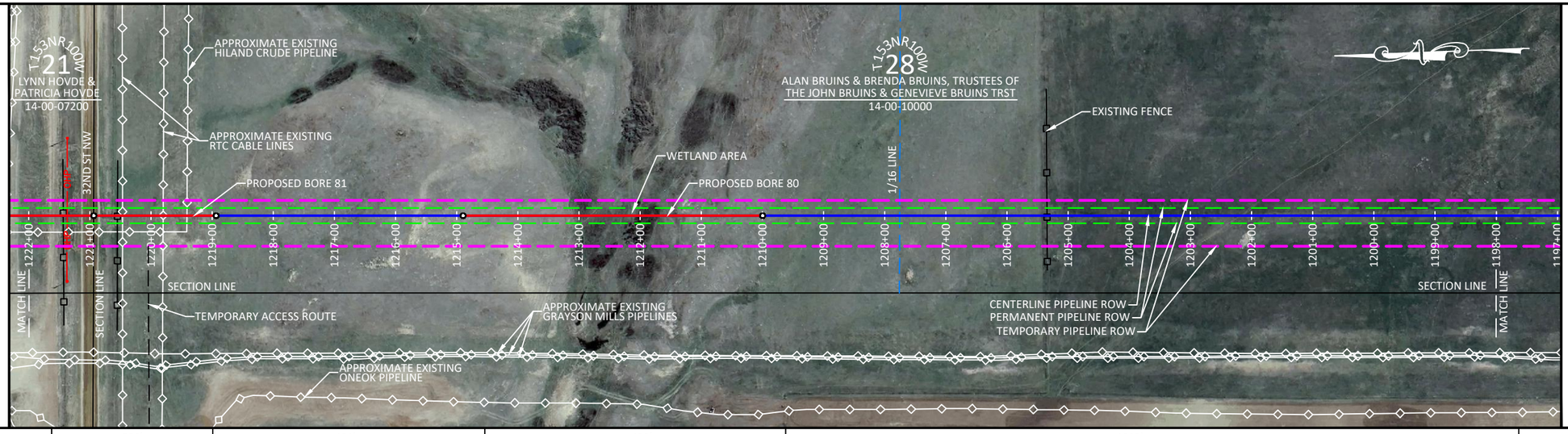
PIPELINE STATIONING

CROSSINGS:

- 1222+00.00 MATCHLINE
- 1221+43.70 EXISTING FENCE
- 1221+37.28 OVERHEAD POWER
- 1221+01.90 32ND ST. NW
- 1220+93.75 SECTION/OWNERSHIP LINE
- 1220+54.96 EXISTING FENCE
- 1220+46.76 APPROX. EXIST. RTC CABLE
- 1219+80.28 APPROX. EXIST. RTC CABLE
- 1219+41.41 APPROXIMATE EXISTING HILAND CRUDE LINE
- 1218+93.75 BEGIN BORE 81
- 1214+89.82 END BORE 80
- 1212+75.00 EXISTING WETLAND EDGE
- 1211+62.57 EXISTING WETLAND EDGE
- 1209+99.82 BEGIN BORE 80
- 1205+34.77 EXISTING FENCE
- 1198+00.00 MATCHLINE

ALIGNMENT STRIP MAP

PLAN

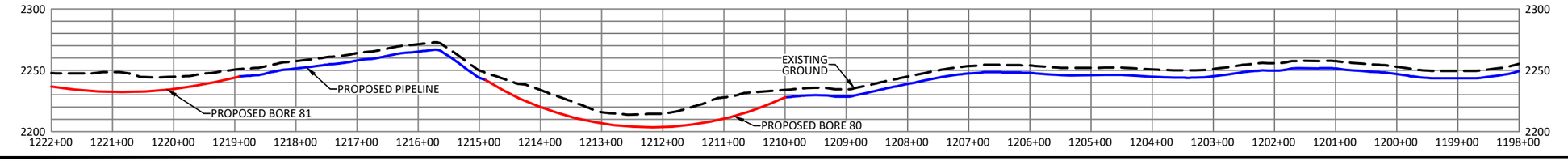


PIPELINE

MATERIAL	306'	404'	490'	1200'
	②	①	②	①
COATING				
DESIGN FACTOR				
CLASS LOCATION				
MAOP				

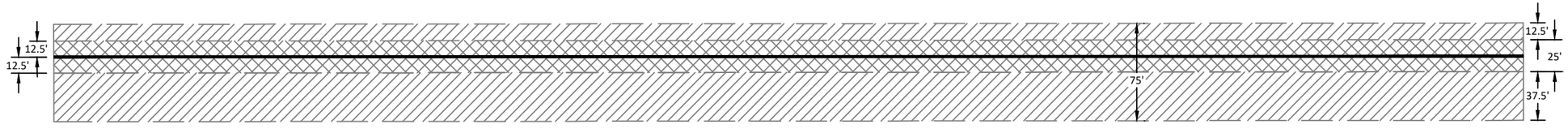
PROFILE

ELEVATION



WORKSPACE

FOOTPRINT



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
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- APPROXIMATE EXISTING PIPELINE
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- FOUND CORNER MONUMENT
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PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1604'
2	10" .307 W.T. BORE PIPE FBE+ARO	796'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
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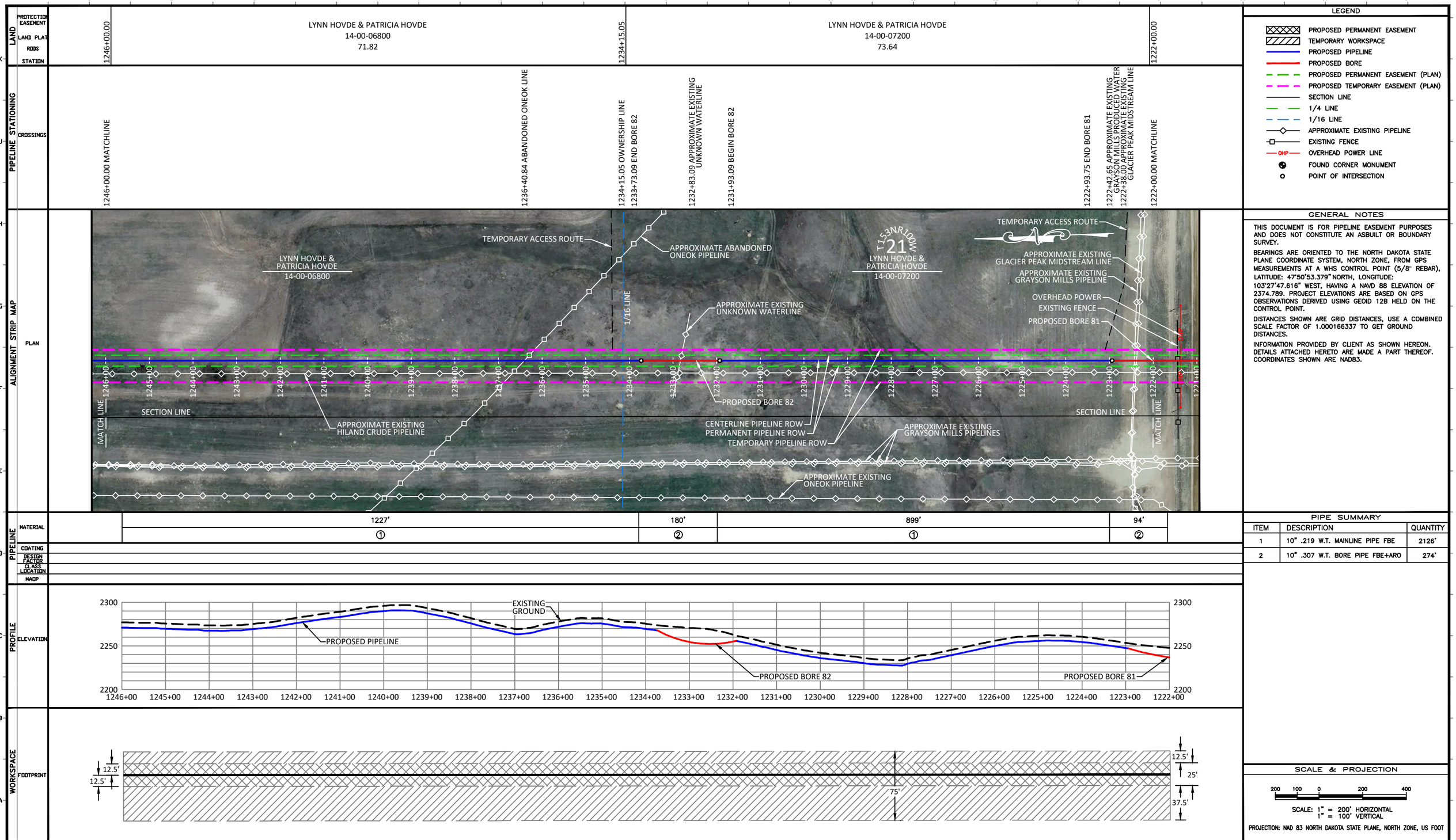
Facility Name

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 55 OF 66
1198+00.00 TO 1222+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

Feb 12, 2025 - 8:36PM



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
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DISTANCES SHOWN ARE GRID DISTANCES, USE A COMBINED SCALE FACTOR OF 1.000166337 TO GET GROUND DISTANCES.

INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2126'
2	10" .307 W.T. BORE PIPE FBE+ARO	274'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

Reference Drawings

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

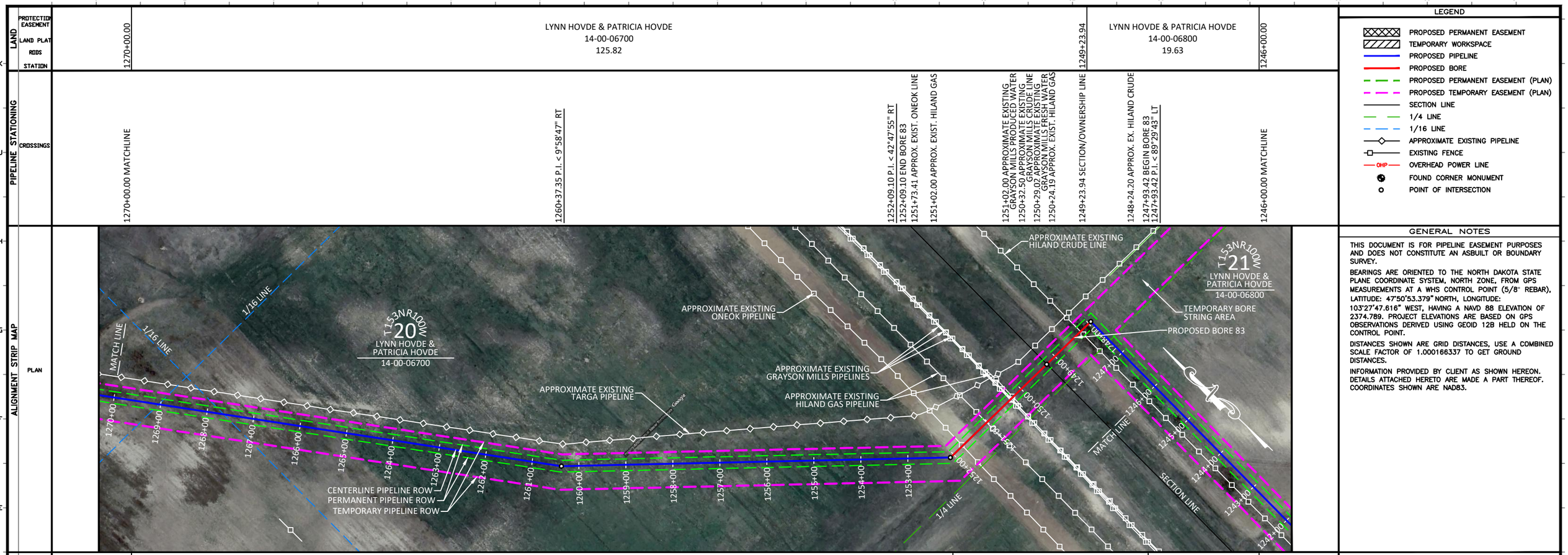
WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Facility Name

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 56 OF 66
1222+00.00 TO 1246+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001		Rev



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

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PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1984'
2	10" .307 W.T. BORE PIPE FBE+ARO	416'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
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A	PROPOSED	16013	11/29/2024

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HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 57 OF 66
1246+00.00 TO 1270+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED
State: NORTH DAKOTA | PIN No:
County: MCKENZIE | Scale: 1"=200'
Category:
File Name: HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg
Drawing No: HILAND EXPRESS SPINE TIE-IN-PRO-001 | Rev

LAND

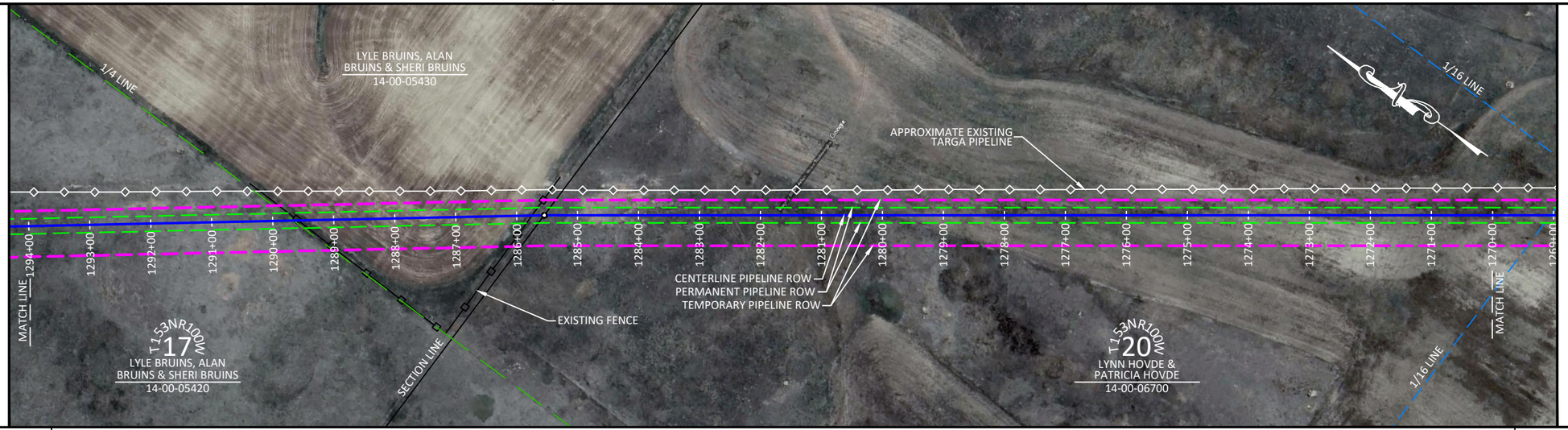
PROTECTION EASEMENT	1294+00.00	LYLE BRUINS, ALAN BRUINS & SHERI BRUINS 14-00-05420 26.32	1289+65.66	LYLE BRUINS, ALAN BRUINS & SHERI BRUINS 14-00-05430 24.91	1285+54.57	LYNN HOVDE & PATRICIA HOVDE 14-00-06700 94.22	1270+00.00
LAND PLAT RODS							
STATION							

PIPELINE STATIONING

CROSSINGS	1294+00.00 MATCHLINE	1289+65.66 OWNERSHIP LINE 1289+58.49 EXISTING FENCE	1285+74.71 EXISTING FENCE 1285+54.57 SECTION/OWNERSHIP LINE 1285+54.57 P.I. <1°13'23" LT	1270+00.00 MATCHLINE

ALIGNMENT STRIP MAP

PLAN

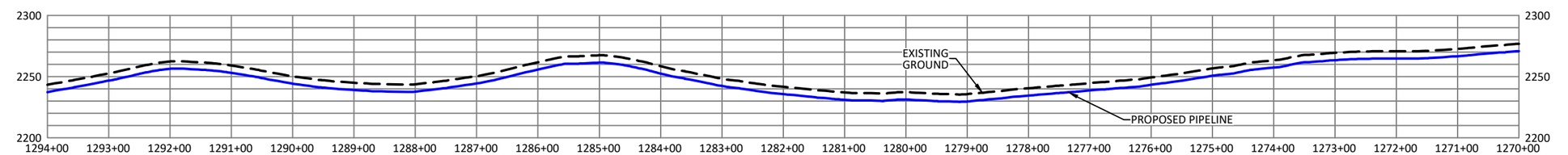


PIPELINE

MATERIAL	2400'
	①
COATING	
DESIGN FACTOR	
CLASS LOCATION	
MAOP	

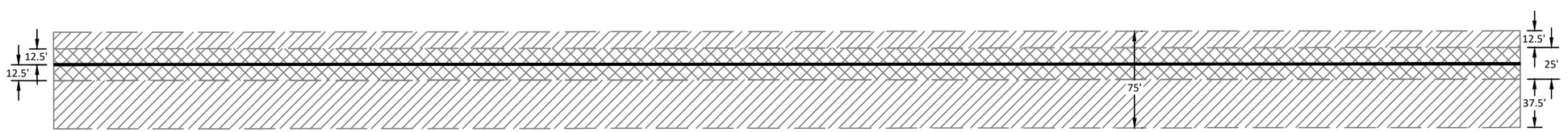
PROFILE

ELEVATION



WORKSPACE

FOOTPRINT



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

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PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2400'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
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NOTES

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1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 58 OF 66
1270+00.00 TO 1294+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

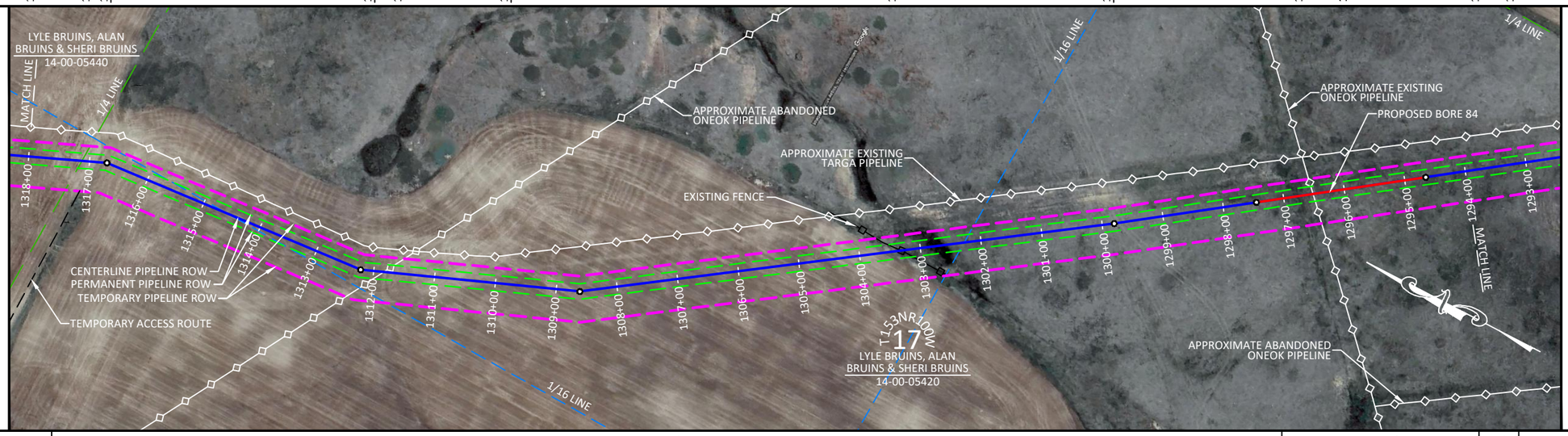
Facility Name

Status: PROPOSED

State: NORTH DAKOTA	PIN No:
County: MCKENZIE	Scale: 1"=200'
Category:	
File Name: HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg	
Drawing No: HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev

Plot By: BSIS - 8:30AM

LAND	PROTECTION EASEMENT			LYLE BRUINS, ALAN & SHERI BRUINS 14-00-05440 5.29				LYLE BRUINS, ALAN BRUINS & SHERI BRUINS 14-00-05420 140.16											
	LAND PLAT RODS		1318+00.00		1317+12.65													1294+00.00	
	STATION		1318+00.00 MATCHLINE		1317+12.65 OWNERSHIP LINE	1316+71.87 P.I. < 18°10'04" LT		1312+21.59 P.I. < 17°09'25" RT	1311+83.43 ABANDONED ONEOK LINE		1308+61.35 P.I. < 12°54'39" RT			1303+30.84 EXISTING FENCE			1299+80.11 P.I. < 1°12'56" RT		1297+45.02 END BORE 84	1296+51.54 APPROX. EXIST. ONEOK LINE		1294+65.02 BEGIN BORE 84	1294+00.00 MATCHLINE
PIPELINE STATIONING	CROSSINGS																		



ALIGNMENT STRIP MAP — PLAN

| PIPELINE | | | | | | | | | | | | | | | | | | |

LAND

PROTECTION EASEMENT

LAND PLAT

RODS

STATION

1342+00.00

LYLE BRUINS, ALAN BRUINS
& SHERI BRUINS
14-00-05440
145.45

1318+00.00

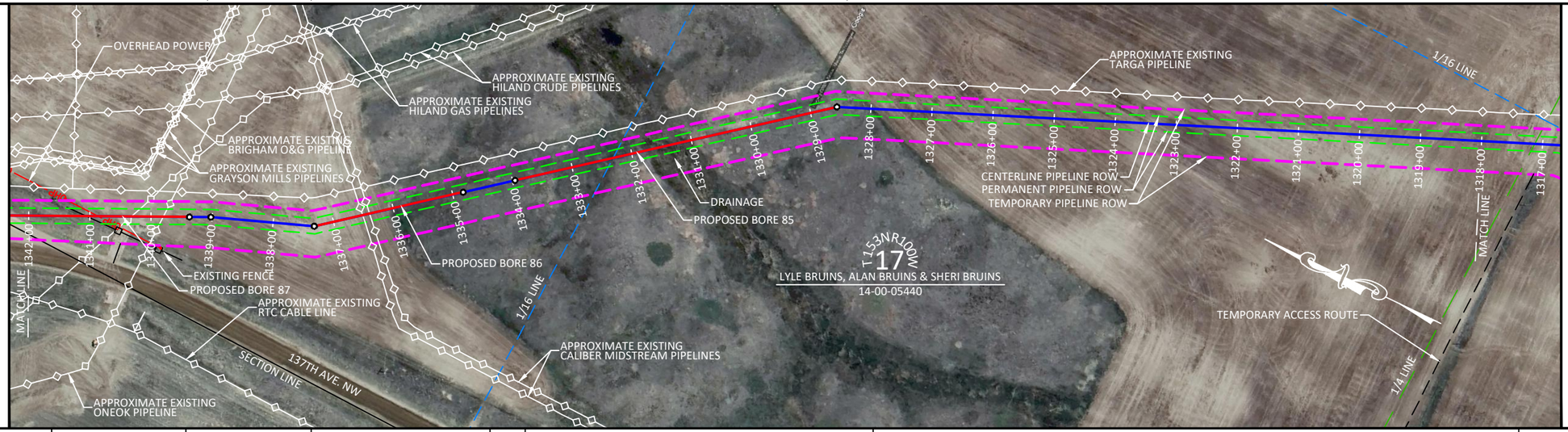
PIPELINE STATIONING

CROSSINGS

1342+00.00 MATCHLINE
1341+06.09 EXISTING FENCE
1340+86.67 OVERHEAD POWER
1340+31.79 APPROX. EXISTING HILAND CRUDE
1339+79.96 APPROX. EXISTING ONEOK PIPELINE
1339+37.55 BEGIN BORE 87
1339+02.33 P.I. < 4°33'54" LT
1337+32.65 P.I. < 17°50'40" RT
1337+32.65 END BORE 86
1336+51.29 APPROX. EXISTING CALIBER MIDSTREAM LINE
1336+39.79 APPROX. EXISTING CALIBER MIDSTREAM LINE
1334+82.65 BEGIN BORE 86
1334+95.83 END BORE 85
1331+22.79 DRAINAGE
1328+55.83 BEGIN BORE 85
1328+55.83 P.I. < 15°52'03" LT
1318+00.00 MATCHLINE

ALIGNMENT STRIP MAP

PLAN

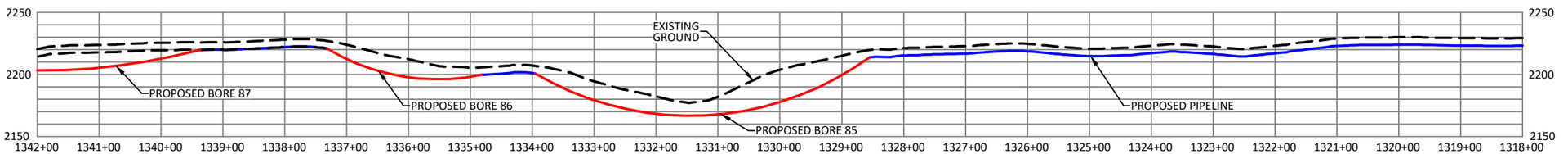


PIPELINE

MATERIAL	262'	205'	250'	87'	540'	1056'
	②	①	②	①	②	①
COATING						
DESIGN FACTOR						
CLASS LOCATION						
MAOP						

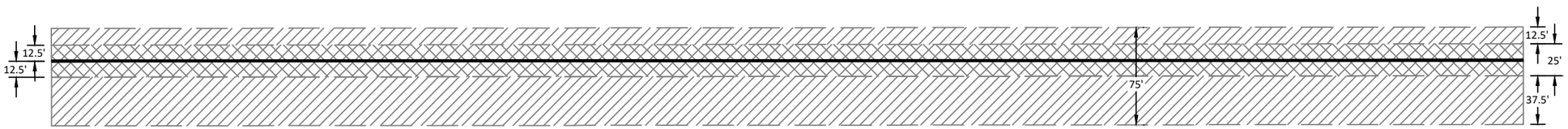
PROFILE

ELEVATION



WORKSPACE

FOOTPRINT



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
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PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1348'
2	10" .307 W.T. BORE PIPE FBE+ARO	1052'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024
NO.	Revision Description	Project ID	Date

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

Facility Name

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 60 OF 66
1318+00.00 TO 1342+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

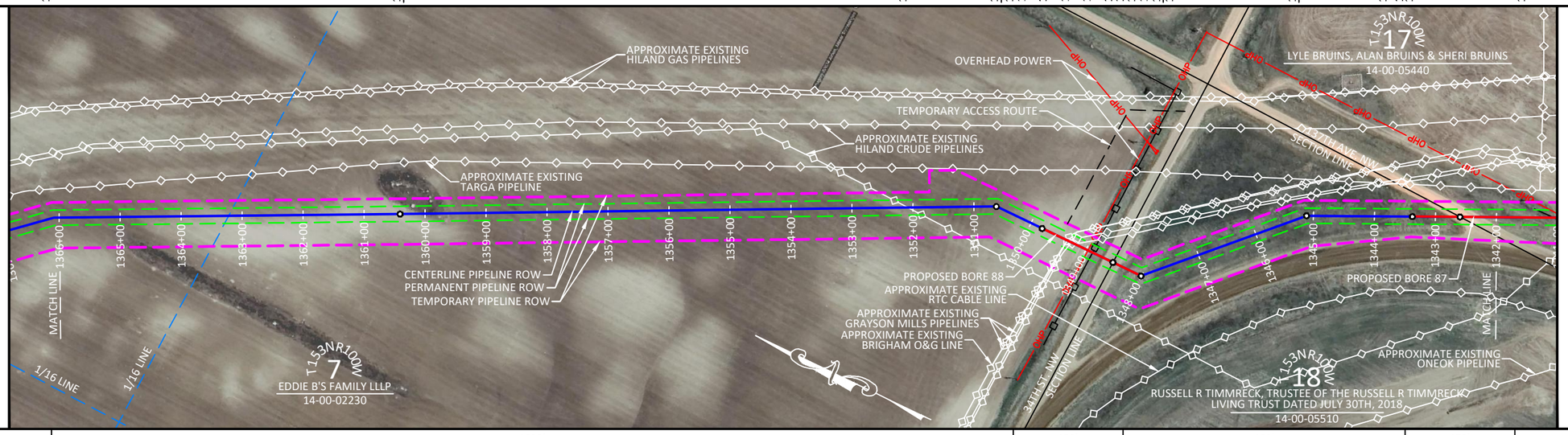
State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			

File Name: HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg

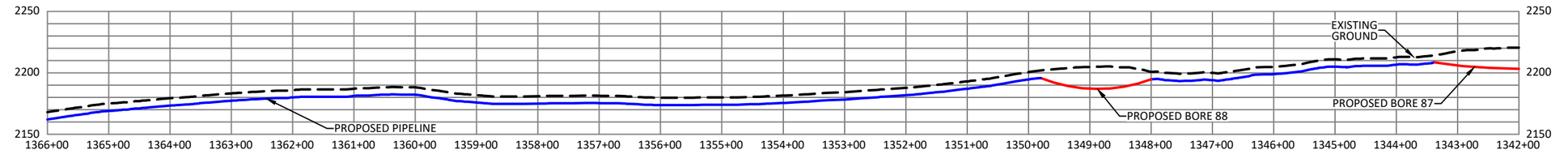
Drawing No: HILAND EXPRESS SPINE TIE-IN-PRO-001

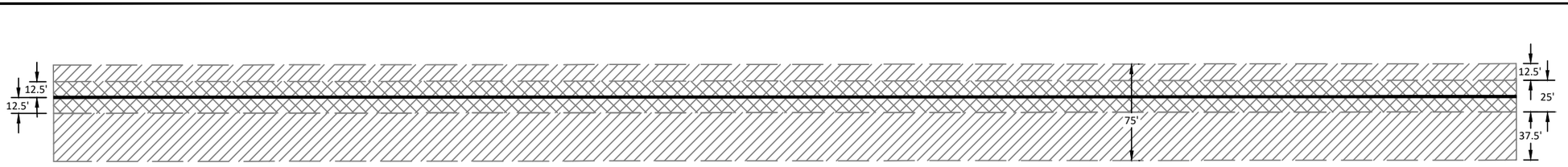
Rev

Feb 18, 2025 - 10:54am

LAND	PROTECTION EASEMENT			EDDIE B'S FAMILY LLLP 14-00-02230 106.00							RUSSELL R TIMMRECK, TRUSTEE OF THE RUSSELL R TIMMRECK LIVING TRUST DATED JULY 30TH, 2018 14-00-05510 35.87			LYLE BRUINS, ALAN BRUINS & SHERI BRUINS 14-00-05440 3.59						
	LAND PLAT RODS STATION	1366+00.00									1348+51.07			1342+59.29					1342+00.00
PIPELINE STATIONING	CROSSINGS	1366+00.00 MATCHLINE		1360+41.08 P.I. < 0°05'58" RT				1352+08.49 APPROX. EXISTING HILAND CRUDE LINE		1350+63.29 P.I. < 26°23'05" LT 1349+79.93 END BORE 88 1349+34.32 APPROXIMATE EXISTING BRIGHAM O&G LINES 1349+33.42 APPROXIMATE EXISTING GRAYSON MILLS CRUDE LINE 1349+32.57 APPROXIMATE EXISTING GRAYSON MILLS WATER LINE 1349+21.91 APPROXIMATE EXISTING GRAYSON MILLS FRESH WATER 1348+96.57 OVERHEAD POWER 1348+88.43 EXISTING FENCE 1349+56.27 34TH ST. NW 1348+51.07 SECTION/OWNERSHIP LINE 1347+99.93 P.I. < 45°40'31" RT 1347+99.93 BEGIN BORE 88			1345+11.18 P.I. < 20°27'11" LT		1343+37.55 END BORE 87 1342+59.29 SECTION/OWNERSHIP LINE 1342+29.22 137TH AVE. NW			1342+00.00 MATCHLINE
ALIGNMENT STRIP MAP	PLAN																		

PIPELINE	MATERIAL	1620'									180'	462'			138'				
		①									②	①			②				
	COATING																		
	DESIGN FACTOR																		
	CLASS LOCATION																		
	MAOP																		





LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
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PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2082'
2	10" .307 W.T. BORE PIPE FBE+ARO	318'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

D	RE-ROUTE	16013	2/12/2025
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Reference Drawings

Facility Name:
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10" HP STEEL GAS PIPELINE
SHEET 61 OF 66
1342+00.00 TO 1366+00.00
T149N R98W, T149N R99W, T150N R99W, T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001		Rev

LAND

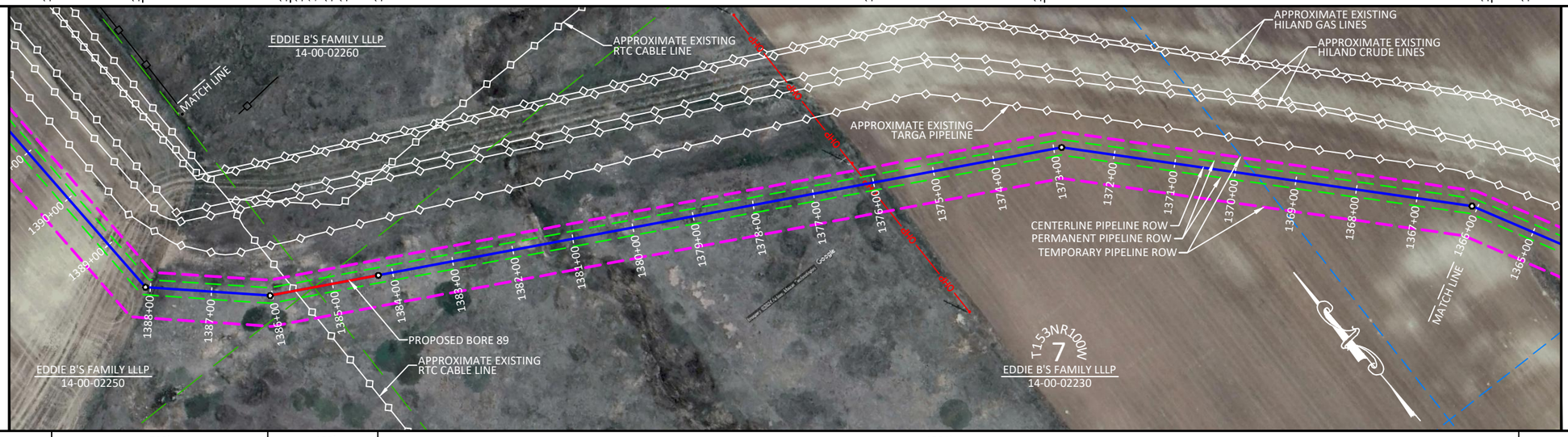
PROTECTION EASEMENT	1390+00.00	EDDIE B'S FAMILY LLLP 14-00-02250 28.37	1385+31.87	1385+30.67	EDDIE B'S FAMILY LLLP 14-00-02260 0.07	EDDIE B'S FAMILY LLLP 14-00-02230 117.01	1366+00.00
LAND PLAT							
RODS							
STATION							

PIPELINE STATIONING

CROSSINGS	1390+00.00 MATCHLINE	1388+08.19 P.I. < 45°00'37" RT	1386+03.87 P.I. < 14°26'57" RT	1386+03.87 END BORE 89	1385+62.02 APPROX. EXISTING RTC CABLE	1385+31.87 OWNERSHIP LINE	1385+30.67 OWNERSHIP LINE	1384+23.87 BEGIN BORE 89	1376+09.82 OVERHEAD POWER	1372+86.70 P.I. < 18°43'05" LT	1366+08.65 P.I. < 15°03'36" LT	1366+00.00 MATCHLINE

ALIGNMENT STRIP MAP

PLAN

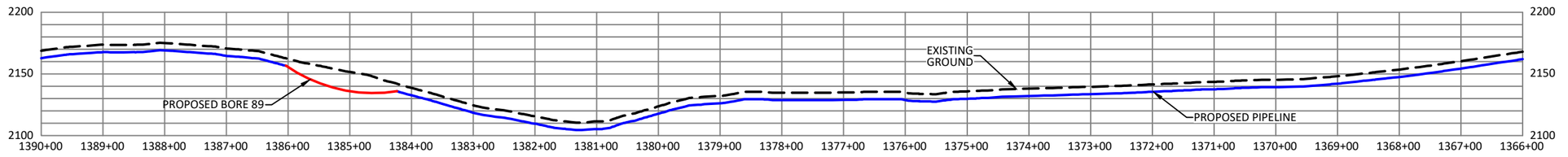


PIPELINE

MATERIAL	396' ①	180' ②	1824' ①
COATING			
DESIGN FACTOR			
CLASS LOCATION			
MAOP			

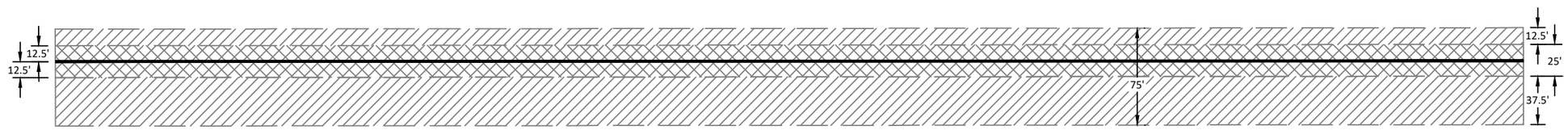
PROFILE

ELEVATION



WORKSPACE

FOOTPRINT



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
- APPROXIMATE EXISTING PIPELINE
- EXISTING FENCE
- OHP — OVERHEAD POWER LINE
- FOUND CORNER MONUMENT
- POINT OF INTERSECTION

GENERAL NOTES

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DISTANCES SHOWN ARE GRID DISTANCES, USE A COMBINED SCALE FACTOR OF 1.000166337 TO GET GROUND DISTANCES.

INFORMATION PROVIDED BY CLIENT AS SHOWN HEREON. DETAILS ATTACHED HERETO ARE MADE A PART THEREOF. COORDINATES SHOWN ARE NAD83.

PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2220'
2	10" .307 W.T. BORE PIPE FBE+ARO	180'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

Facility Name

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 62 OF 66
1366+00.00 TO 1390+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001		Rev

Plot By: BSIS - BISMARCK

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	

LAND

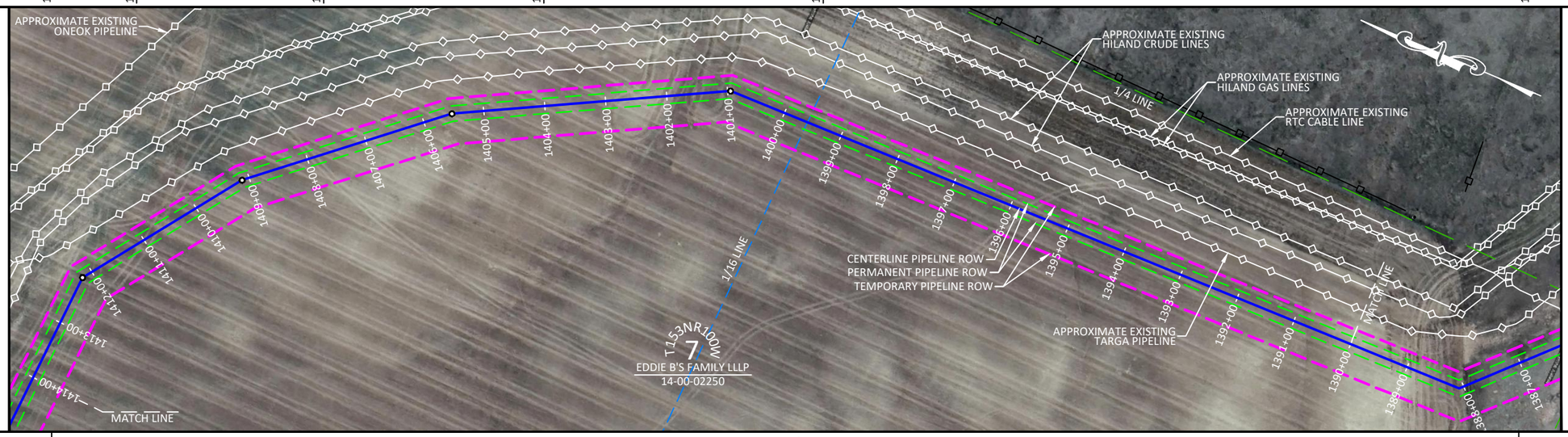
PROTECTION EASEMENT																	
LAND PLAT	EDDIE B'S FAMILY LLLP 14-00-02250 145.45																
RODS																	
STATION	1414+00.00																1390+00.00

PIPELINE STATIONING

CROSSINGS																	
	1414+00.00 MATCHLINE		1412+17.99 P.I. < 32°17'46" LT			1409+12.33 P.I. < 13°48'15" LT				1405+52.31 P.I. < 12°53'29" LT					1400+95.15 P.I. < 26°51'06" LT		1390+00.00 MATCHLINE

ALIGNMENT STRIP MAP

PLAN

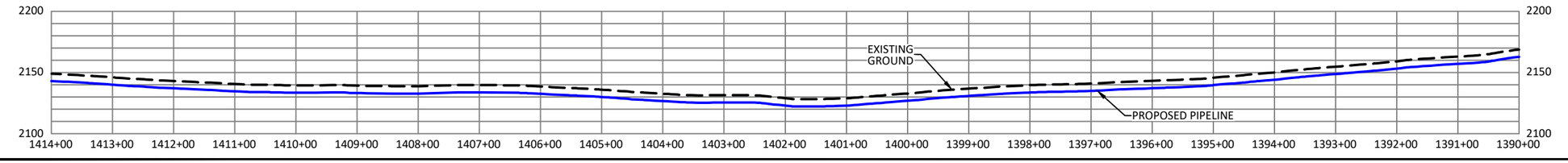


PIPELINE

MATERIAL	2400'																
	①																
COATING																	
DESIGN FACTOR																	
CLASS LOCATION																	
MAOP																	

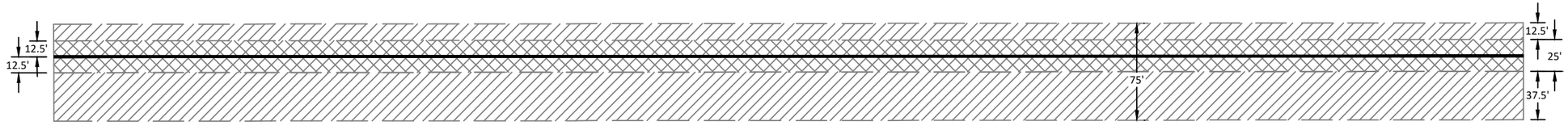
PROFILE

ELEVATION



WORKSPACE

FOOTPRINT



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
- 1/4 LINE
- 1/16 LINE
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- OHP — OVERHEAD POWER LINE
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PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2400'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

Facility Name

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 63 OF 66
1390+00.00 TO 1414+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

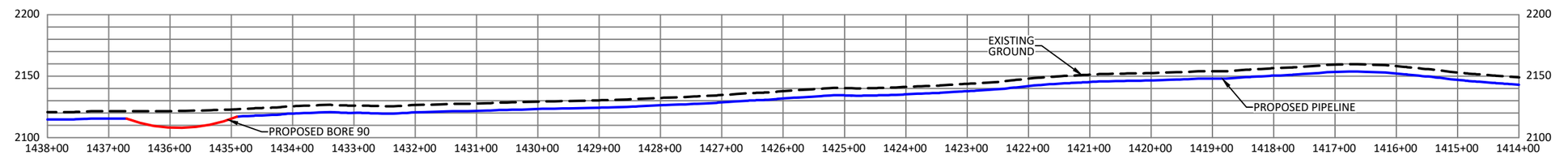
State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001		Rev

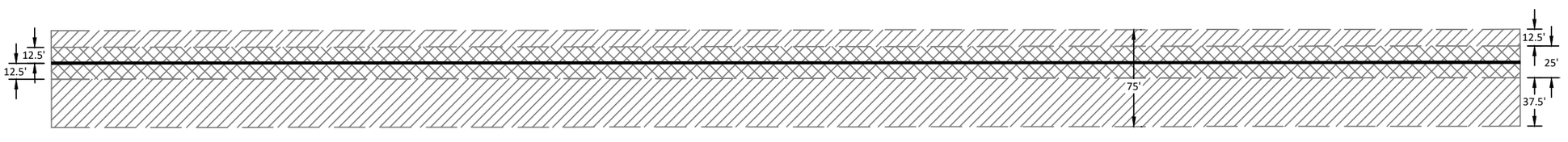
Feb 12, 2025 - 8:36AM

LAND	PROTECTION EASEMENT		EDDIE B'S FAMILY LLLP 36-00-05100 67.92		EDDIE B'S FAMILY LLLP 14-00-02250 77.54
	LAND PLAT				
	RODS	1438+00.00		1426+79.38	1414+00.00
	STATION				
PIPELINE STATIONING	CROSSINGS	1438+00.00 MATCHLINE 1436+71.53 P.I. < 10°12'43" RT 1436+71.53 END BORE 90 1435+79.67 APPROX. EXIST. ONEOK LINE 1434+91.15 BEGIN BORE 90 1433+10.78 P.I. < 18°14'45" RT		1426+79.38 SECTION/OWNERSHIP LINE	1414+00.00 MATCHLINE



PIPELINE	MATERIAL	129' ①	180' ②	2091' ①
	COATING			
	DESIGN FACTOR			
	CLASS LOCATION			
	MAOP			





LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
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PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	2220'
2	10" .307 W.T. BORE PIPE FBE+ARO	180'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
ENGINEERING > SURVEYING > PLANNING
1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 64 OF 66
1414+00.00 TO 1438+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Facility Name

Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

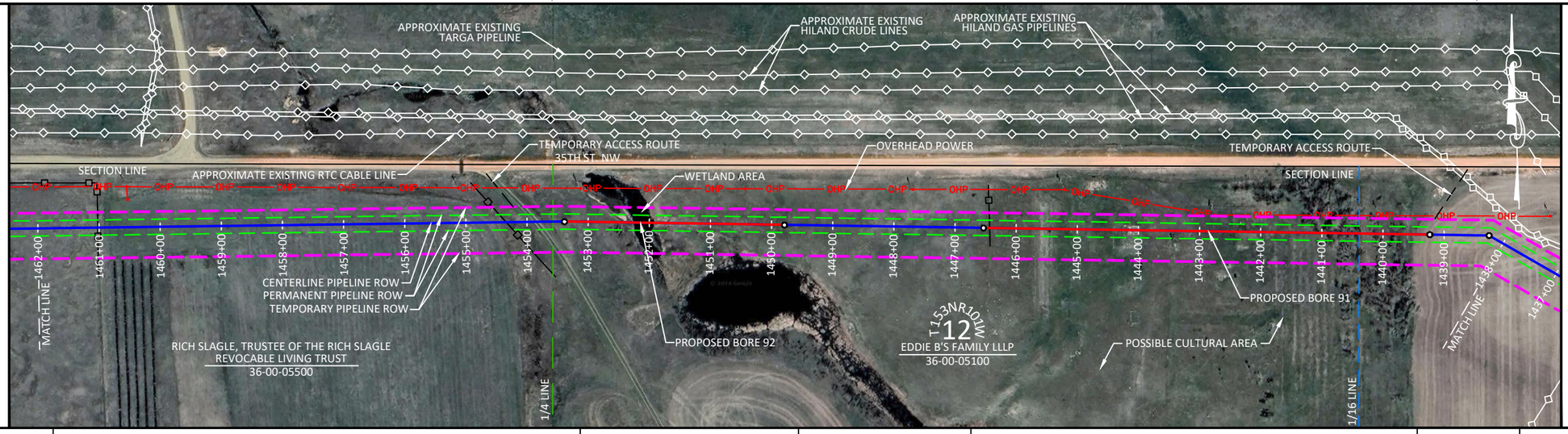
Feb 12, 2025 - 8:56PM

LAND	PROTECTION EASEMENT	RICH SLAGLE, TRUSTEE OF THE RICH SLAGLE REVOCABLE LIVING TRUST 36-00-05500 51.06	EDDIE B'S FAMILY LLLP 36-00-05100 94.39
	LAND PLAT RODS	1462+00.00	1453+57.45	1438+00.00
	STATION		

PIPELINE STATIONING — CROSSINGS

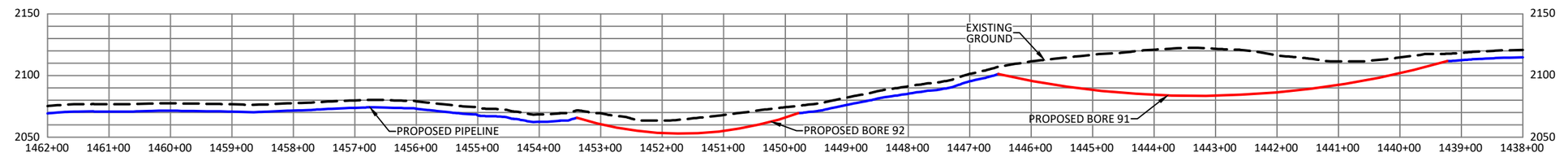
1462+00.00 MATCHLINE
1461+02.14 EXISTING FENCE
1454+33.88 EXISTING FENCE
1453+57.45 OWNERSHIP LINE
1453+38.76 P.I. < 1°35'57" LT
1453+38.76 END BORE 92
1452+34.22 WETLAND EDGE
1452+09.94 WETLAND EDGE
1449+78.76 BEGIN BORE 92
1446+53.16 END BORE 91
1446+43.15EXISTING FENCE
1441+27.40 TREE ROW
1439+58.09 TREE ROW
1439+23.16 BEGIN BORE 91
1438+26.13 P.I. < 28°56'52" LT
1438+00.00 MATCHLINE

ALIGNMENT STRIP MAP — PLAN

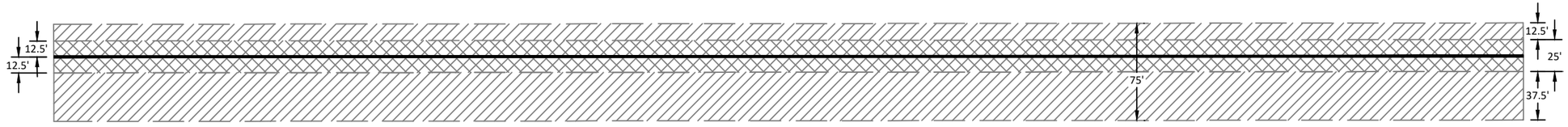


PIPELINE	MATERIAL	861'	360'	326'	730'	123'
		①	②	①	②	①
	COATING					
	DESIGN FACTOR					
	CLASS LOCATION					
	MAOP					

PROFILE — ELEVATION



WORKSPACE — FOOTPRINT



LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
- SECTION LINE
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PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1310'
2	10" .307 W.T. BORE PIPE FBE+ARO	1090'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

NO.	Revision Description	Project ID	Date
D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
B	RE-STATIONING	16013	1/7/2025
A	PROPOSED	16013	11/29/2024

NOTES

KINDER MORGAN
HILAND PARTNERS HOLDINGS, L.L.C.

WHS
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1515 9TH STREET, STE A, ROCK SPRINGS, WY 82901
307.362.6065 | 866.938.3088 | www.whsmithpc.com

Reference Drawings

Facility Name

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 65 OF 66
1438+00.00 TO 1462+00.00
T149N R98W, T149N R99W, T150N R99W,
T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Status: PROPOSED

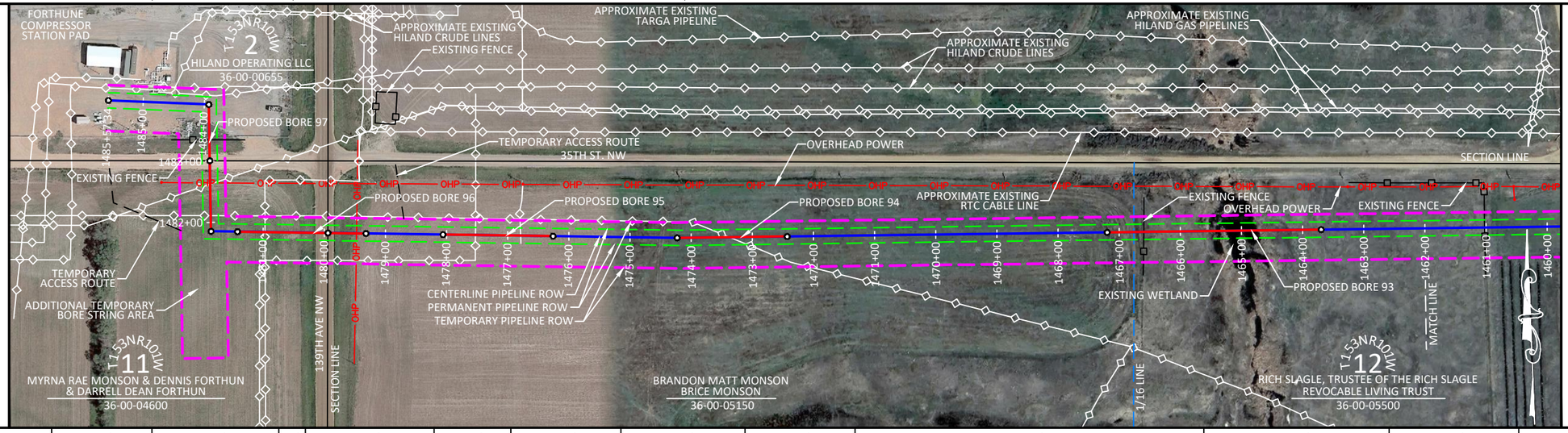
State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			

File Name: HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg

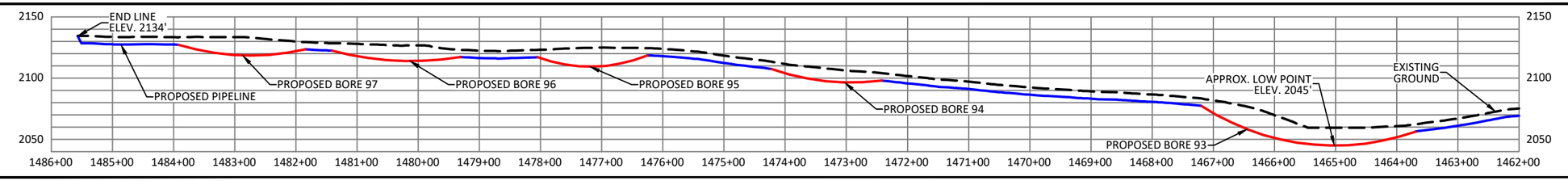
Drawing No: HILAND EXPRESS SPINE TIE-IN-PRO-001 Rev

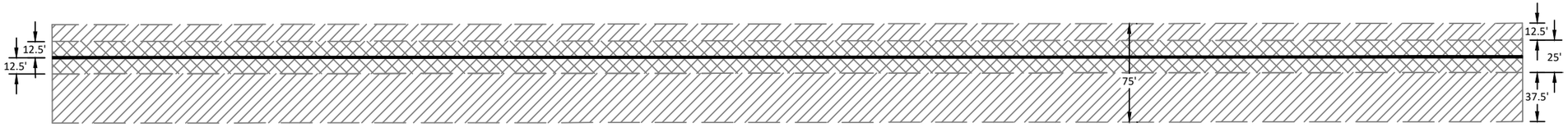
Fri Jul 25, 2025 - 8:36PM

LAND	PROTECTION EASEMENT			HILAND OPERATING LLC 36-00-00655 15.54			MYRNA RAE MONSON & DENNIS FORTHUN & DARRELL DEAN FORTHUN 36-00-04600 18.59			BRANDON MATT MONSON BRICE MONSON 36-00-05150 79.90						RICH SLAGLE, TRUSTEE OF THE RICH SLAGLE REVOCABLE LIVING TRUST 36-00-05500 28.84			
	LAND PLAT RODS	1485+57.34				1483+00.97			1479+94.31								1466+75.88			1462+00.00
PIPELINE STATIONING	STATION	1485+57.34 END LINE @ FORTHUNE COMPRESSOR STATION		1483+92.94 P.I. < 86°38'19" LT	1483+92.94 END BORE 97	1483+35.16 EXISTING PAD FENCE	1483+00.97 SECTION/OWNERSHIP LINE	1482+98.82 35TH ST. NW	1482+64.58 OVERHEAD POWER	1482+62.52 APPROX. EXIST. HILAND GAS	1482+10.89 APPROX. EXIST. ONEOK LINE	1481+85.44 BEGIN BORE 97	1481+85.44 P.I. < 88°10'53" RT	1481+42.06 END BORE 96	1480+97.06 APPROX. EXISTING RTC CABLE	1480+02.84 139TH AVE. NW	1479+94.31 SECTION/OWNERSHIP LINE	1479+47.34 OVERHEAD POWER	1479+32.06 BEGIN BORE 96	1478+05.91 END BORE 95	1477+52.75 APPROX. EXIST. HILAND GAS	1476+79.08 MCKENZIE ELECTRIC UGP	1476+25.91 BEGIN BORE 95	1474+22.98 P.I. < 1°32'37" RT	1474+22.98 END BORE 94	1473+37.28 APPROX. EXIST. ONEOK LINE	1472+42.98 BEGIN BORE 94	1467+19.42 END BORE 93	1466+75.88 OWNERSHIP LINE	1466+59.69 EXISTING FENCE	1465+09.43 WETLAND EDGE	1464+89.86 WETLAND EDGE	1463+69.42 BEGIN BORE 93	1462+00.00 MATCHLINE
	CROSSINGS																														



PIPELINE	MATERIAL	164'	①	207'	②	44'	①	210'	②	126'	①	180'	②	203'	①	180'	②	524'	①	350'	②	169'	①										
	COATING																														
	DESIGN FACTOR																														
	CLASS LOCATION																														
	MAOP																														





LEGEND

- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- PROPOSED PIPELINE
- PROPOSED BORE
- PROPOSED PERMANENT EASEMENT (PLAN)
- PROPOSED TEMPORARY EASEMENT (PLAN)
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PIPE SUMMARY

ITEM	DESCRIPTION	QUANTITY
1	10" .219 W.T. MAINLINE PIPE FBE	1230'
2	10" .307 W.T. BORE PIPE FBE+ARO	1127'

SCALE & PROJECTION

200 100 0 200 400

SCALE: 1" = 200' HORIZONTAL
1" = 100' VERTICAL

PROJECTION: NAD 83 NORTH DAKOTA STATE PLANE, NORTH ZONE, US FOOT

CRITICAL_DRAWING

D	RE-ROUTE	16013	2/12/2025
C	RE-ROUTE	16013	1/15/2025
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A	PROPOSED	16013	11/29/2024
NO.	Revision Description	Project ID	Date

NOTES

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Reference Drawings

HILAND EXPRESS SPINE
10" HP STEEL GAS PIPELINE
SHEET 66 OF 66
1462+00.00 TO 1485+57.34 (E.O.L.)
T149N R98W, T149N R99W, T150N R99W, T150N R100W, T151N R100W, T151N R101W
5TH P.M., MCKENZIE COUNTY, NORTH DAKOTA

Facility Name

Status: PROPOSED

State:	NORTH DAKOTA	PIN No:	
County:	MCKENZIE	Scale:	1"=200'
Category:			
File Name:	HILAND EXPRESS SPINE TIE-IN ALIGNMENT PLAN.dwg		
Drawing No:	HILAND EXPRESS SPINE TIE-IN-PRO-001	Rev	

Feb 12, 2025 - 10:50pm

Exhibit B – Project Maps

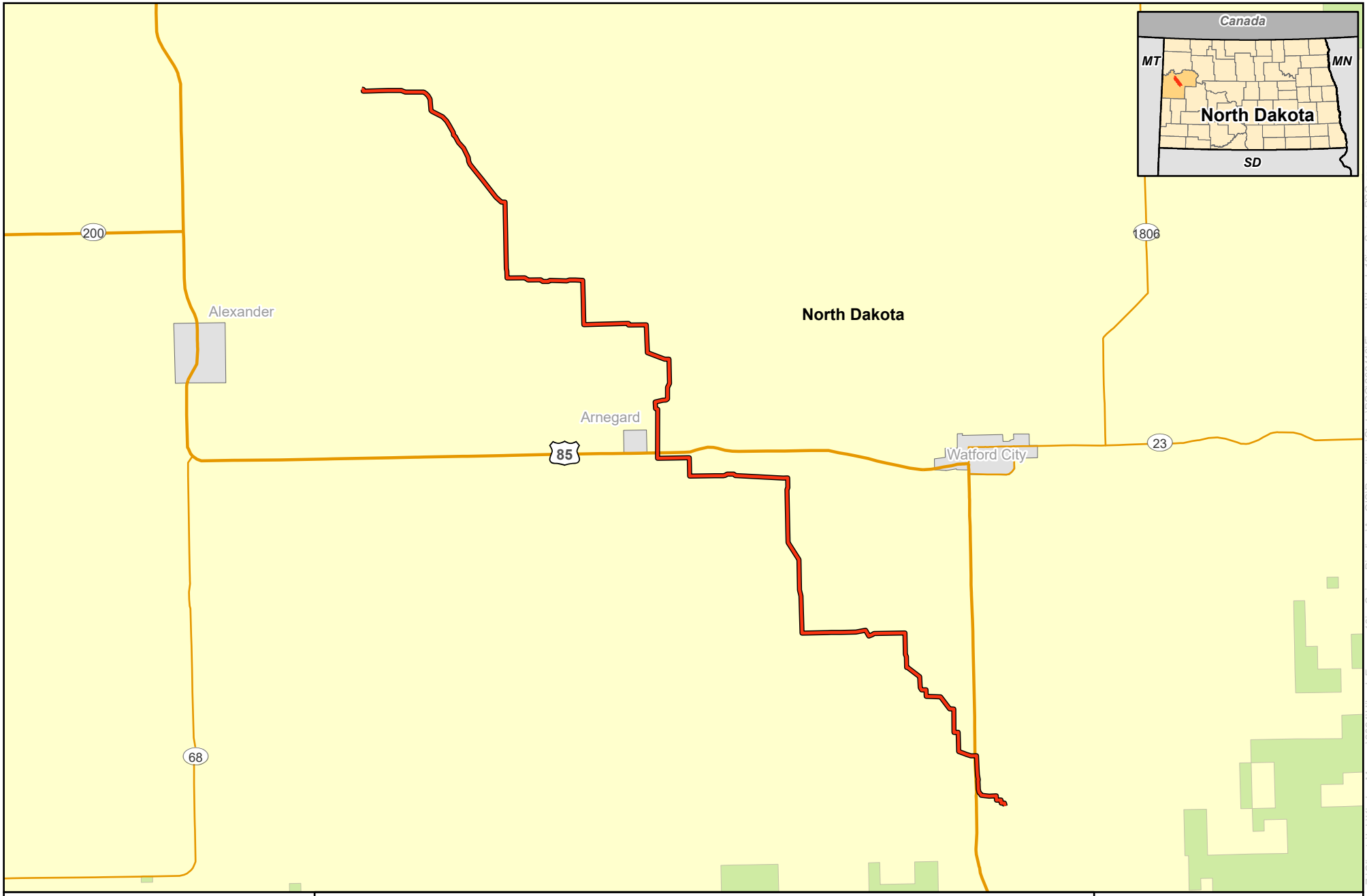
B.1 Project Overview

B.2 Avoidance and Exclusion Maps

B.3 Land Use/Land Cover Maps

B.4. Selection Criteria (Other) Maps

B.5 Black and White Map for Publications



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For Environmental Review Purposes Only

Exhibit B.1

Hiland Crude, LLC

Hiland Express Spine Pipeline Project

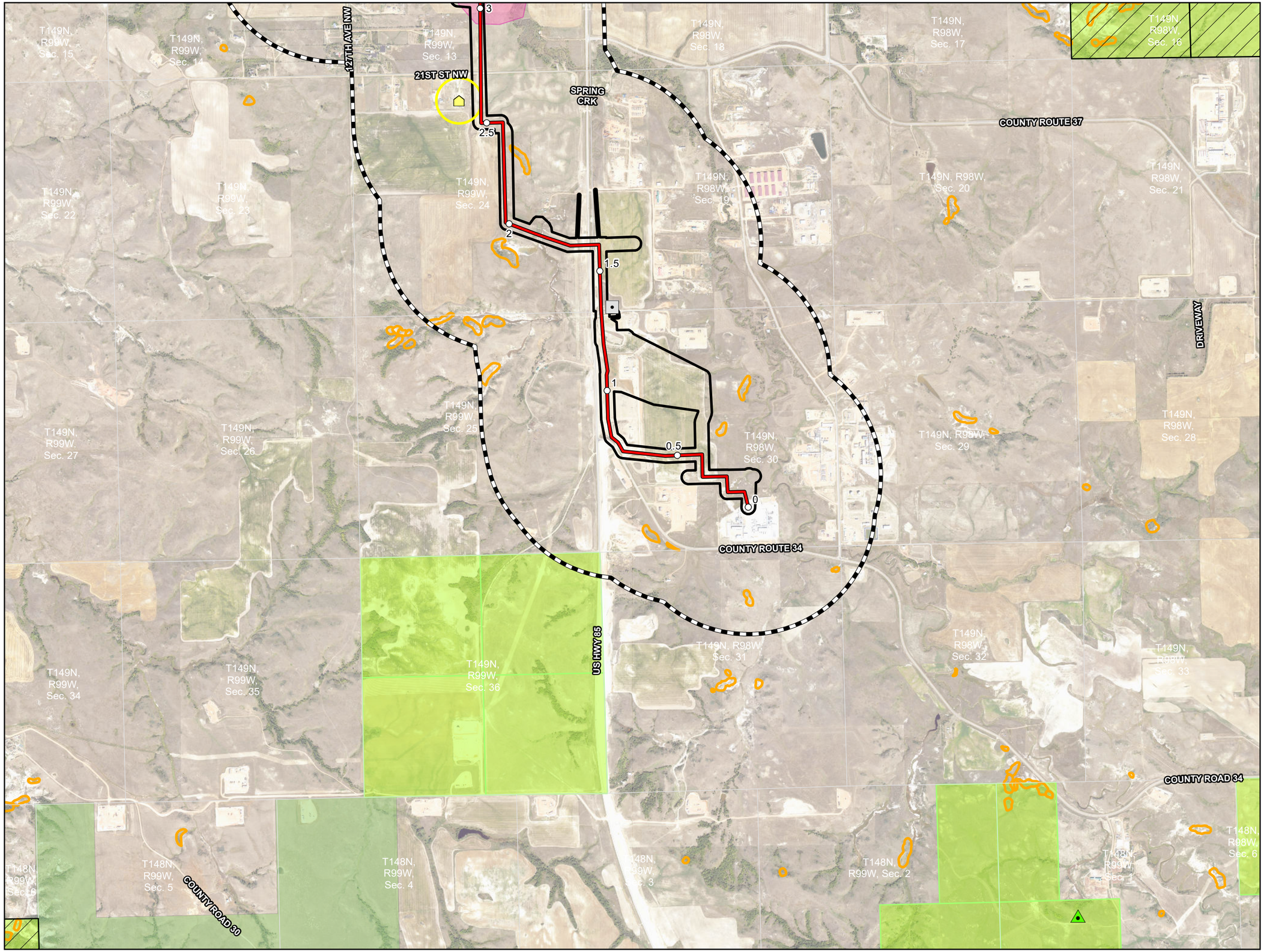
Project Overview

Proposed Pipeline

Forest Service Land (USFS)

Source: Z:\Clients_L\Kinder_Morgan\2024\Hiland_Express_10in_Spine_PipelineArcGIS\Permitting\State\PSC\20241010\Figures\Hiland_10in_Spine_PSC.aprx

Date: (2/3/2025)





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Imagery Source: North Dakota NAIP Imagery 2017

N
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- Milepost
- Proposed Pipeline
- Project Corridor
- 1-mile Study Area
- NDDTL - School Trust Land
- NDDTL - Mineral Trust Land
- Section Boundary
- Occupied Structure within 500' of Route
- Occupied Structure (500’ Buffer)
- Abandoned Mine

Avoidance Area

- Surficial Aquifer
- Landslide Deposit

Exclusion Area

- Cemetery
- National Grassland

Exhibit B.2
Hiland Crude, LLC
Hiland Express Spine Pipeline Project

Avoidance and Exclusion Maps

Page 1 of 5

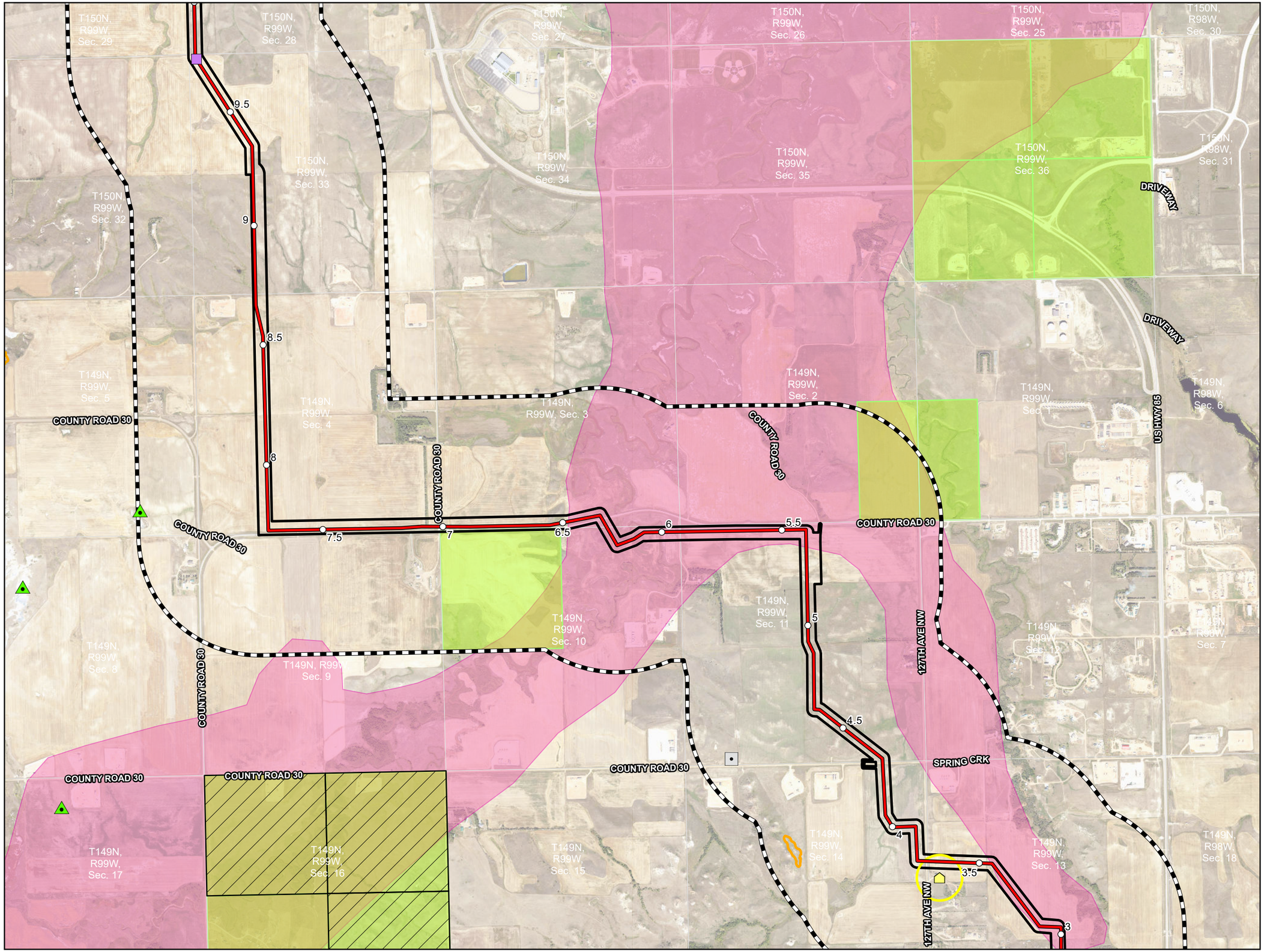
McKenzie County, ND

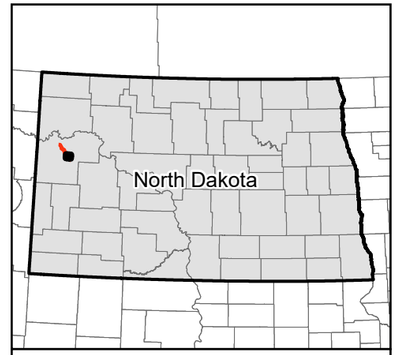
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For Environmental Review Purposes Only

2/4/2025

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Date: (2/4/2025)





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Imagery Source: North Dakota NAIP Imagery 2017

N W E S

- Milepost
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- Proposed Pipeline
- Project Corridor
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- Abandoned Mine

Avoidance Area

- Surficial Aquifer
- Landslide Deposit

Exclusion Area

- Cemetery

Exhibit B.2
Hiland Crude, LLC
Hiland Express Spine Pipeline Project

Avoidance and Exclusion Maps

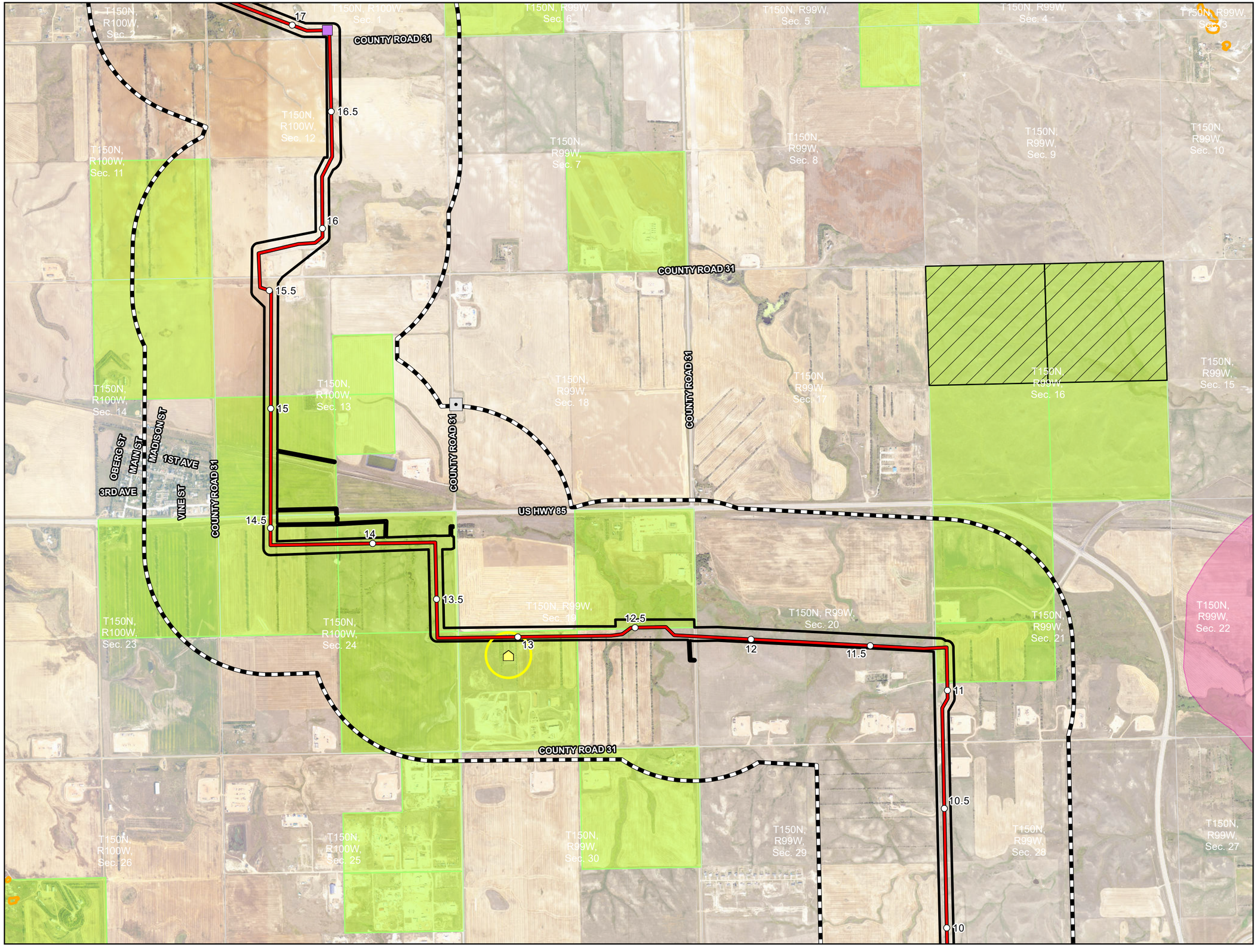
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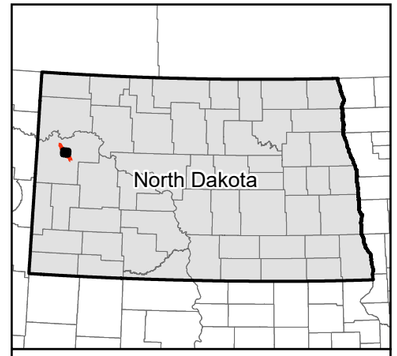
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Date: (2/4/2025)

For Environmental Review Purposes Only

2/4/2025





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Imagery Source: North Dakota NAIP Imagery 2017

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- Mainline Valve
- Proposed Pipeline
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- NDDTL - Mineral Trust Land
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- Occupied Structure (500' Buffer)

Avoidance Area

- Surficial Aquifer
- Landslide Deposit

Exclusion Area

- Cemetery

Exhibit B.2
Hiland Crude, LLC
Hiland Express Spine Pipeline Project

Avoidance and Exclusion Maps

McKenzie County, ND

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For Environmental Review Purposes Only

2/4/2025

Source: Z:\Clients\T_L\Kinder_Morgan\2024\Hiland_Express_10in_Spine_Pipeline\ArcGIS\Permitting\State\PSC\2024\10\Figures\Hiland_10in_Spine_PSC.aprx
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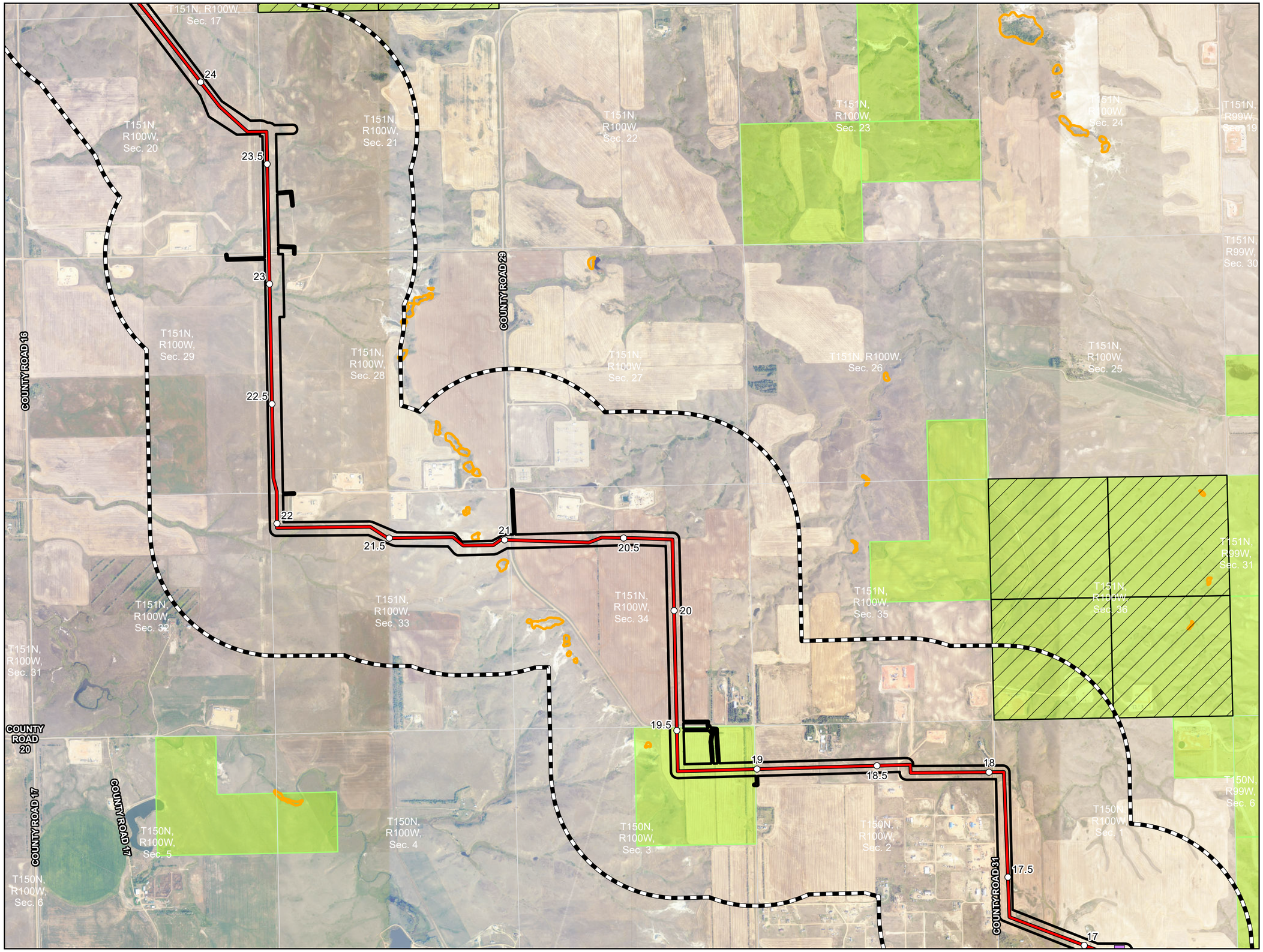


Exhibit B.2
Hiland Crude, LLC
Hiland Express Spine Pipeline Project

Avoidance and Exclusion Maps

Page 4 of 5

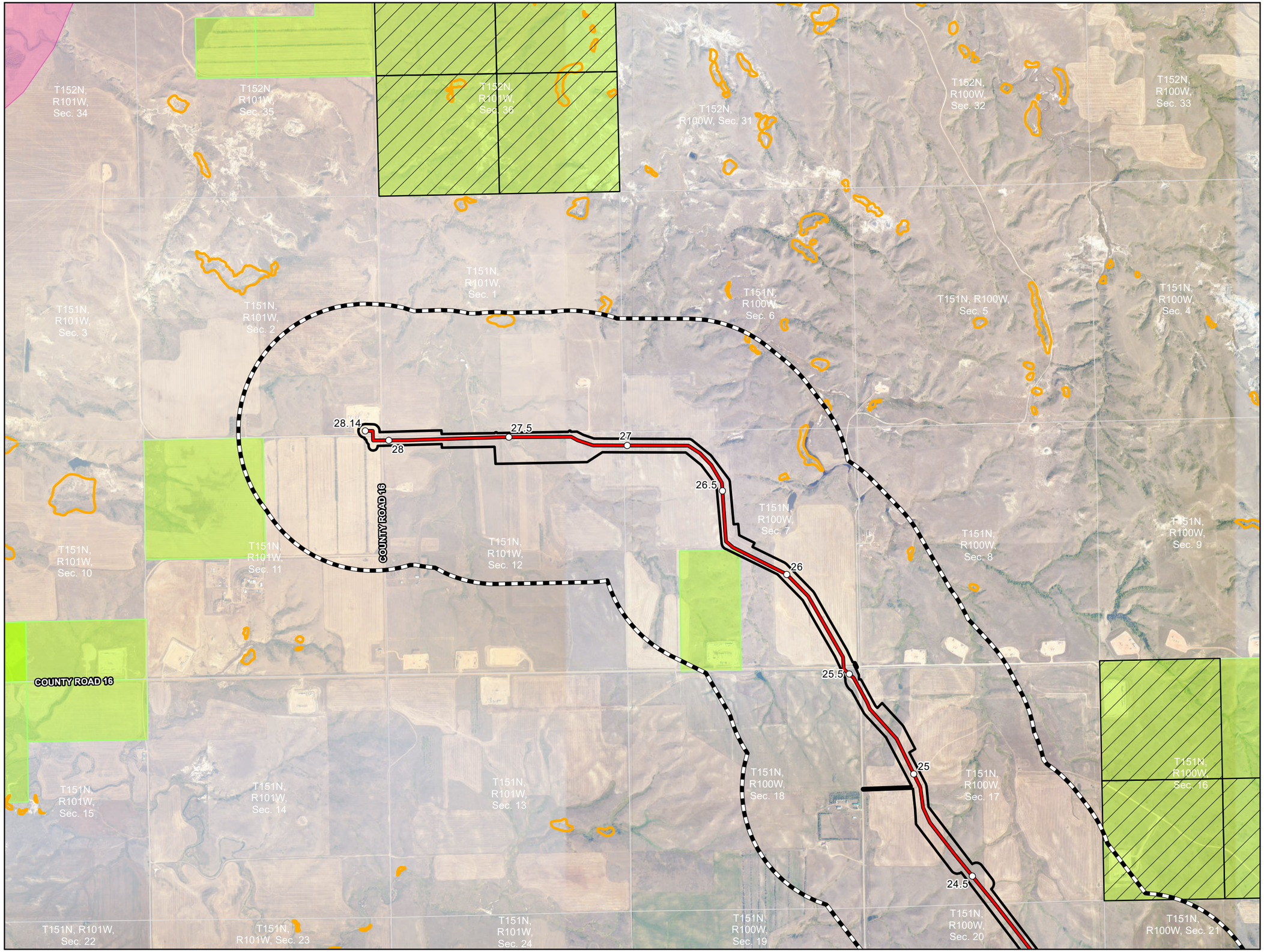
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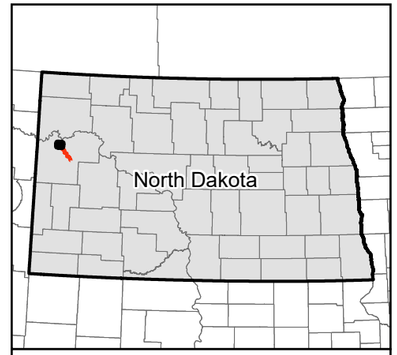
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For Environmental Review Purposes Only

2/4/2025

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Imagery Source: North Dakota NAIP Imagery 2017

N W E S

- Milepost
- Proposed Pipeline
- Project Corridor
- 1-mile Study Area
- NDDTL - School Trust Land
- NDDTL - Mineral Trust Land
- Section Boundary

Avoidance Area

- Surficial Aquifer
- Landslide Deposit

Exhibit B.2
Hiland Crude, LLC
Hiland Express Spine Pipeline Project

Avoidance and Exclusion Maps

Page 5 of 5

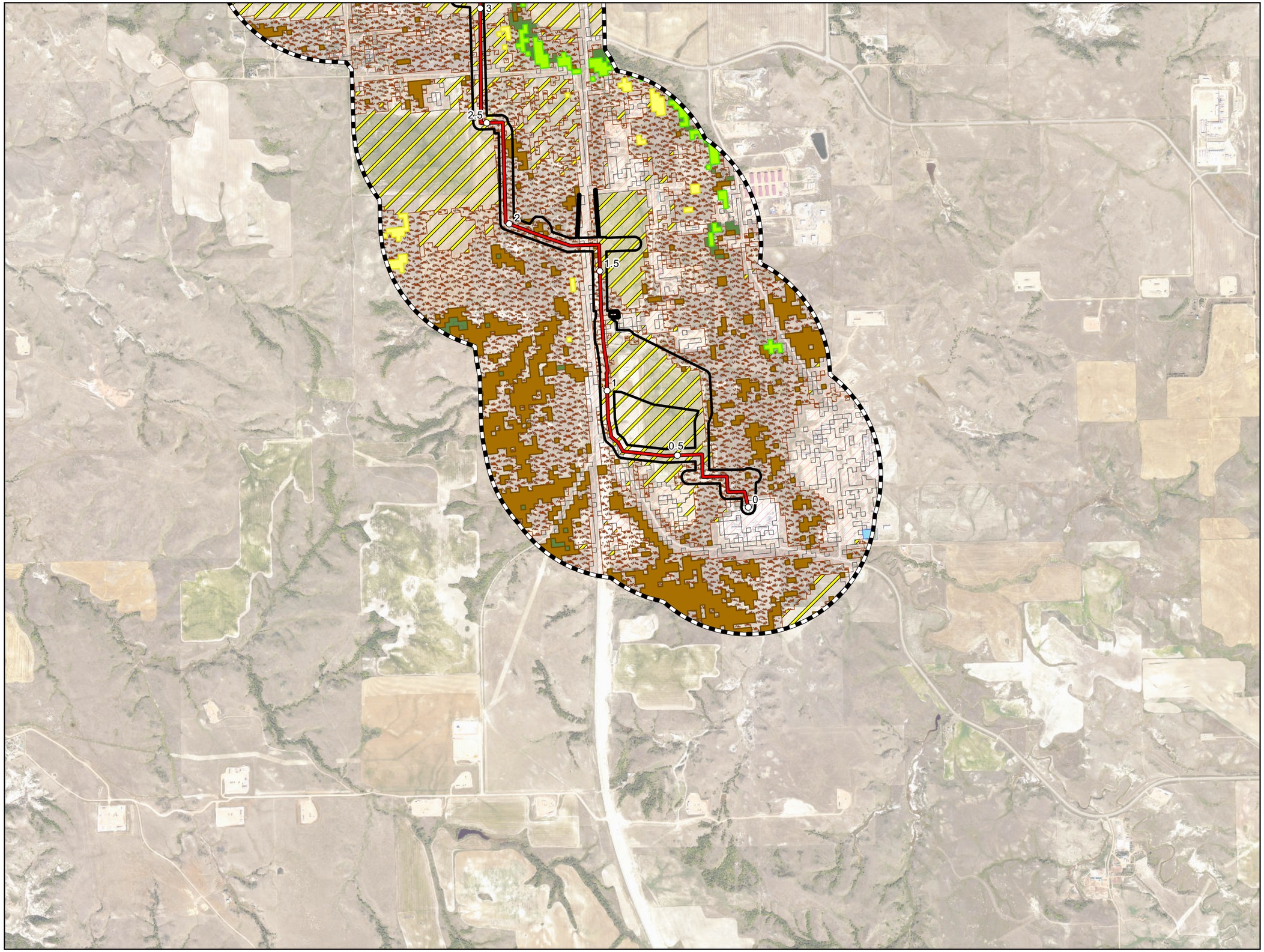
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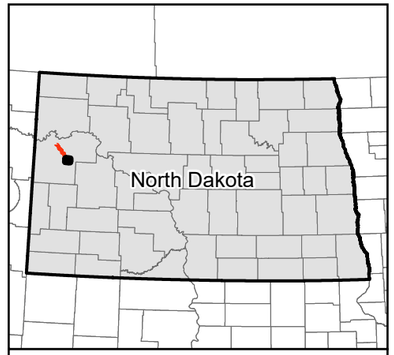
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For Environmental Review Purposes Only

2/4/2025

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Imagery Source: North Dakota NAIP Imagery 2017

N
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- Milepost
- Mainline Valve
- Proposed Pipeline
- Project Corridor
- County Boundary
- 1-mile Study Area

LULC Classification

- Cultivated Crops
- Developed
- Forest
- Grassland/Herbaceous
- Open Water
- Pasture/Hay
- Shrub/Scrub
- Woody Wetlands

Exhibit B.3
Hiland Crude, LLC
Hiland Express Spine Pipeline Project

Selection Criteria (LULC) Maps

Page 1 of 5

McKenzie County, ND

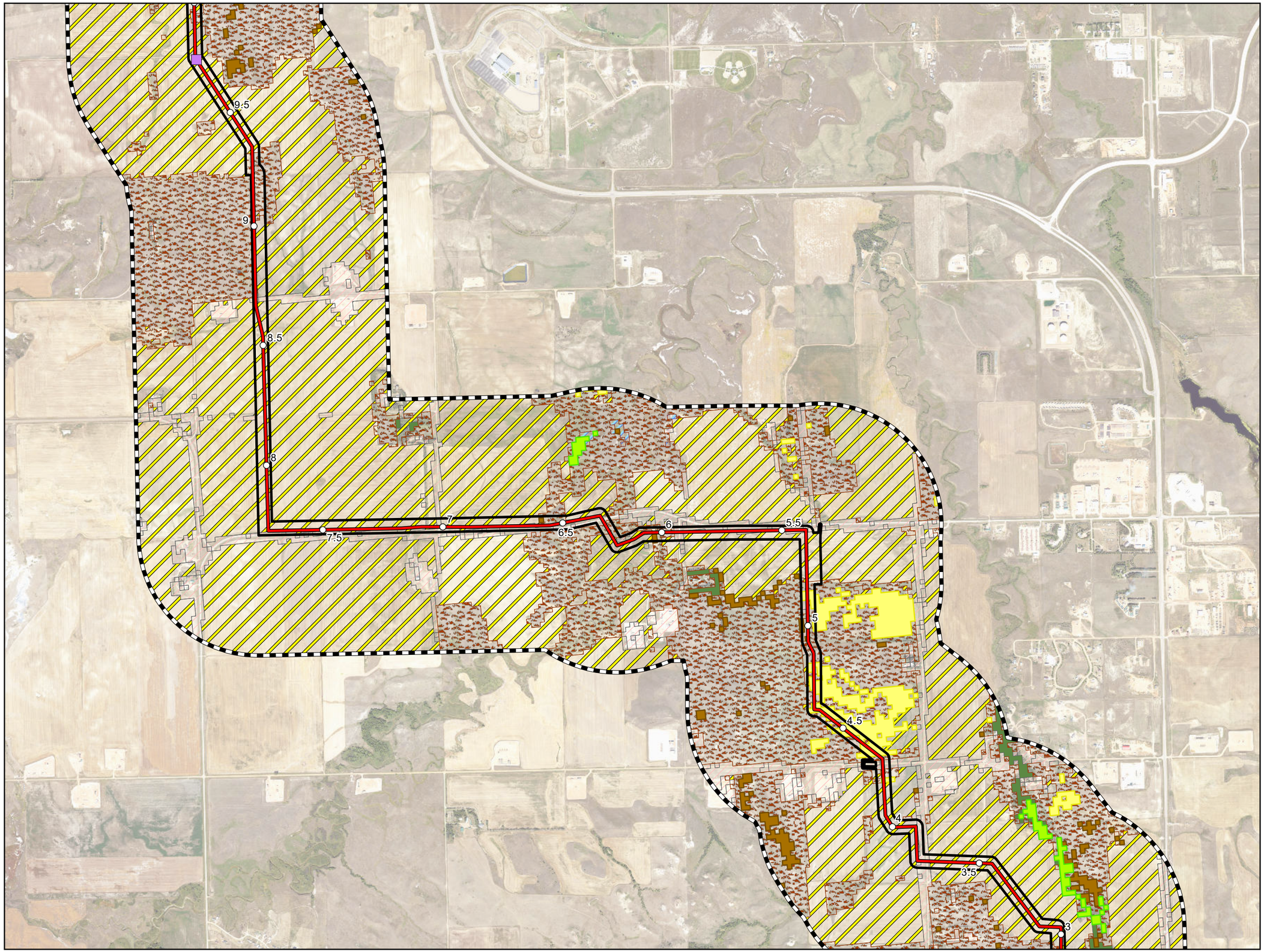
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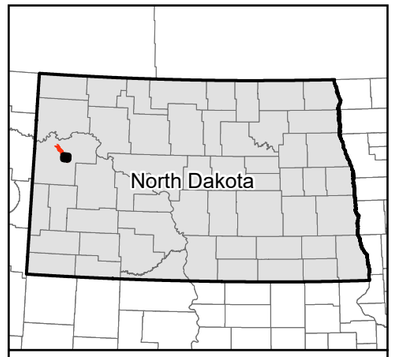
For Environmental Review Purposes Only

2/3/2025

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Date: (2/3/2025)





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Imagery Source: North Dakota NAIP Imagery 2017

N
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- Milepost
- Mainline Valve
- Proposed Pipeline
- Project Corridor
- County Boundary
- 1-mile Study Area

LULC Classification

- Cultivated Crops
- Developed
- Emergent Herbaceous Wetlands
- Forest
- Grassland/Herbaceous
- Pasture/Hay
- Shrub/Scrub
- Woody Wetlands

Exhibit B.3
Hiland Crude, LLC
Hiland Express Spine Pipeline Project

Selection Criteria (LULC) Maps

Page 2 of 5

McKenzie County, ND

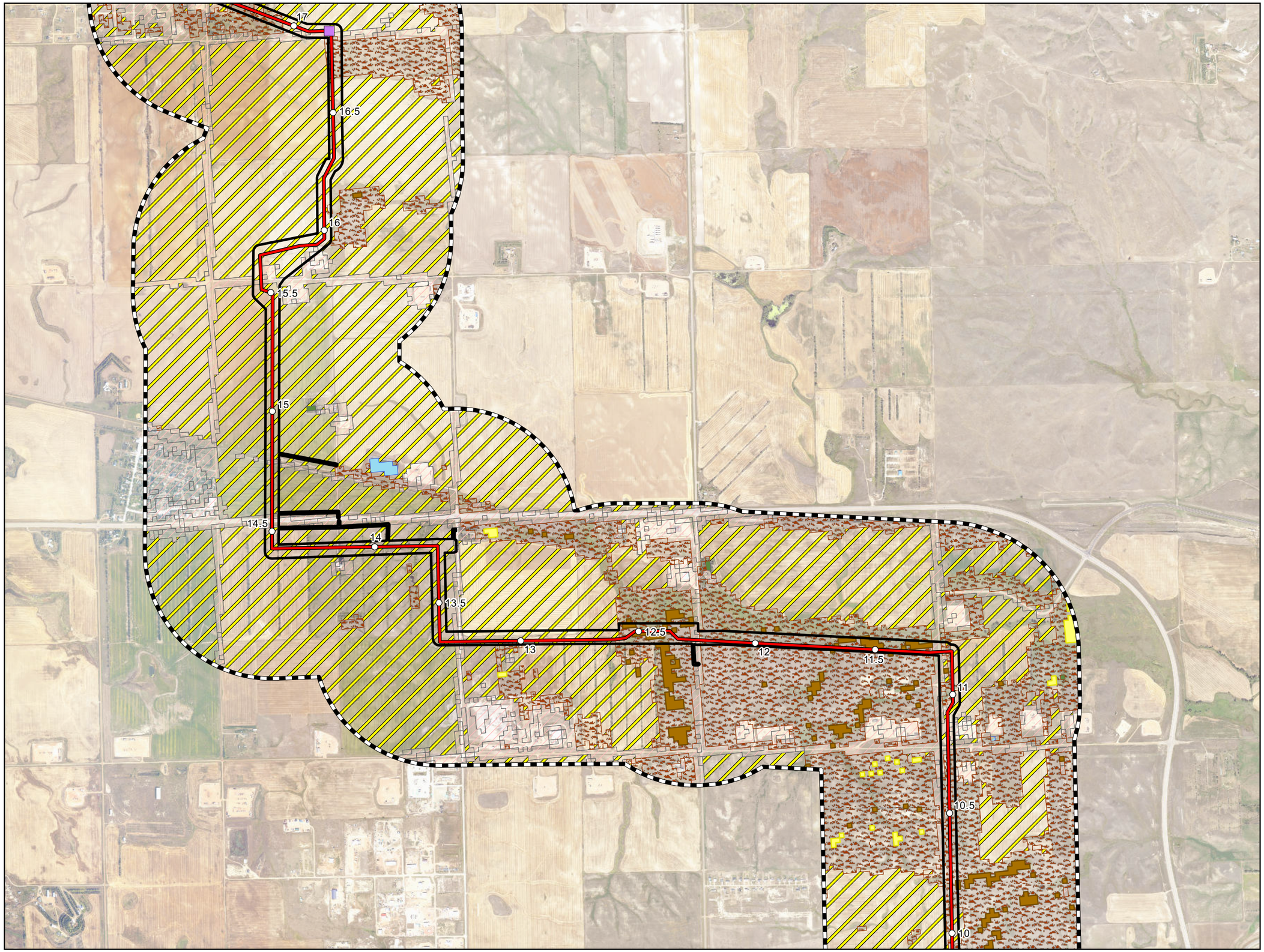
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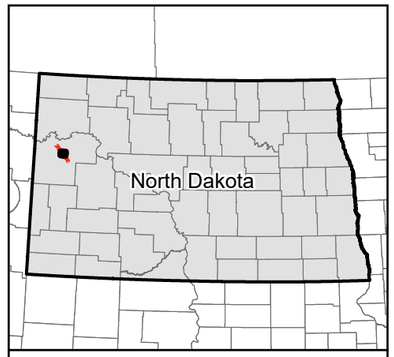
For Environmental Review Purposes Only

2/3/2025

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Date: (2/3/2025)





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Imagery Source: North Dakota NAIP Imagery 2017

N
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- Milepost
- Mainline Valve
- Proposed Pipeline
- Project Corridor
- County Boundary
- 1-mile Study Area

LULC Classification

- Cultivated Crops
- Developed
- Emergent Herbaceous Wetlands
- Forest
- Grassland/Herbaceous
- Open Water
- Pasture/Hay
- Shrub/Scrub

Exhibit B.3
Hiland Crude, LLC
Hiland Express Spine Pipeline Project

Selection Criteria (LULC) Maps

Page 3 of 5

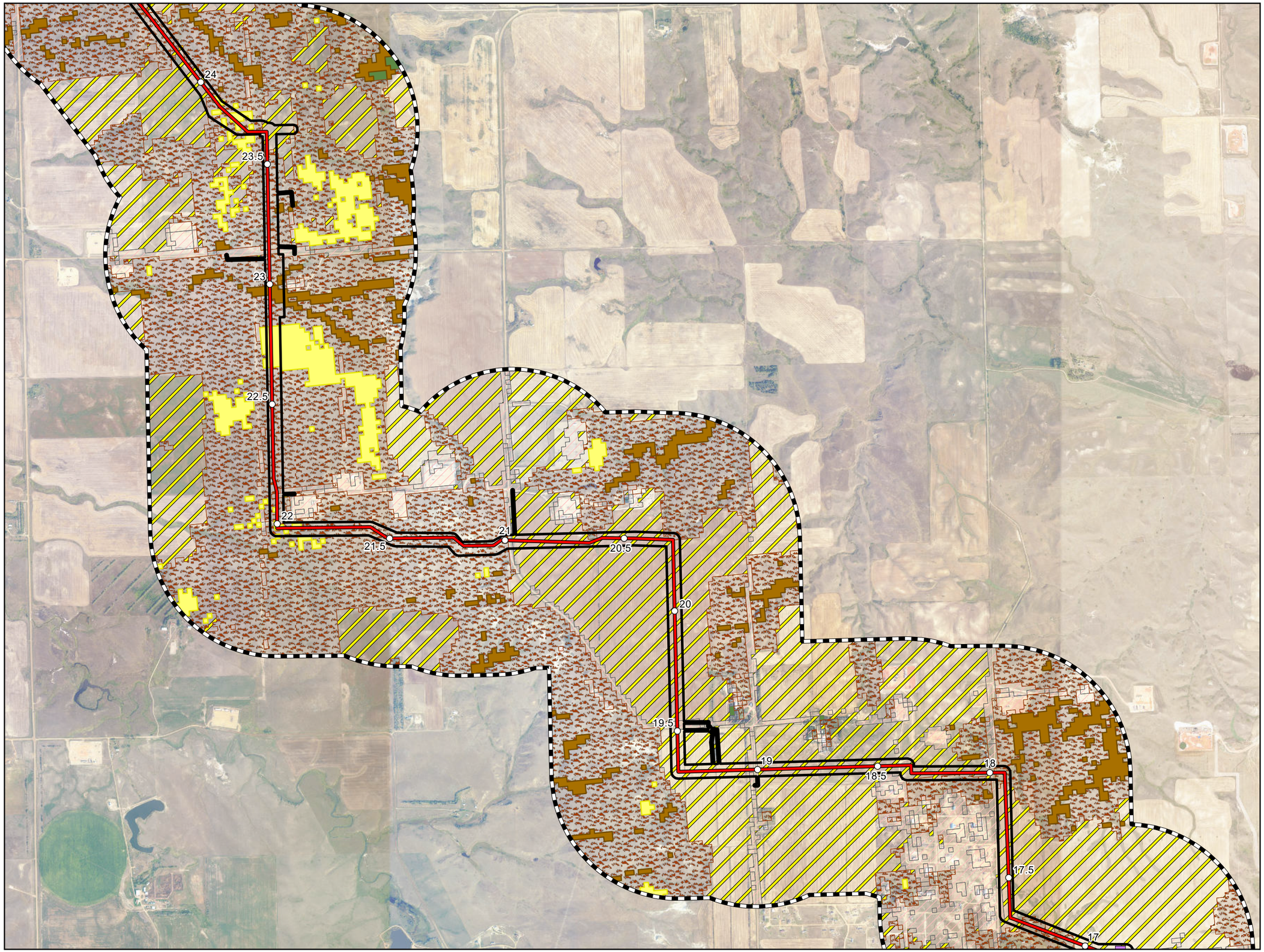
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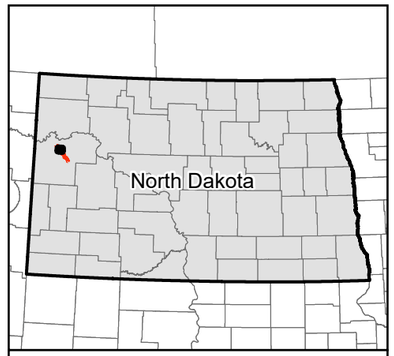
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For Environmental Review Purposes Only

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Imagery Source: North Dakota NAIP Imagery 2017

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- Milepost
- Mainline Valve
- Proposed Pipeline
- Project Corridor
- County Boundary
- 1-mile Study Area

LULC Classification

- Cultivated Crops
- Developed
- Forest
- Grassland/Herbaceous
- Pasture/Hay
- Shrub/Scrub

Exhibit B.3
Hiland Crude, LLC
Hiland Express Spine Pipeline Project

Selection Criteria (LULC) Maps

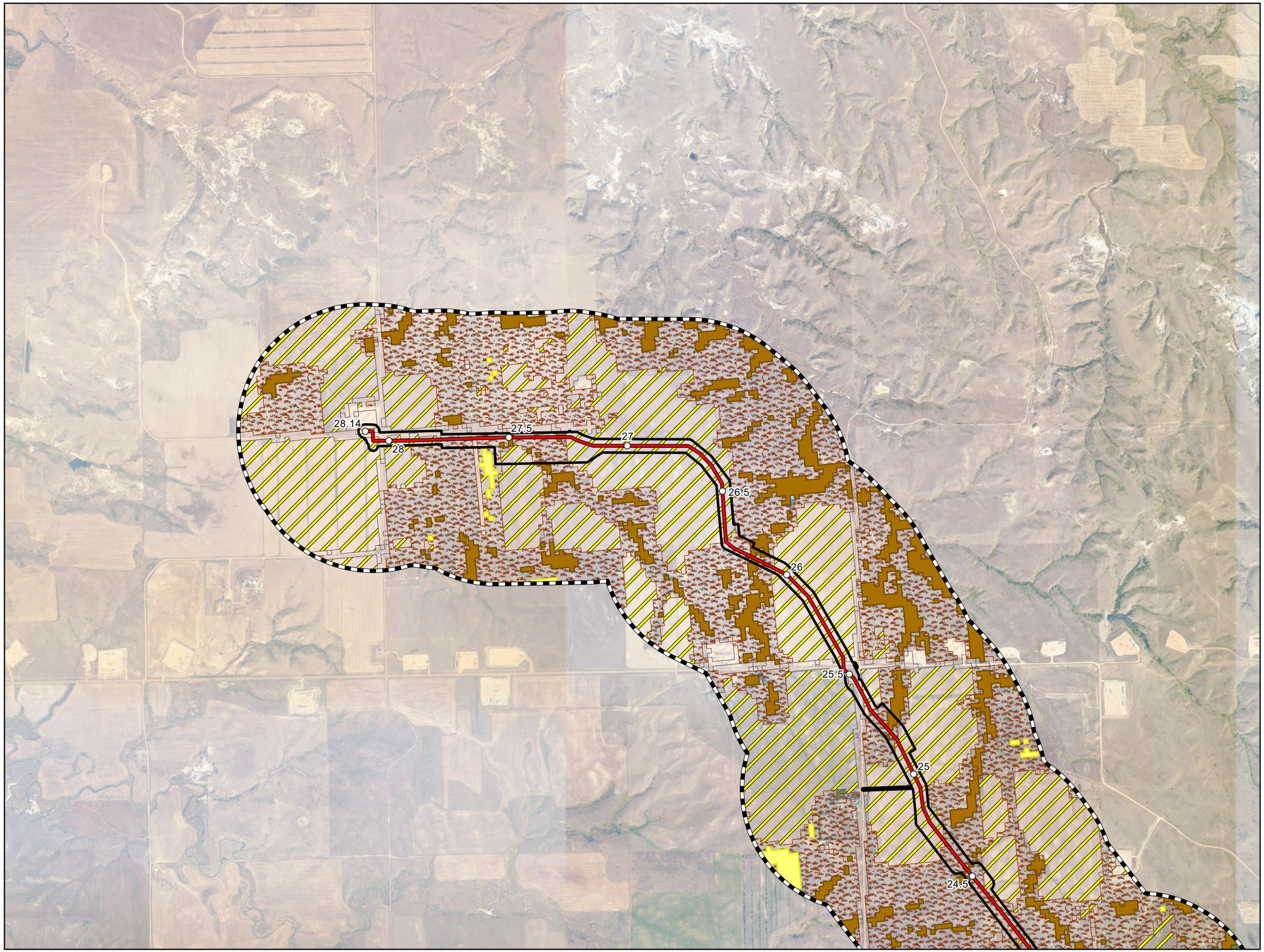
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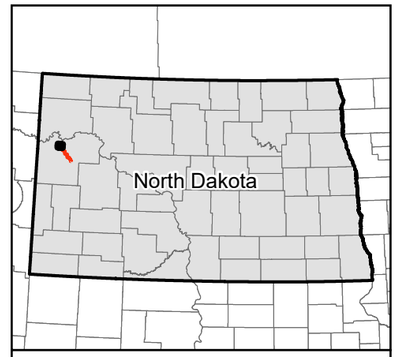
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For Environmental Review Purposes Only

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Imagery Source: North Dakota NAIP Imagery 2017

- Milepost
- Mainline Valve
- Proposed Pipeline
- Project Corridor
- County Boundary
- 1-mile Study Area

LULC Classification

- Cultivated Crops
- Developed
- Forest
- Grassland/Herbaceous
- Open Water
- Pasture/Hay
- Shrub/Scrub

Exhibit B.3
Hiland Crude, LLC
Hiland Express Spine Pipeline Project

Selection Criteria (LULC) Maps

Page 5 of 5

McKenzie County, ND

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For Environmental Review Purposes Only

2/3/2025

Source: Z:\Clients\I_L\Kinder_Morgan\2024\Hiland_Express_10in_Spine_Pipeline\ArcGIS\Permitting\State\PSC\202410\Figures\Hiland_10in_Spine_PSC.aprx

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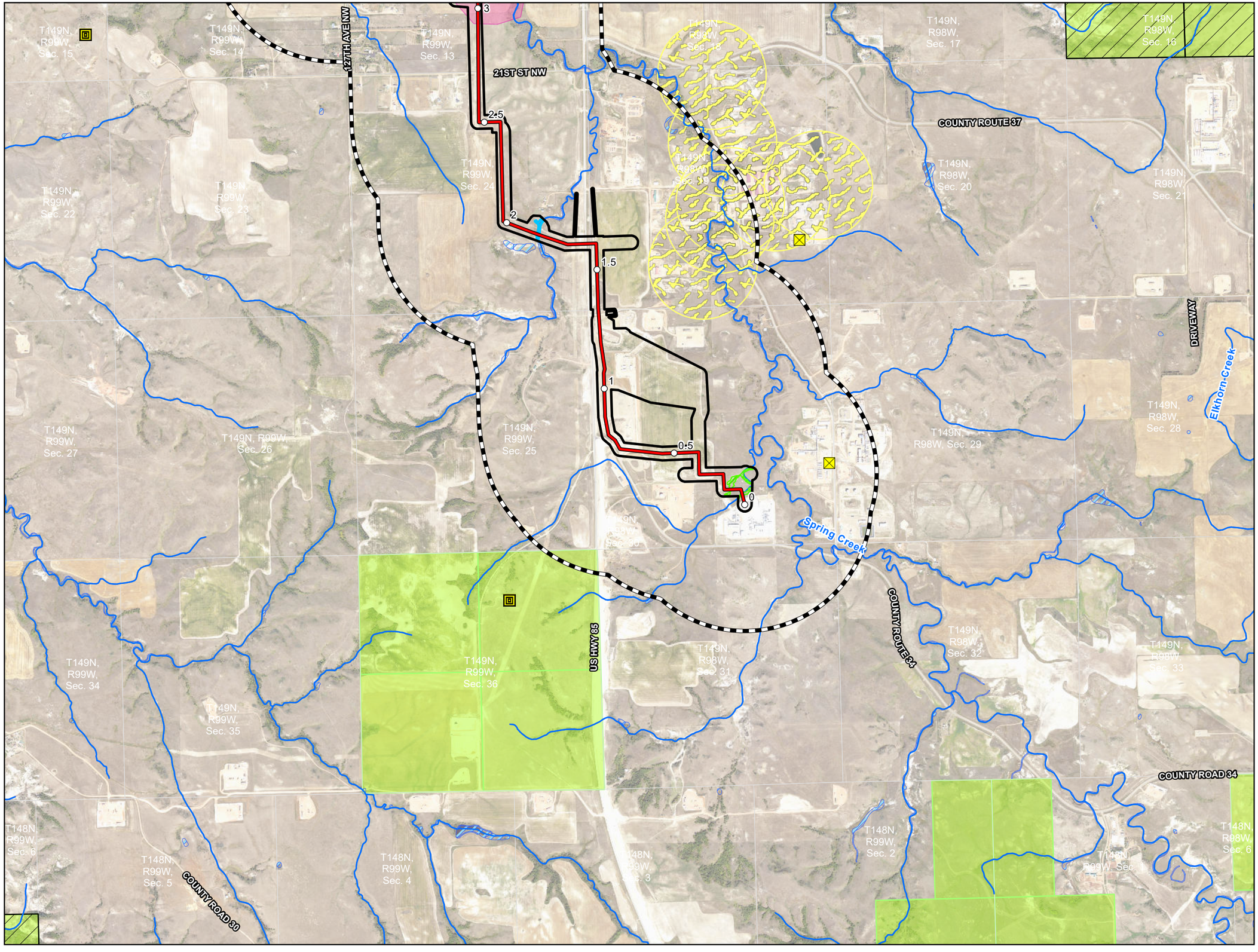


Exhibit B.4
Hiland Crude, LLC
Hiland Express Spine Pipeline Project

Selection Criteria (Other) Maps

Page 1 of 5

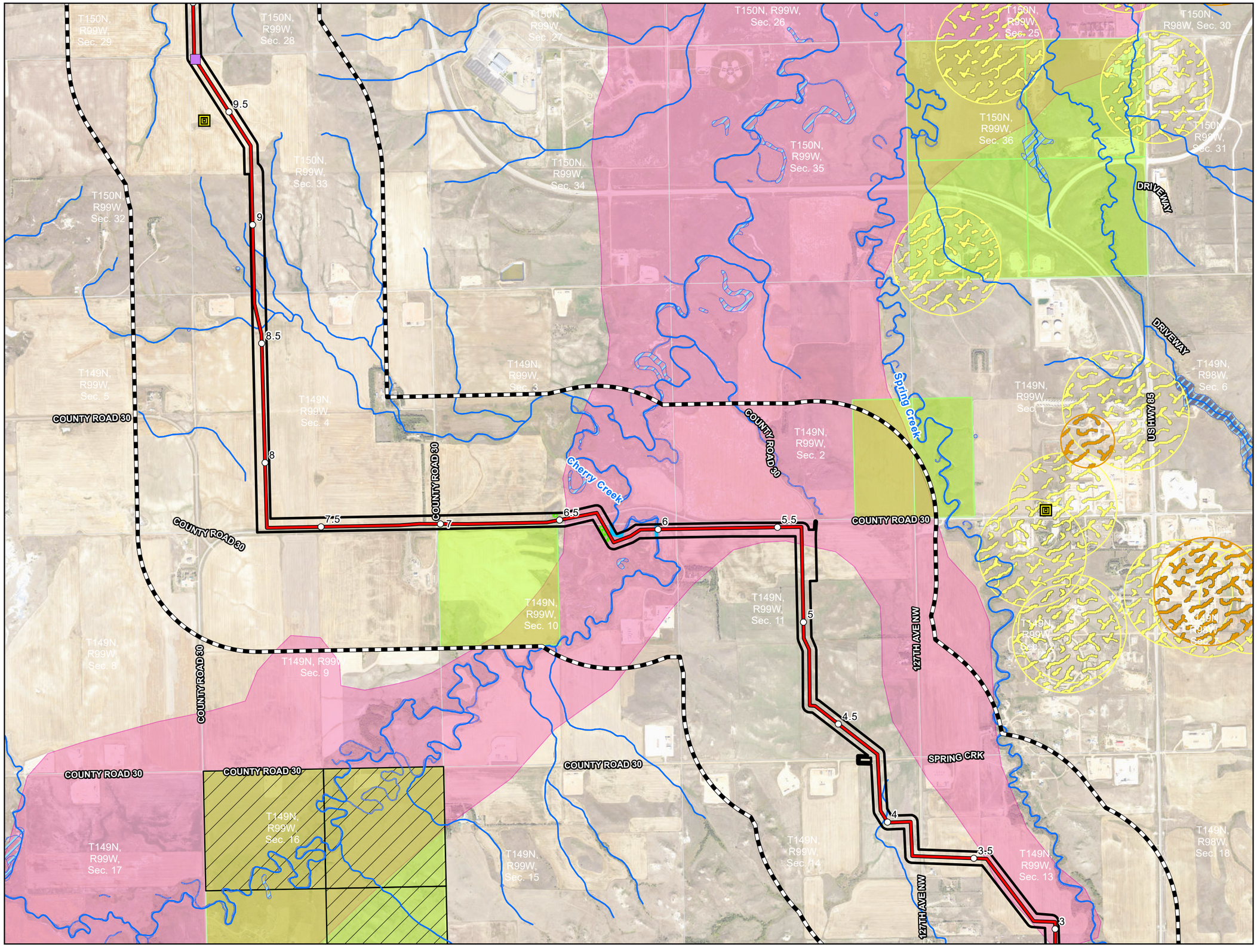
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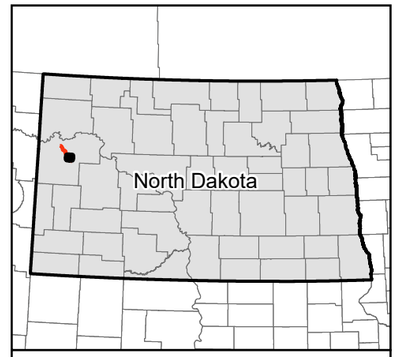
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For Environmental Review Purposes Only

2/3/2025

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Date: (2/3/2025)





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Imagery Source: North Dakota NAIP Imagery 2017

N
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- Milepost
- Mainline Valve
- Proposed Pipeline
- Project Corridor
- 1-mile Study Area
- Microwave Station
- Antenna Structure
- NHD Flowline
- NWI Wetland
- Field Delineated Waterbody
- Field Delineated Wetland
- NDDTL - School Trust Land
- NDDTL - Mineral Trust Land
- Surficial Aquifer
- Wellhead Community Protection Area
- Wellhead Non-Community Protection Area
- Section Boundary
- County Boundary

Exhibit B.4
Hiland Crude, LLC
Hiland Express Spine Pipeline Project

Selection Criteria (Other) Maps

Page 2 of 5

McKenzie County, ND

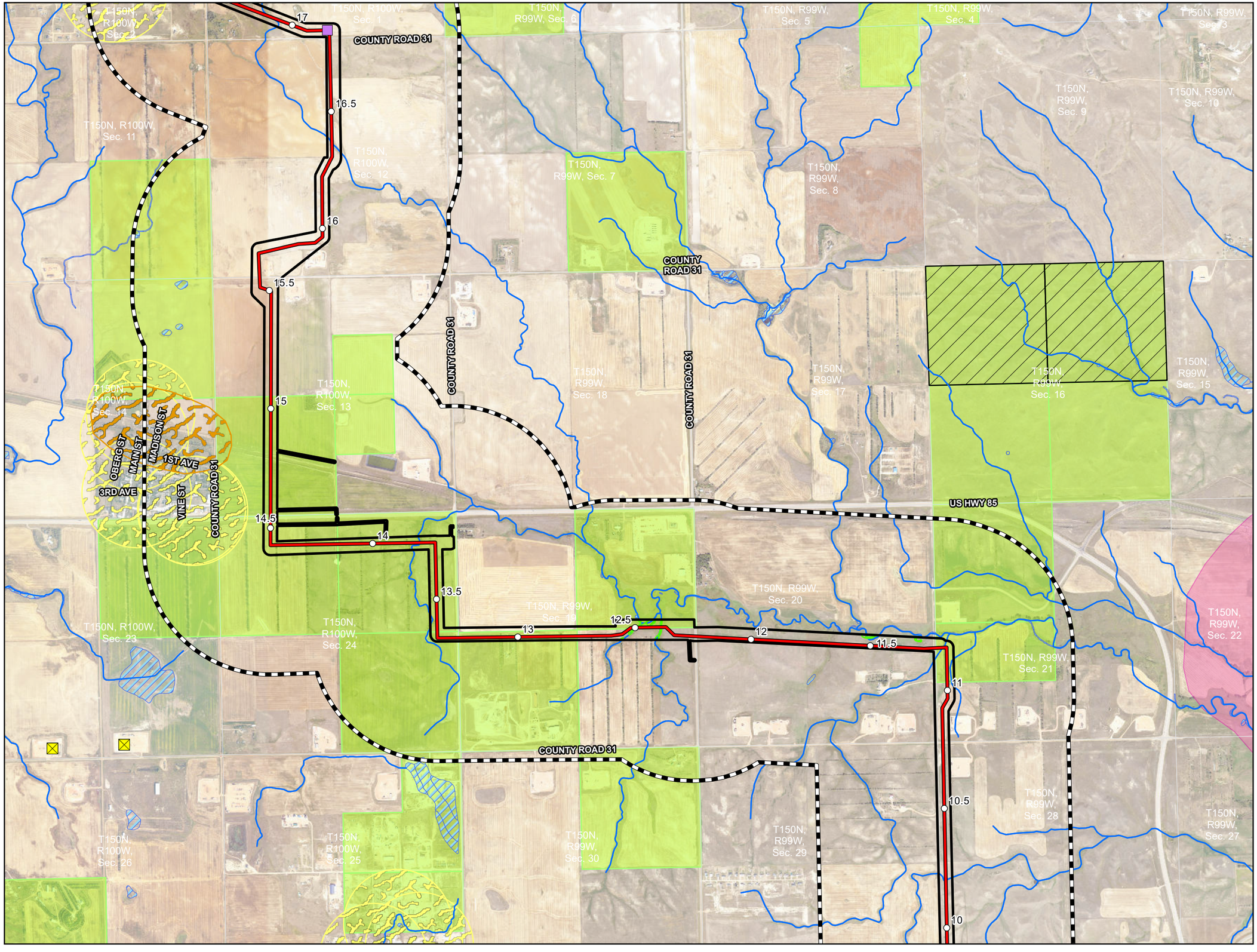
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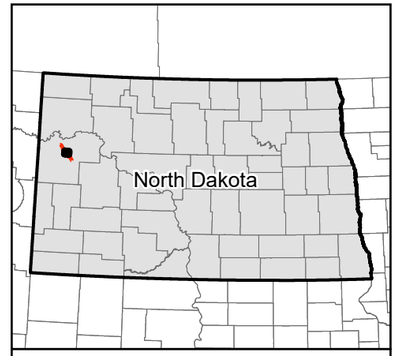
For Environmental Review Purposes Only

2/3/2025

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Date: (2/3/2025)





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Imagery Source: North Dakota NAIP Imagery 2017

N
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- Milepost
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- NDDTL - School Trust Land
- NDDTL - Mineral Trust Land
- Surficial Aquifer
- Wellhead Community Protection Area
- Wellhead Non-Community Protection Area
- Section Boundary
- County Boundary

Exhibit B.4
Hiland Crude, LLC
Hiland Express Spine Pipeline Project

Selection Criteria (Other) Maps

Page 3 of 5

McKenzie County, ND

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For Environmental Review Purposes Only

2/3/2025

Source: Z:\Clients\LLK\Kinder_Morgan\2024\Hiland_Express_10in_Spine_Pipeline\ArcGIS\Permitting\State\PSC\2024\10\Figures\Hiland_10in_Spine_PSC.aprx
Date: (2/3/2025)

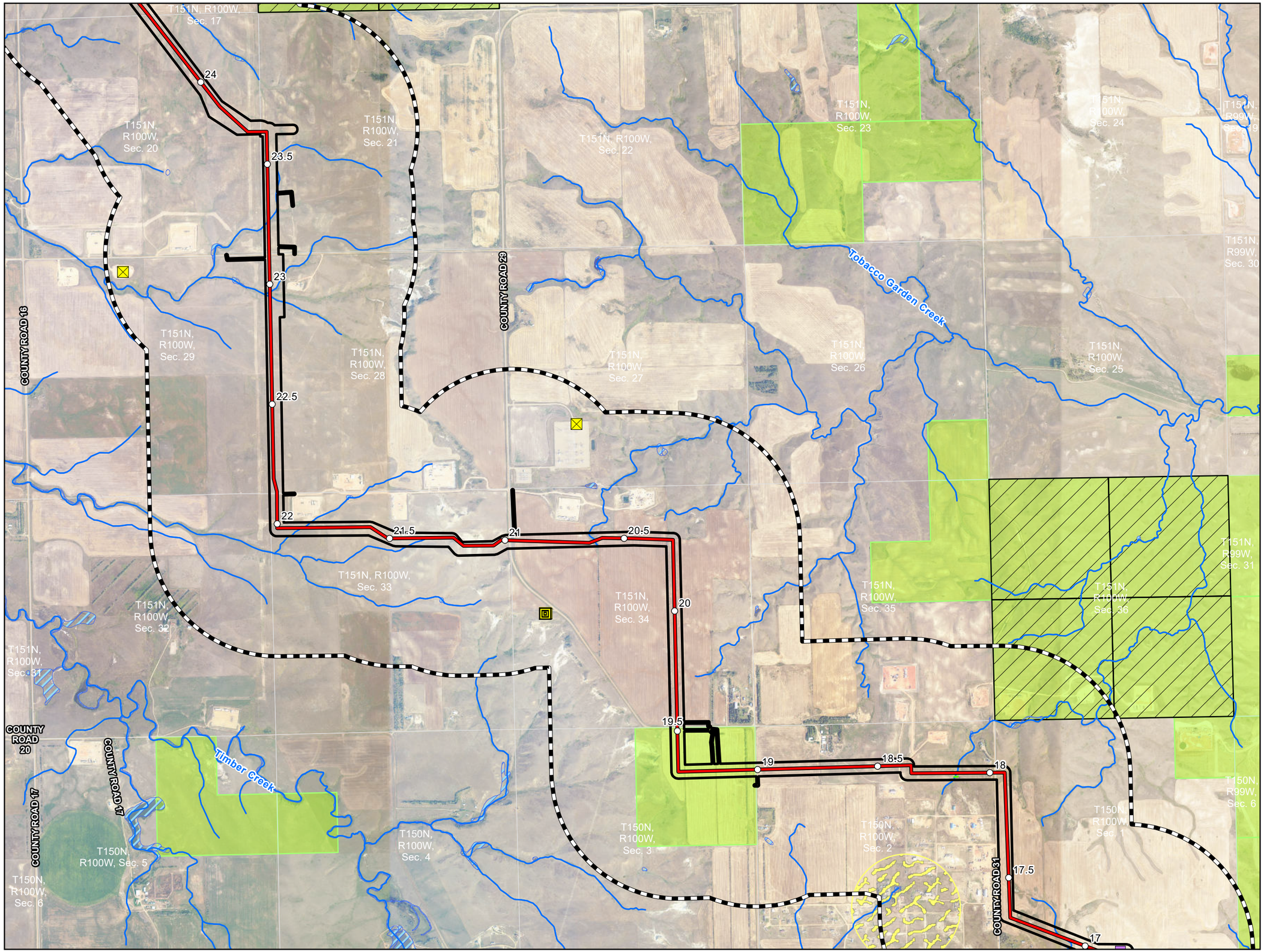


Exhibit B.4
Hiland Crude, LLC
Hiland Express Spine Pipeline Project

Selection Criteria (Other) Maps

McKenzie County, ND

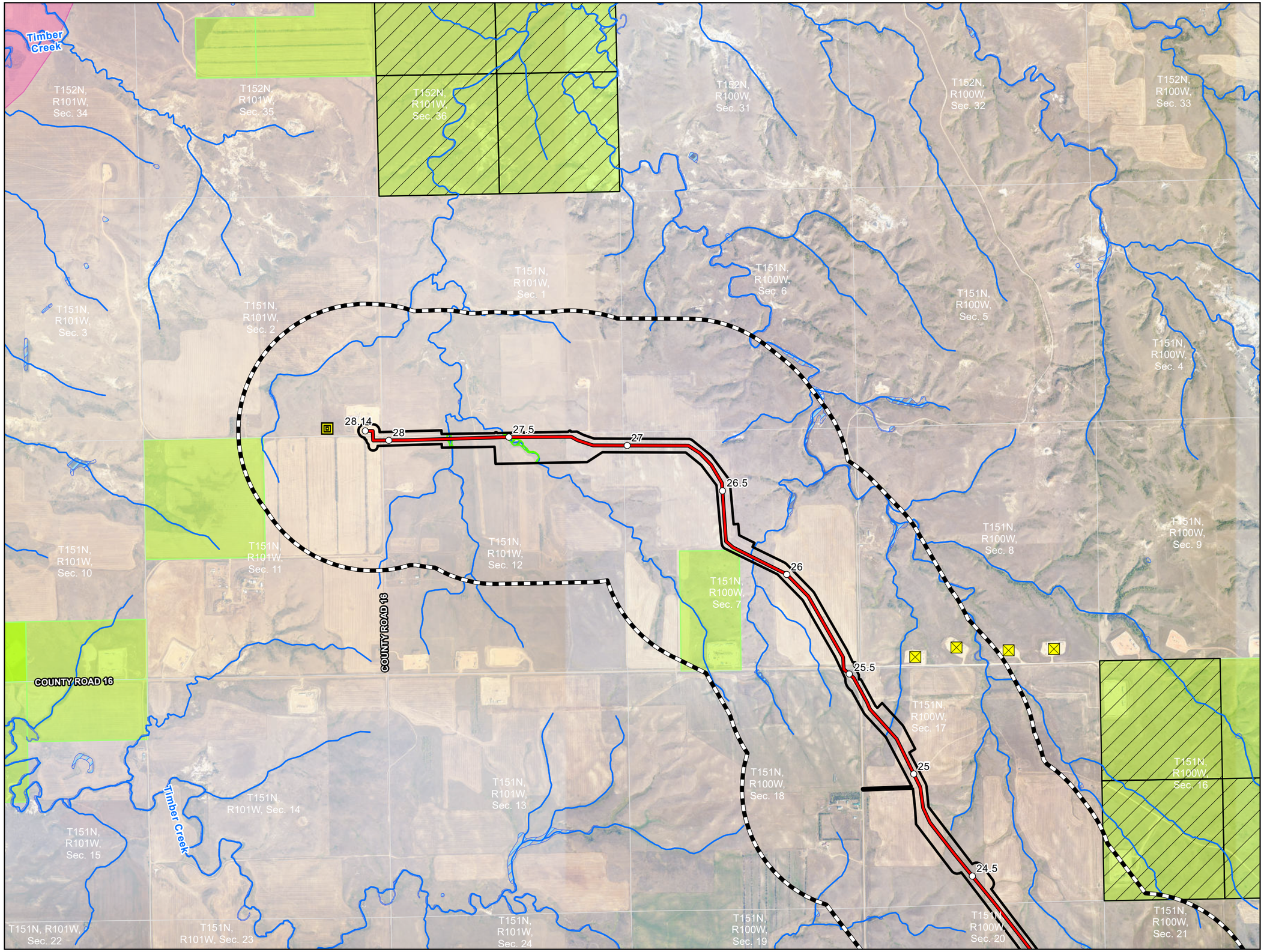
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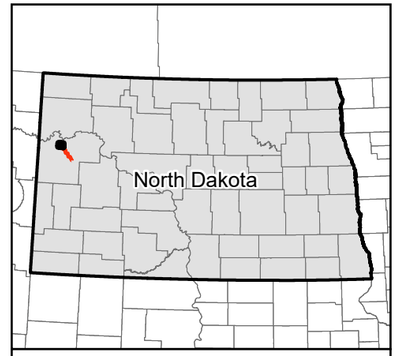
For Environmental Review Purposes Only

2/3/2025

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Date: (2/3/2025)





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Imagery Source: North Dakota NAIP Imagery 2017

N
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- Milepost
- Proposed Pipeline
- Project Corridor
- 1-mile Study Area
- Microwave Station
- Antenna Structure
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- NWI Wetland
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- NDDTL - Mineral Trust Land
- Surficial Aquifer
- Section Boundary
- County Boundary

Exhibit B.4
Hiland Crude, LLC
Hiland Express Spine Pipeline Project

Selection Criteria (Other) Maps

Page 5 of 5

McKenzie County, ND

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For Environmental Review Purposes Only

2/3/2025

Source: Z:\Clients_L\Kinder_Morgan\2024\Hiland_Express_10in_Spine_Pipeline\ArcGIS\Permitting\State\PSC\2024\10\Figures\Hiland_10in_Spine_PSC.aprx

Date: (2/3/2025)

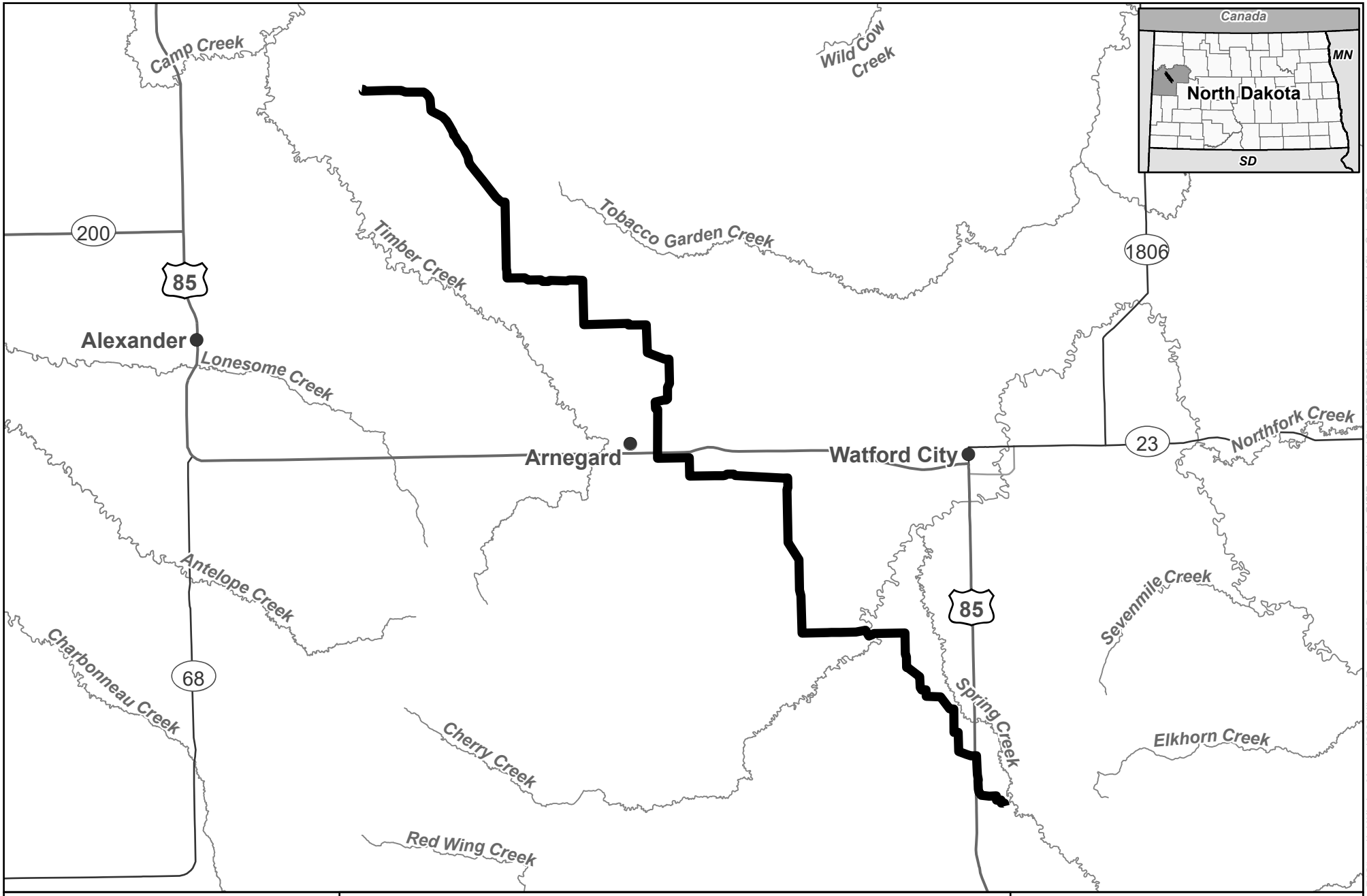

Camp Creek
Wild Cow Creek
Canada
MN
North Dakota
SD
200
85
Alexander
Timber Creek
Tobacco Garden Creek
1806
Lonesome Creek
Arnegard
Watford City
23
Northfork Creek
Antelope Creek
85
Sevenmile Creek
Charbonneau Creek
68
Spring Creek
Elkhorn Creek
Cherry Creek
Red Wing Creek
0 1.5 3
Miles
1:180,000
N
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For Environmental Review Purposes Only
Exhibit B.5
Hiland Crude, LLC
Hiland Express Spine Pipeline Project
Project Location Map
Preferred Route
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Date: (2/3/2025)

Exhibit C

Natural Resources Survey Report

Natural Resources Inventory Report for the Hiland Express Spine Pipeline Project McKenzie County, North Dakota



Prepared for:

Merjent

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January 8, 2025

WEST

Confidential Business Information

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REPORT REFERENCE

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ACRONYMS AND ABBREVIATIONS

Acronym	Definition
ac	acre
DASK	Dakota Skipper
DBH	diameter at breast height
ESA	Endangered Species Act
Final Rule	*Endangered and Threatened Wildlife and Plants; Endangered Species Status for Northern Long-Eared Bats; Final Rule*
ft	foot
IPaC	Information for Planning and Consultation
mi	mile
N	north
NLEB	Northern long-eared bat
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
PEMC	Palustrine emergent seasonally flooded
PLSS	Public Land Survey System
Project	Hiland Spine Pipeline Project
R	Range
ROW	Right-of-way
Sec.	Section
Survey Corridor	Area covered by field survey (1,190.16 acres)
T	Township
USACE	US Army Corps of Engineers
USEPA	US Environmental Protection Agency
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey
W	west
WEST	Western EcoSystems Technology, Inc.
WNS	White-nose syndrome

1.0 INTRODUCTION

Hiland Express (Hiland), a subsidiary of Kinder Morgan, proposes to construct the Hiland Express Spine Pipeline (Project). Western EcoSystems Technology, Inc. (WEST), was retained by Merjent to provide natural resource inventory services, which include the identification of waterbody/wetland boundaries, an evaluation of habitat for federally listed species, a line-of-sight raptor nest survey, a noxious weed inventory, and a tree and shrub inventory. The proposed Project is 28.14 mi long and located within McKenzie County, North Dakota. The Project starts at the Roosevelt Gas Processing Plant approximately eight miles (mi) south of Watford City, runs northwest, and terminates at the Camp Creek Injection Station approximately 15 mi northwest of Watford City (Figure 1). Table 1 identifies the Public Land Survey System Sections within which the Project is located.

Table 1. Legal descriptions of the Project's Centerline.

Section	Township	Range
2, 11, 12	151	101
7, 17, 18, 20, 21, 28, 33, 34	151	100
1, 2, 3, 12, 13, 24	150	100
19, 20, 21, 28, 33,	150	99
3, 4, 10, 11, 13, 14, 24	149	99
19, 30	149	98

Hiland considered multiple route alignments to minimize impacts to cultural and natural resources. The natural resources discussed in this report includes all areas surveyed for the Project. The Survey Corridor is 300 feet (ft) wide in most areas and contains 1190.16 acres (ac). The pedestrian field surveys took place from September 16 to September 18, 2024, on October 3, 2024, and on November 1, 2024.

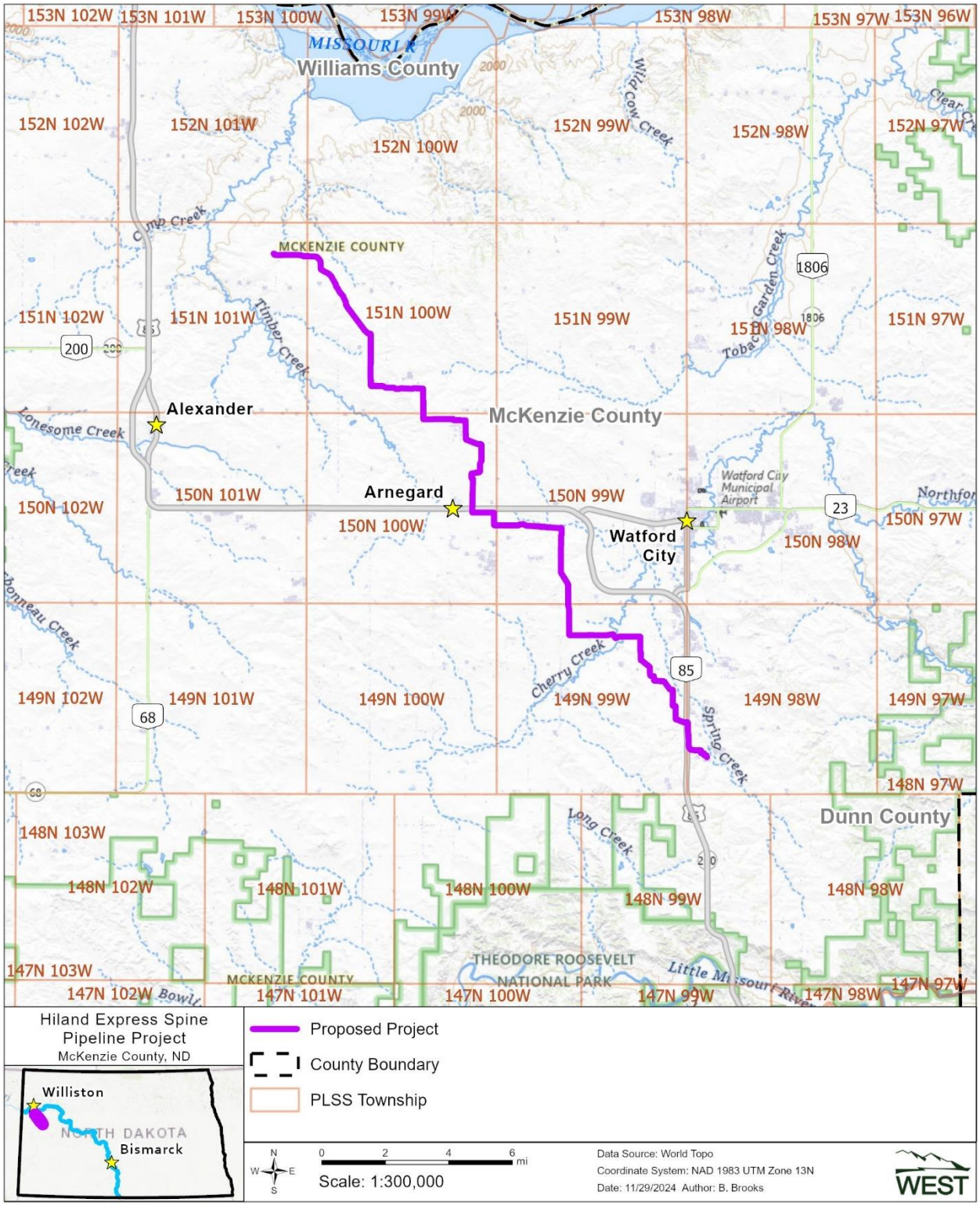


Figure 1. Location of the proposed Hiland Express Spine Pipeline.

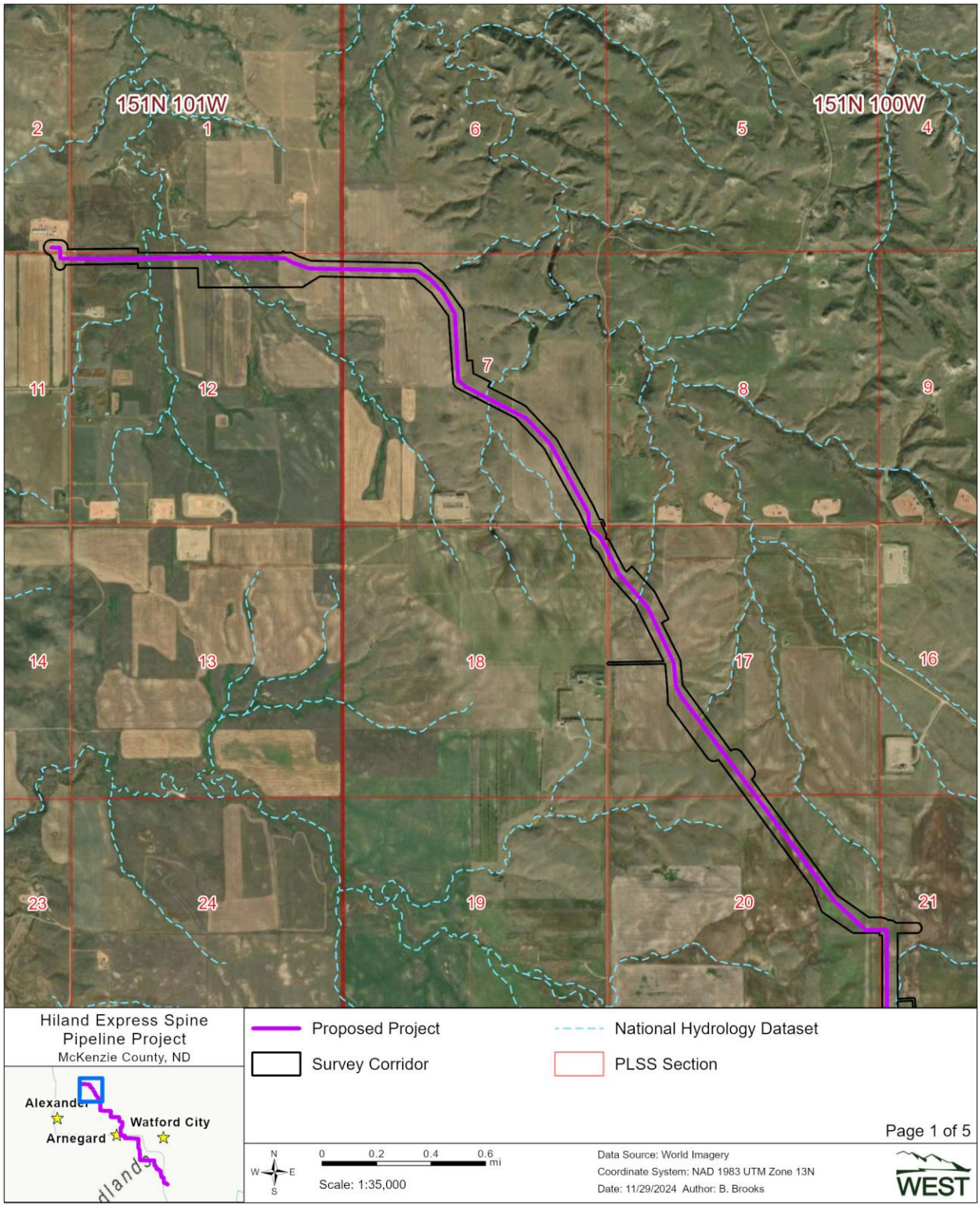


Figure 2. Detailed view of the proposed Hiland Express Spine Pipeline.

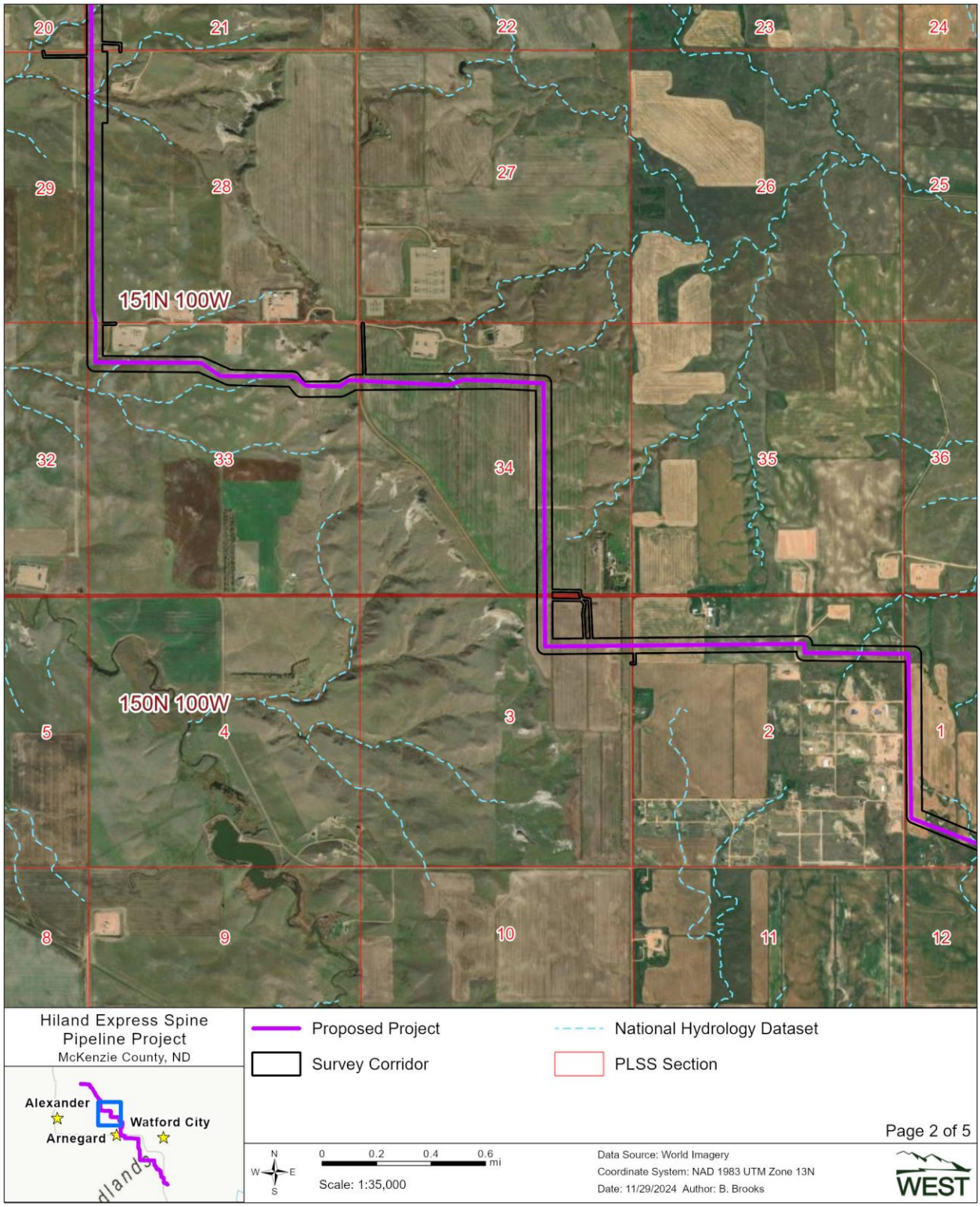


Figure 2 (Cont'd). Detailed view of the proposed Hiland Express Spine Pipeline.

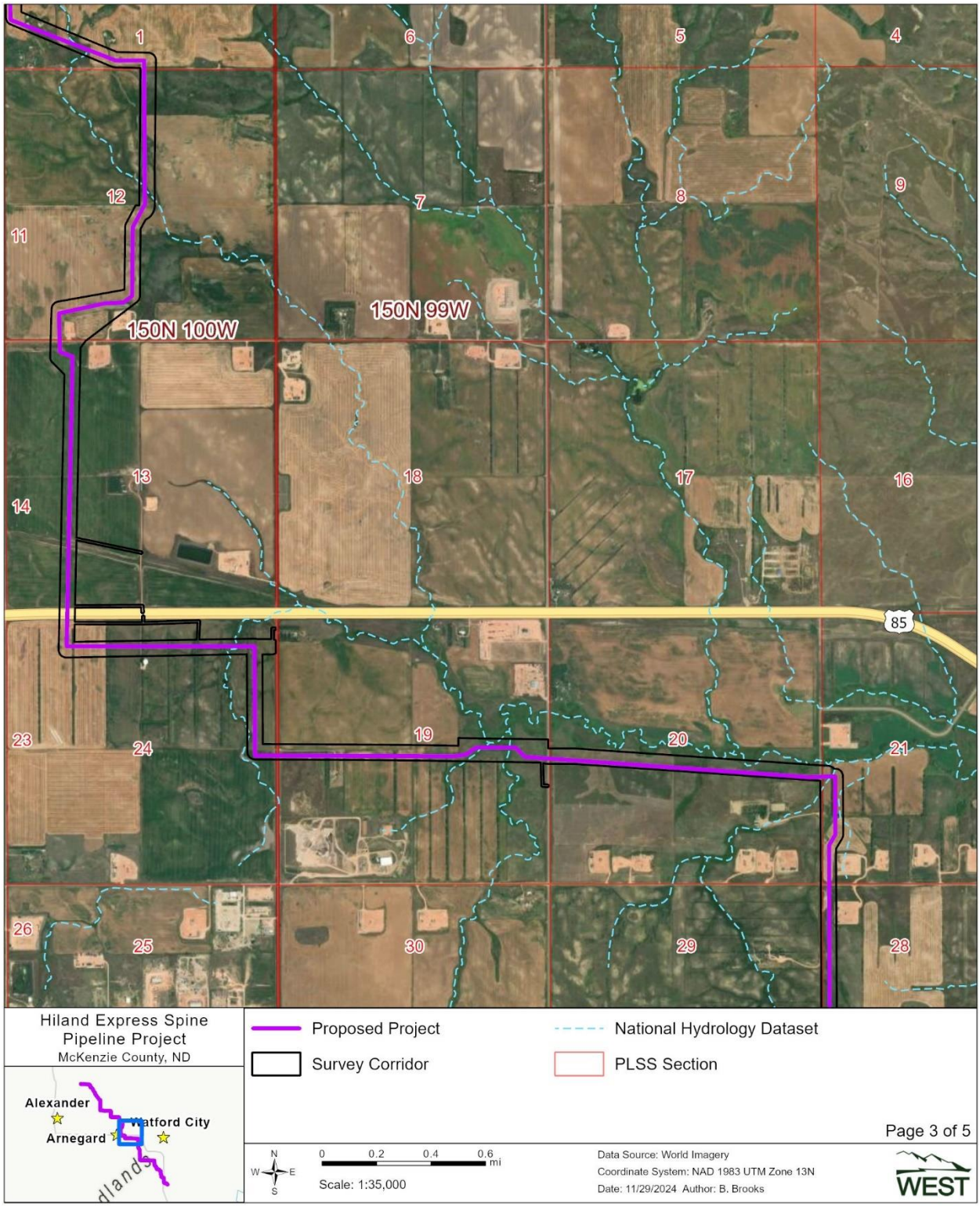


Figure 2 (Cont'd). Detailed view of the proposed Hiland Express Spine Pipeline.

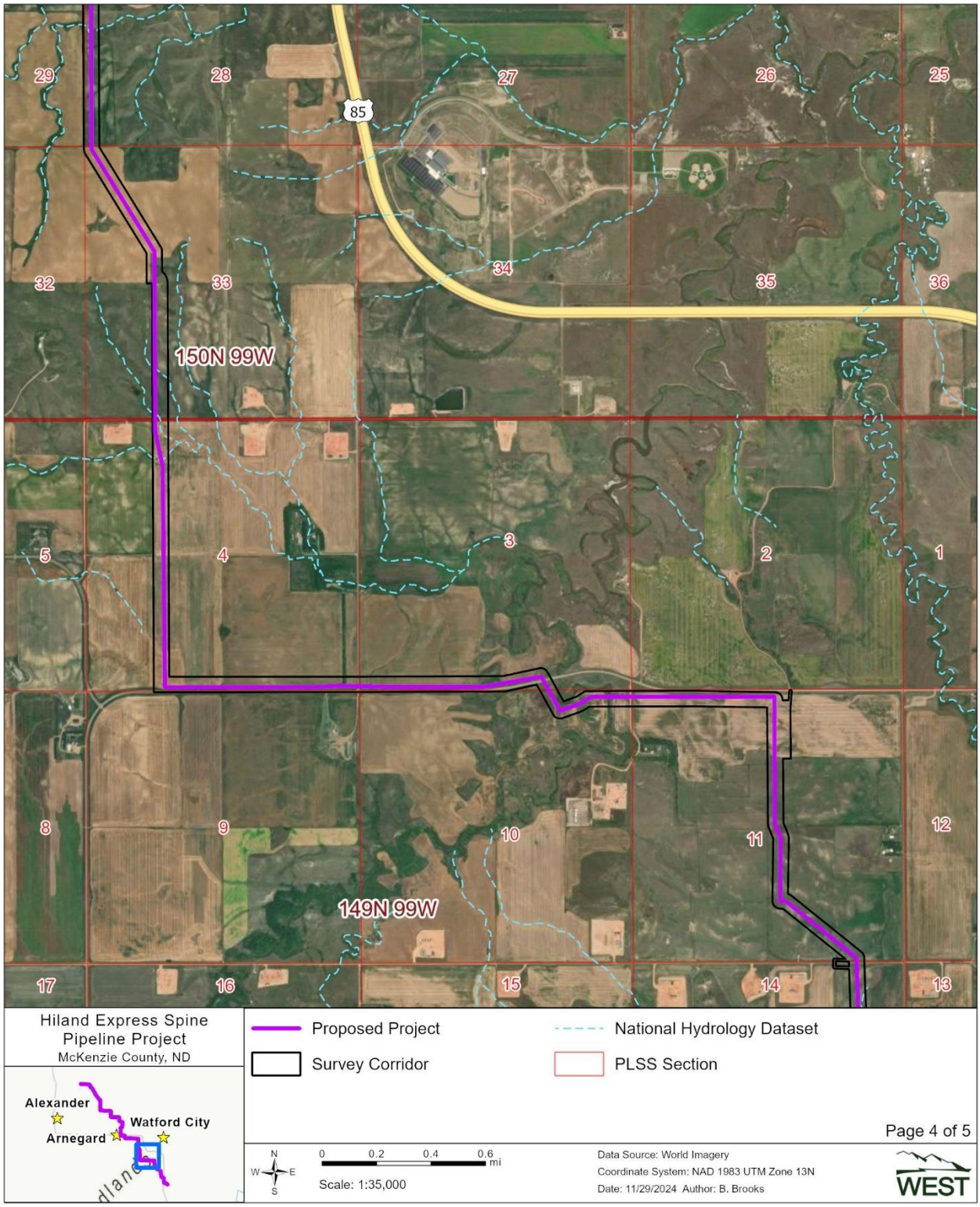


Figure 2 (Cont'd). Detailed view of the proposed Hiland Express Spine Pipeline.

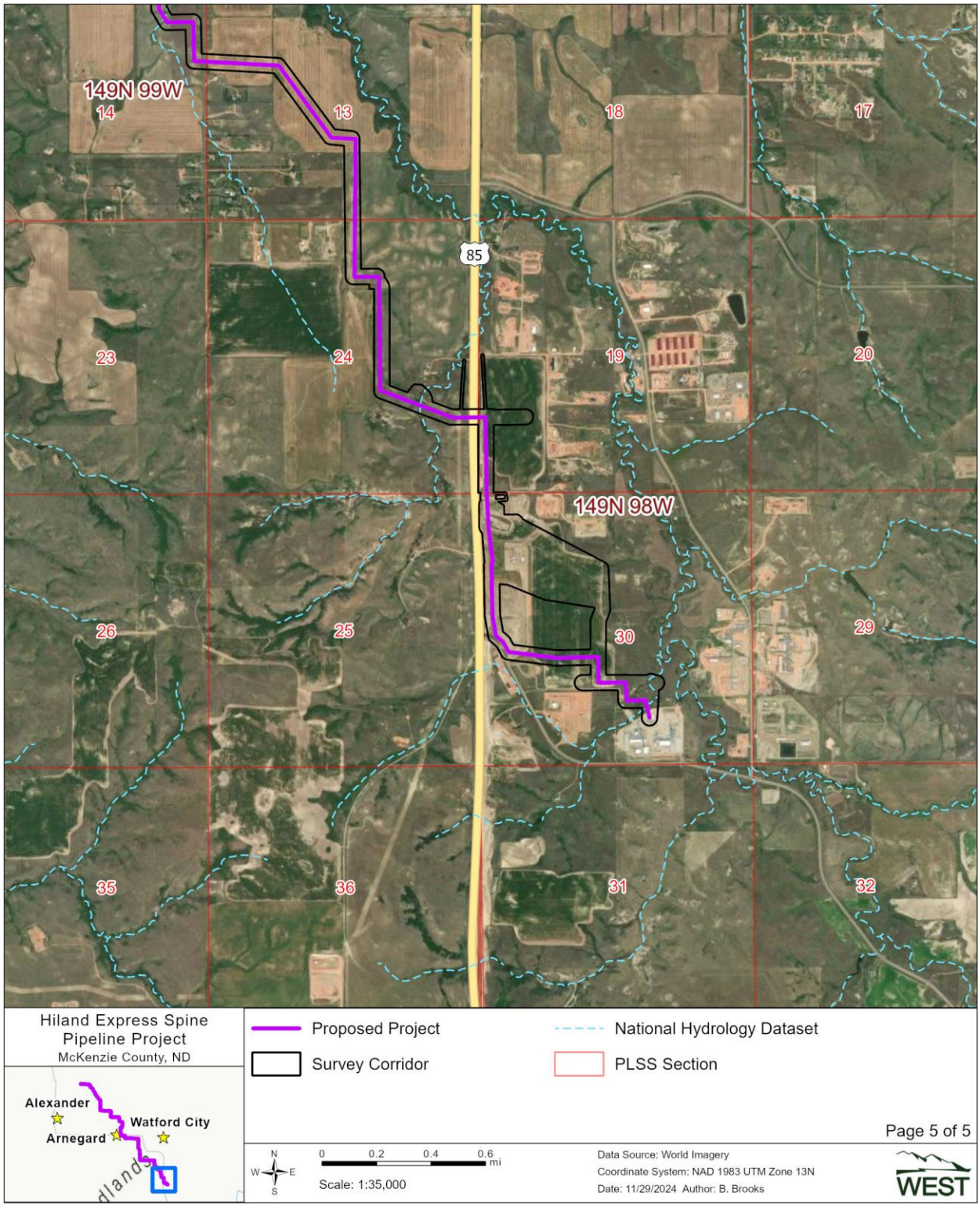


Figure 2 (Cont'd). Detailed view of the proposed Hiland Express Spine Pipeline.

2.0 PROCEDURES

2.1 Wetland and Waterbody Field Determination

Wetland identification utilized the presence of hydrophytic vegetation and landscape hydrology and/or topographic position. Wetland boundary mapping utilized US Army Corps of Engineers (USACE) guidance from the 1987 Corps of Engineers Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains (Version 2.0; USACE 2010). Waterbody boundaries were recorded utilizing the criteria and definitions provided by the USACE National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams – Interim Version (USACE 2022a) and revised definition of "Waters of the United States" (USEPA 2023). Wetlands and waterbodies were field classified in accordance with guidelines set forth in the Classification of Wetlands and Deepwater Habitats of the United States by the Federal Geographic Data Committee (2013). The following resources were reviewed prior to the wetland field determination to aid in identifying potential wetlands within the Survey Corridor: McKenzie County National Agriculture Imagery Program (NAIP) aerial photographs (US Geological Survey [USGS] 2023); US Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI; USFWS NWI 2021); USGS National Hydrography Dataset (USGS 2023); and the US Department of Agriculture Natural Resources Conservation Service (USDA NRCS) digital Web Soil Survey (USDA NRCS 2024). The vegetation within the area surveyed was characterized using the hydrophytic criteria outlined in the National Wetland Plant List (USACE 2022b).

A pre-survey review of the USFWS NWI database signatures within the Survey Corridor was conducted (USFWS NWI 2024). During the field survey, each signature within the Survey Corridor was investigated. Hydric and upland observation points were recorded at each wetland. Upland observation points were recorded at NWI signatures that do not meet wetland criteria. For each observation point, vegetation and hydrology characteristics were recorded on a USACE Great Plains Region data form. Soil data was not collected due to landowner negotiations and proximity to existing underground utilities. The data forms are included in Appendix A – USACE Wetland Determination Data Forms.

2.2 Federally Listed Wildlife Species Evaluation

The USFWS Information for Planning Consultation (IPaC) tool was used to review federally listed species that have the potential to be impacted by the Project (USFWS 2024c). The review also included the USFWS designated critical habitat for threatened and endangered species geospatial data (2023a), along with known range, reported occurrences, and habitat needs for each species. Table 2 identifies the federally listed species with the potential for occurrence within the Survey Corridor. Field evaluations were conducted from September 16 to September 18, 2024, on October 3, 2024, and on November 1, 2024, to confirm the presence or absence of potentially suitable habitat for federally listed species within the Project Survey Corridor. Background data was collected for preliminary review and to aid in the field inventory of biological resources.

Table 2. Federally listed threatened and endangered species.

Common Name	Scientific Name	Status
Northern long-eared bat	*Myotis septentrionalis*	Endangered
Whooping crane	*Grus americana*	Endangered
Dakota skipper	*Hesperia dacotae*	Threatened
Piping plover	*Charadrius melodus*	Threatened
Red knot (rufa)	*Calidris canutus rufa*	Threatened
Western regal fritillary	*Argynnis idalia occidentalis*	Proposed threatened
Monarch butterfly	*Danaus plexippus*	Proposed threatened

Source: US Fish and Wildlife Service 2024a

2.3 Nesting Raptor Survey

A 0.5-mi line-of-sight pedestrian survey from the Survey Corridor and publicly accessible roads for nesting raptors was conducted. The surveyors utilized 10x magnification binoculars to scan trees and wooded areas from either the Survey Corridor or public roads. The North Dakota Game and Fish Department's (NDGF) eagle nest database was also reviewed.

2.4 Noxious Weed Inventory

North Dakota has 13 state-listed noxious weed species. The McKenzie County Weed Control District lists four additional species as invasive (North Dakota Department of Agriculture 2024). Table 3 provides a list of noxious and/or invasive weed species listed for the Project.

Table 3. North Dakota State and Project County listed noxious and invasive weeds.

North Dakota State Listed Noxious Weeds		Project County Invasive Weeds	
Common Name	**Scientific Name**	**Common Name**	**Scientific Name**
Absinth wormwood	*Aremisia absinthium*	**McKenzie County**	
Canada thistle	*Cirsium arvense*	Baby's breath	*Gypsophila paniculata*
Dalmatian toadflax	*Linaria genistifolia*	Black henbane	*Hyoscyamus niger*
Diffuse knapweed	*Centaurea diffusa*	Common burdock	*Arctium minus*
Houndstongue	*Cynoglossum officinale*	Halogeton	*Halogeton glomeratus*
Leafy spurge	*Euphorbia esula*		
Musk thistle	*Carduus nutans*		
Palmer amaranth	*Amaranthus palmeri*		
Purple loosestrife	*Lythrum salicaria*		
Russian knapweed	*Acroptilon repens*		
Saltcedar	*Tamarix chinensis*		
Spotted knapweed	*Centaurea maculosa*		
Yellow toadflax	*Linaria vulgaris*		

2.5 Tree and Shrub Inventory

A tree and shrub inventory was conducted within the Survey Corridor, and included species considered non-native. The location, number, and species of each tree and shrub were documented for this inventory. Individual points were recorded for planted trees and shrubs. In dense native growth areas, a polygon around the tree/shrub patches was recorded, and sample

plots were used to extrapolate the numbers of individual plants. In areas of sparse native growth areas, points were taken to document trees and shrubs.

3.0 RESULTS

3.1 Wetlands

A pre-survey review of the USFWS NWI database identified eight wetlands within the Survey Corridor (USFWS NWI 2024). The classifications of these NWI signatures include one palustrine, aquatic bed, semi permanently flooded, impounded (PABFh) wetland; one palustrine, unconsolidated shore, temporarily flooded, impounded (PUSAh) wetland; four palustrine emergent, temporarily flooded (PEMA) wetlands; and two palustrine emergent, seasonally flooded (PEMC) wetlands.

The field survey identified 14 wetlands, covering 7.09 ac within the Survey Corridor. Thirteen of the wetlands were palustrine emergent seasonally flooded (PEMC) wetlands, and one wetland was classified as palustrine emergent, temporarily flooded (PEMA). Additionally, two of the NWI signatures were found to not exhibit wetland hydrology or contain hydric vegetation. Upland points were recorded at these sites to document that the features had been surveyed and lacked wetland characteristics. Such points were identified with an "UP" for upland and a datapoint number starting at 101 (e.g. UP-101, UP-102…). Attributes for the wetlands are listed in Table 4.

Table 4. Wetlands documented within the Survey Corridor.

Feature	Classification	Location	Acres
Wetland 01	PEMC	Sec. 12, T151N, R101W	0.48
Wetland 02	PEMC	Sec. 12, T151N, R101W	1.35
Wetland 03	PEMC	Sec. 24, T149N, R99W	0.63
Wetland 04	PEMA	Sec. 2, T150N, R100W	0.02
Wetland 05	PEMC	Sec. 19, T150N, R99W	0.05
Wetland 06	PEMC	Sec. 19, T150N, R99W	1.15
Wetland 07	PEMC	Sec. 19, T150N, R99W	0.41
Wetland 08	PEMC	Sec. 20, T150N, R99W	<0.01
Wetland 09	PEMC	Sec. 20, T150N, R99W	0.28
Wetland 10	PEMC	Sec. 20, T150N, R99W	0.10
Wetland 11	PEMC	Sec. 3, T149N, R99W	0.12
Wetland 12	PEMC	Sec. 10, T149N, R99W	0.55
Wetland 13	PEMC	Sec. 30, T149N, R98W	1.42
Wetland 14	PEMC	Sec. 30, T149N, R98W	0.53
		Total	**7.09**

N = North, R = Range; Sec = Section; T = Township; W = West.

USACE Great Plains Region data forms are included in Appendix A. The recorded wetland features and observation points are depicted in Appendix B.

3.2 Waterbodies

The pre-survey review of the USFWS NWI database indicated no features with lake or freshwater pond attributes, but riverine signatures cross through the Survey Corridor 26 times. One of these signatures is classified as R5 (Cherry Creek - perennial), and the remaining signatures are classified as R4 (intermittent).

The field survey identified two waterbodies (Cherry Creek) covering 0.47 ac within the Survey Corridor. Attributes for the waterbodies are listed in Table 5.

Table 5. Waterbodies documented within the Survey Corridor

Feature	Name	Classification	Location	Acres	Ordinary High Water Mark Crossing Width (feet at Centerline)
S-01	Cherry Creek	Perennial	Sec. 10, T149N, R99W	0.33	N/A
S-02	Cherry Creek	Perennial	Sec. 10, T149N, R99W	0.14	19.33
			Total	**0.47**	

N = North, R = Range; Sec = Section; T = Township; W = West.

Additionally, 24 of the riverine signatures were found to not contain waterbodies. Upland points were recorded at these sites to document that the features had been surveyed. Such points were identified with an "UP" for upland and a datapoint number starting at 101 (e.g. UP-101, UP-102…). The recorded waterbody features and observation points are depicted in Appendix B.

3.3 Threatened and Endangered Species Habitat Assessment

Threatened and endangered species that have been documented and/or that have the potential to occur within the Survey Corridor are listed in Table 2 (USFWS 2023a, 2024b, 2024c). A review of USFWS species information datasets, along with habitat data gathered from the field surveys, were used to aid in the determinations. Threatened and endangered species information gathered from the review is documented below in the species discussions.

During the field surveys, no federally listed species were observed. Numerous treed areas (more than three inches [in.] diameter at breast height [DBH]) with the potential to provide summer roosting habitat for the northern long-eared bat were documented. Numerous patches of potential habitat for the Dakota skipper and western regal fritillary were recorded as well.

3.3.1 Northern Long-eared Bat

The northern long-eared bat (*Myotis septentrionalis*) is a forest-dwelling mammal. The home range of the northern long-eared bat (NLEB) is approximately 150 ac, including a summer and winter habitat. In the summer, NLEB roost under bark or in crevices of trees, preferring to roost in tall trees with greater than three inches (in.; eight centimeters [cm]) DBH and under the exfoliating bark of dead or dying trees. In the winter, NLEB hibernate in caves and mines. The NLEB prefers foraging in edge habitats and forests comprising trees with a diversity of life stages (USFWS 2014a).

Occurrences of the NLEB are uncertain in North Dakota. White-nose syndrome (WNS) currently remains the predominant threat to NLEB. North Dakota is included in the current extent of WNS zone per the *Endangered and Threatened Wildlife and Plants; Endangered Species Status for Northern Long-Eared Bat; Final Rule* (Final Rule; 88 Federal Register [FR] 4908 [January 26, 2023]; USFWS 2023b). With the Final Rule reclassifying the NLEB as endangered, incidental take of the species is prohibited. To avoid incidental take, it is recommended to conduct tree clearing activities between November 1 and April 14 when bats have either migrated or are hibernating in underground caves (USFWS 2024e).

Twenty-seven patches, totaling 11.64 ac, of potential habitat for the northern long-eared bat in the form of trees are present within the Survey Corridor. A portion of the USFWS known range is crossed by the Project (Figure 3) at Cherry Creek; however, the field survey did not identify any trees at this location. No habitat for the northern long-eared bat in the form of a hibernacula is present within the Survey Corridor. Table 6 lists the attributes of the habitat polygons, and Appendix B shows the locations of the potential habitat identified during the field survey.

Table 6. Northern long-eared bat habitat within the Survey Corridor.

Name	Location	Acres
NLEB 1	Sec. 11, T151N, R101W	0.01
NLEB 2	Sec. 12, T151N, R101W	1.54
NLEB 3	Sec. 12, T151N, R101W	0.06
NLEB 4	Sec. 34, T151, R100W	1.82
NLEB 5	Sec. 34, T151, R100W	0.03
NLEB 6	Sec. 34, T151, R100W	1.09
NLEB 7	Sec. 34, T151, R100W	0.02
NLEB 8	Sec. 3, T150N, R100W	0.39
NLEB 9	Sec. 24, T150N, R100W	0.54
NLEB 10	Sec. 24, T150N, R100W	0.33
NLEB 11	Sec. 24, T150N, R100W	0.25
NLEB 12	Sec. 24, T150N, R100W	0.20
NLEB 13	Sec. 24, T150N, R100W	0.26
NLEB 14	Sec. 24, T150N, R100W	1.17
NLEB 15	Sec. 24, T150N, R100W	1.41
NLEB 16	Sec. 24, T150N, R100W	0.27
NLEB 17	Sec. 19, T150N, R99W	0.26
NLEB 18	Sec. 19, T150N, R99W	0.08
NLEB 19	Sec. 19, T150N, R99W	0.15
NLEB 20	Sec. 19, T150N, R99W	0.08
NLEB 21	Sec. 19, T150N, R99W	0.02
NLEB 22	Sec. 19, T150N, R99W	0.02
NLEB 23	Sec. 19, T150N, R99W	0.09
NLEB 24	Sec. 21, T151N, R88W	<0.01
NLEB 25	Sec. 19, T150N, R99W	0.15
NLEB 26	Sec. 21, T150N, R99W	1.05
NLEB 27	Sec. 4, T149N, R99W	0.35
	Total	**11.64**

N = North, R = Range; Sec = Section; T = Township; W = West.

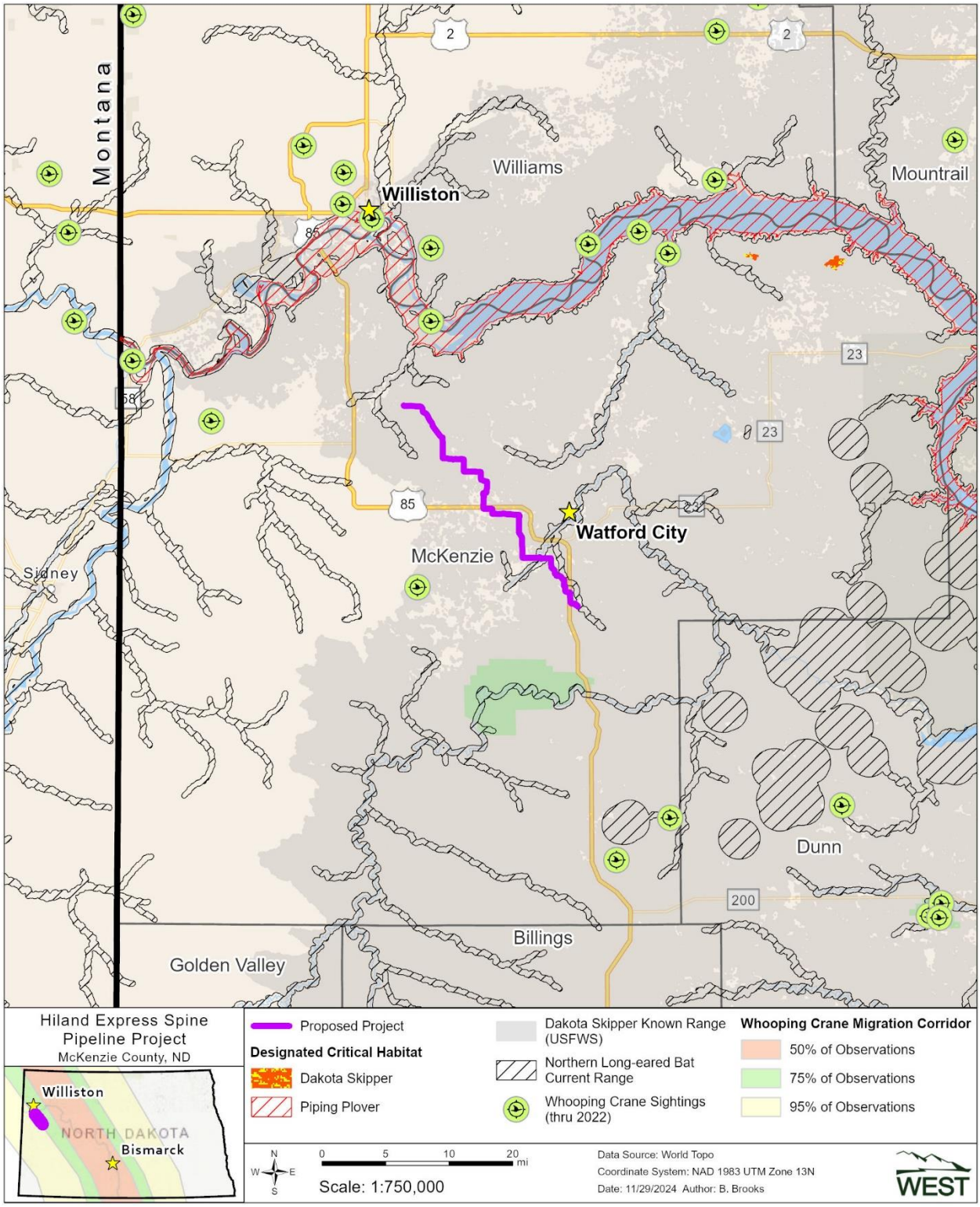


Figure 3. Known sightings, species range, and designated critical habitats in relation to the proposed Hiland Express Spine Pipeline.

3.3.2 Whooping Crane

The primary nesting area for the whooping crane (*Grus americana*) is in Canada's Wood Buffalo National Park. Aransas National Wildlife Refuge in Texas is the primary wintering area for whooping cranes. In the spring and fall, the cranes migrate, primarily along the Central Flyway. During the migration, whooping cranes make numerous stops, roosting in relatively large, shallow marshes and feeding and loafing in harvested grain fields. The primary threats to whooping cranes are power lines, illegal hunting, and habitat loss (USFWS 2023c).

The whooping crane is federally listed and has the potential to occur in all counties of North Dakota. The Project is located within the migration corridor where 50-75% of whooping cranes travel. Land use within the Project is a mixture of cropland and rangeland. The USFWS Database (USFWS 2022) shows McKenzie County has nine verified whooping crane sightings. The closest confirmed sighting to the Project was of eight adult cranes in 1962, 6.7 mi north of the Project in Sec. 5, T152N, R100W. The sighting locations are depicted on Figure 3. The wetlands and agriculture fields within the Survey Corridor could potentially be used for foraging and loafing by migrating whooping cranes.

3.3.3 Dakota Skipper

The Dakota skipper (*Hesperia dacotae*), a prairie obligate species, requires nectar-producing native flowers and native grasses. Historically, Dakota skippers (DASK) have been associated with relatively low, wet, prairie-dominated, high-quality, tall grass prairie habitat (Type A habitat). Researchers have found that DASK also use upland mixed-grass prairie that is relatively dry and includes ridges and hillsides (Type B habitat; USFWS 2013a). These habitats often have small inclusions of areas with species more commonly typified with tall grass prairie. Larvae require grass components of mixed-grass prairie that include bluestem grasses (*Andropogon* spp.) and needlegrasses, while adults require nectar sources; therefore, suitable prairie must include nectar-producing forbs. These forbs may include purple coneflower (*Echinacea purpurea*), blue bells (*Campanula rotundifolia*), blanket flower (*Gaillardia aristata*), wood lily (*Lilium philadelphicum*), or other species that are in bloom during the adult life cycle of the DASK (Dana 1991). The nearest USFWS designated critical habitat for the DASK is located approximately 27 mi northeast of the Project (Figure 3). The species is known to occur in McKenzie County, and the Project is within the USFWS's known range of the DASK (USFWS 2023a).

A desktop assessment of habitat within the Survey Corridor was used to divide habitat into one of two basic habitat groups: grassland habitat and unsuitable habitat. The assessment identified 297.65 ac (25%) of grassland habitat and 892.53 ac (75%) of unsuitable habitat. The field survey was conducted within the identified grassland habitat to determine if suitable habitat was present. Suitable habitat is defined as native grassland that contains one or more primary constituent elements for the skipper to complete its entire life cycle, including breeding, feeding/foraging, and sheltering behaviors (USFWS 2023d).

Table 7. Dakota skipper and regal fritillary habitat within the Survey Corridor.

Feature	Name	Location	Acres
Dakota Skipper and Regal Fritillary Habitat	DASK RF 1	Sec. 7, T151N, R100W	0.19
Dakota Skipper and Regal Fritillary Habitat	DASK RF 2	Sec. 7, T151N, R100W	0.02
Dakota Skipper within Regal Fritillary Habitat	DASK RF 3	Sec. 17, T151N, R100W	0.11
Dakota Skipper within Regal Fritillary Habitat	DASK RF 4	Sec. 17, T151N, R100W	0.07
Dakota Skipper within Regal Fritillary Habitat	DASK RF 5	Sec. 28, T151N, R100W	0.09
Dakota Skipper within Regal Fritillary Habitat	DASK RF 6	Sec. 28, T151N, R100W	0.12
Dakota Skipper within Regal Fritillary Habitat	DASK RF 7	Sec. 12, T150N, R100W	0.04
Dakota Skipper and Regal Fritillary Habitat	DASK RF 8	Sec. 33, T150N, R99W	0.66
Dakota Skipper and Regal Fritillary Habitat	DASK RF 9	Sec. 30, T149N, R98W	0.10
Regal Fritillary Habitat	RF 1	Sec. 7, T151N, R100W	0.54
Regal Fritillary Habitat	RF 2	Sec. 17, T151N, R100W	0.45
Regal Fritillary Habitat	RF 3	Sec. 17, T151N, R100W	0.28
Regal Fritillary Habitat	RF 4	Sec. 17, T151N, R100W	1.73
Regal Fritillary Habitat	RF 5	Sec. 17, T151N, R100W	1.30
Regal Fritillary Habitat	RF 6	Sec. 17, T151N, R100W	1.49
Regal Fritillary Habitat	RF 7	Sec. 28, T151N, R100W	0.99
Regal Fritillary Habitat	RF 8	Sec. 28, T151N, R100W	0.22
Regal Fritillary Habitat	RF 9	Sec. 12, T150N, R100W	0.76
Regal Fritillary Habitat	RF 10	Sec. 28, T150N, R99W	2.37

N = North, R = Range; Sec = Section; T = Township; W = West.

The field survey identified 11.53 ac of native prairie within the Survey Corridor with nine patches, totaling 1.39 ac, qualifying as suitable habitat for the Dakota skipper. These habitat patches were dominated by native species including little bluestem (*Schizachyrium scoparium*) and needle and thread grass (*Hesperostipa comata*). Native forbs present included purple coneflower (*Echinacea angustifolia*) and fringed sagewort (*Artemisia frigida*). Table 7 lists the attributes of the habitat polygons, and Appendix B shows the locations of the habitat.

3.3.4 Piping Plover

The piping plover (*Charadrius melodus*) is a migratory shorebird that breeds in North Dakota. Suitable nesting habitat for piping plovers includes alkaline wetlands and the shoreline of the Missouri River system; this habitat has been characterized as sparsely vegetated channel sandbars, sand and gravel beaches on islands, temporary pools on sandbars and islands, and island margins that interface with the river channel. The piping plover feeds on worms, insects, and mollusks. The decline of piping plover populations is due to the loss of habitat from river impoundment(s), as well as the degradation of habitat related to the channelization river systems, nest predation, and human disturbance (USFWS 1985).

Critical habitat for the Northern Great Plains piping plover has been designated on alkali lakes and wetlands, the Yellowstone River, and Missouri River in North Dakota. The physical and biological features that are essential to the conservation of the species, referred to as the primary constituent elements, require special consideration for protection. These features include sparsely vegetated alkaline wetlands, sand and gravel beaches on islands, temporary pools on sandbars and islands, and island margins that interface with the river channel. The northern portion of the Project is 4.2 mi from the nearest critical habitat, the Missouri River (Figure 3). The

field survey documented that the Survey Corridor is predominantly cropland and rangeland containing wetlands that are well vegetated and do not provide bare ground suitable for nesting habitat.

3.3.5 Rufa Red Knot

The red knot (*Calidris canutus*) is a shorebird that breeds in the central Canadian Arctic, with primary breeding grounds in Nunavut Territory, but some potential breeding habitat extending into the Northwest Territories (USFWS 2013b). The rufa red knot (*C, canutus rufa*) winters along the Atlantic coasts of Argentina and Chile (particularly the island of Tierra del Fuego), the north coast of Brazil, and further north into Mexico and the southeast United States (USFWS 2014b). During migration, the rufa red knot primarily follows the Atlantic coastline to and from breeding and wintering grounds. However, geolocator results from red knots wintering in Texas showed that a comparatively small population of birds migrate using the Central Flyway across the Midwestern US and may have a northern Great Plains stopover (USFWS 2013b). Rufa red knots spend two to three months annually on the breeding grounds located in northern Canada.

Red knots are specialized molluscivores, feeding primarily on hard-shelled mollusks in relatively soft, wet sand/sediment (USFWS 2014b). In addition to mollusks, red knots may feed upon shrimp, crabs, marine worms, horseshoe crab (*Limulus* spp.) eggs, and other similar invertebrates. On the breeding grounds, rufa red knots feed mostly on terrestrial invertebrates and grass shoots and seeds (USFWS 2013b).

The shoreline of the Missouri River provides stopover habitat for red knots utilizing a midcontinental migratory route during annual migrations. However, the species is rare and is not reported in North Dakota every year. Reported historical sightings since 1900 (Igl 2015) are primarily composed of single individuals or relatively small flocks; however, on rare occasions, larger flocks have been reported. Many of these sightings have been made in the prairie pothole region during the spring migration in late April through May. An increase in future sightings may result from an increase in public awareness.

The red knot migrates twice annually from its breeding grounds in the Artic to wintering habitat in southern climates. It does not nest in North Dakota but may use areas along the Missouri River as stopover habitat. The northern portion of the Project is 4.2 mi from the Missouri River. The Survey Corridor does not contain suitable shoreline stopover habitat for the rufa red knot.

3.3.6 Western Regal Fritillary

The USFWS has proposed that the western regal fritillary (*Argynnis idalia occidentalis*) be listed as threatened under the Endangered Species Act (ESA). The species is found in 14 states, including North Dakota, and most of the Survey Corridor lies within the USFWS's known range for the species (USFWS, 2024b).

Designation of critical habitat is not yet determined. The species utilizes native grasslands with tall vegetation and flowering plants. Violet species (*Viola spp*.) are the sole food source for

western regal fritillary larvae and are therefore a key component of larval habitat. (USFWS 2024a).

The field survey was conducted within identified grassland habitat to determine if suitable habitat for the western regal fritillary was present. For the purpose of this survey, suitable habitat was defined as native species dominated grasslands containing flowering species. The field survey identified 19 patches, totaling 11.53 ac, of native prairie qualifying as regal fritillary habitat within the Survey Corridor. These potential western regal fritillary habitat patches lack the requisite plant species to be considered Dakota skipper habitat. Table 7 lists the attributes of the habitat polygons, and Appendix B shows the locations of the habitat.

The remaining grassland areas within the Survey Corridor identified as unsuitable habitat were dominated by non-native grasses, primarily smooth brome (*Bromus inermis*).

3.3.7 Monarch Butterfly

The monarch butterfly (*Danaus plexippus*) is currently proposed to be listed as threatened under the ESA. A public comment period is open from December 12, 2024, to March 12, 2025. The ESA final rule is expected to be issued within 12 months of the end of the public comment period. Protections would not apply until the effective date of the final rule.

The species occurs throughout the Great Plains and much of North America. Monarchs prefer open habitats with flowering plants and lay their eggs exclusively on milkweeds (*Asclepias* spp.), which the larvae feed on until pupation (U.S. Forest Service [USFS] 2021). Monarch butterflies will breed in North Dakota during the summer and migrate south to Mexico for the winter; eventually, the butterflies will make their way back to North Dakota during spring migration. Suitable habitat, upland grassland habitat with flowering species, was observed during the field survey. The desktop analysis found that 297.65 ac (25%) of the Survey Corridor is grassland habitat. Much of the herbaceous habitat is rangeland used for livestock grazing or grasslands in roadside ditches. Due to the presence of suitable habitat, it is possible for this species to occur within the Survey Corridor.

3.4 Nesting Raptor Survey

No raptor nests were documented during the line-of-sight field survey. There are no bald or golden eagle nests in the NDGF database within 0.5 miles of the Project (NDGF 2024).

3.5 Noxious Weed Inventory

A pedestrian survey of the Survey Corridor was conducted for state and county listed noxious weeds. Nineteen patches of Canada thistle (*Cirsium arvense*), totaling 4.23 ac, were recorded in the Survey Corridor. Noxious weed attributes are listed in Table 8 and depicted in Appendix B.

Table 8. Noxious weeds documented within the Survey Corridor.

Name	Location	Species	Acres
Weed 1	Sec. 12, T151N, R101W	Canada thistle	0.11
Weed 2	Sec. 12, T151N, R101W	Canada thistle	0.04

Name	Location	Species	Acres
Weed 3	Sec. 12, T151N, R101W	Canada thistle	0.09
Weed 4	Sec. 34, T151N, R100W	Canada thistle	0.04
Weed 5	Sec. 31, T150N, R100W	Canada thistle	0.04
Weed 6	Sec. 31, T150N, R100W	Canada thistle	0.06
Weed 7	Sec. 31, T150N, R100W	Canada thistle	0.19
Weed 8	Sec. 2, T150N, R100W	Canada thistle	0.02
Weed 9	Sec. 19, T150N, R99W	Canada thistle	0.03
Weed 10	Sec. 19, T150N, R99W	Canada thistle	0.61
Weed 11	Sec. 19, T150N, R99W	Canada thistle	0.72
Weed 12	Sec. 19, T150N, R99W	Canada thistle	0.51
Weed 13	Sec. 19, T150N, R99W	Canada thistle	0.23
Weed 14	Sec. 20, T150N, R99W	Canada thistle	0.45
Weed 15	Sec. 21, T150N, R99W	Canada thistle	0.01
Weed 16	Sec. 3, T149N, R99W	Canada thistle	0.44
Weed 17	Sec. 3, T149N, R99W	Canada thistle	0.31
Weed 18	Sec. 10, T149N, R99W	Canada thistle	0.27
Weed 19	Sec. 10, T149N, R99W	Canada thistle	0.06
		Total	**4.23**

N = North, R = Range; Sec = Section; T = Township; W = West.

3.6 Tree and Shrub Inventory

The inventory documented 1,235 trees and 2,120 shrubs in total. The non-native Siberian elm (*Ulmus pumila*) was the most common tree species at 669 stems. The non-native Russian olive (*Elaeagnus angustifolia*) was the next most common tree species at 260 stems. Other tree species documented included peach leaf willow (*Salix amygdaloides*) at 96 stems, green ash (*Fraxinus pennsylvanica*) at 39 stems, ponderosa pine (*Pinus ponderosa*) at 21 stems, and crab apple (*Malus spp.*) at one stem. Table 9 summarizes the tree data, and Appendix C contains the point and polygon attributes. Locations of the identified trees and shrubs are displayed Appendix B.

Table 9. Results of tree inventory.

Species	Status	Count
Crab apple	Non-native	1
Green ash	Native	39
Peach leaf willow	Native	96
Ponderosa pine	Non-native	21
Russian olive	Non-native	260
Siberian elm	Non-native	818
	Total	**1,235**

The native silver buffaloberry (*Shepherdia argentea*) was the most common shrub species at 1,218 stems. The non-native Siberian peashrub (*Caragana arborescens*) was the next most common shrub species at 540 stems. Other shrub species documented included chokecherry (*Prunus virginiana*) at 249 stems, Tatarian honeysuckle (*Lonicera tatarica*) at 91 stems, silverberry (*Elaeagnus commutata*) at 17 stems, Wood's wild rose (*Rosa woodsii*) at four stems, and fragrant sumac (*Rhus aromatica*) at one stem. Table 10 summarizes the shrub data, and

Appendix D contains the point and polygon attributes. Locations of the identified trees and shrubs are displayed on Appendix B. In Appendix B, individual tree point labels begin with a “T”, followed by their individual identifier number. Individual shrub point labels begin with a “S”, shrub polygon labels begin with “Shrub Area”, and tree polygon labels begin with “Tree Area”.

Table 10. Results of shrub inventory.

Species	Status	Count
Chokecherry	Native	249
Fragrant sumac	Native	1
Siberian peashrub	Non-native	540
Silverberry	Native	17
Silver buffaloberry	Native	1,218
Tatarian honeysuckle	Non-native	91
Wood’s wild rose	Native	4
	Total	**2,120**

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Appendix A – USACE Wetland Determination Data Forms

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 09/16/2024

Applicant/Owner: Hiland Express | State: ND | Sampling Point: WP-01

Investigator(s): NH CB | Section, Township, Range: Sec 12-T151N-R101W

Landform (hillside, terrace, etc.): depression | Local relief (concave, convex, none): concave | Slope (%): 3

Subregion (LRR): LRR F, MLRA 54 | Lat: 47.92063 | Long: -103.556 | Datum: NAD 83

Soil Map Unit Name: E3609F Zahl-Cabba-Maschetah complex, 6-70% slopes | NWI classification: PEMA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes ____	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Spartina pectinata*	100	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30ft)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	100	x 2 =	200
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		200 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: WP-01

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 09/19/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-01
Investigator(s): NH CB | Section, Township, Range: Sec 12-T151N-R101W
Landform (hillside, terrace, etc.): hillslope | Local relief (concave, convex, none): convex | Slope (%): 3
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.92045 | Long: -103.556 | Datum: NAD 83
Soil Map Unit Name: E3609F Zahl-Cabba-Maschetah complex, 6-70% slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Bromus inermis*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
____ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-01

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 09/16/2024

Applicant/Owner: Hiland Express | State: ND | Sampling Point: WP-02

Investigator(s): NH CB | Section, Township, Range: Sec 12-T151N-R101W

Landform (hillside, terrace, etc.): depression | Local relief (concave, convex, none): concave | Slope (%): 4

Subregion (LRR): LRR F, MLRA 54 | Lat: 47.92043 | Long: -103.55 | Datum: NAD 83

Soil Map Unit Name: E3609F Zahl-Cabba-Maschetah complex, 6-70% slopes | NWI classification: PEMA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes ____ No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Spartina pectinata*	70	Yes	FACW
2. *Distichlis spicata*	15	No	FACW
3. *Hordeum jubatum*	10	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	95 =Total Cover		
Woody Vine Stratum (Plot size: 30ft)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum 5

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	95	x 2 =	190
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	95 (A)		190 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: WP-02

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- X Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline City/County: McKenzie Sampling Date: 09/19/2024

Applicant/Owner: Hiland Express State: ND Sampling Point: UP-02

Investigator(s): NH CB Section, Township, Range: Sec 12-T151N-R101W

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 4

Subregion (LRR): LRR F, MLRA 54 Lat: 47.92049 Long: -103.55 Datum: NAD 83

Soil Map Unit Name: E3609F Zahl-Cabba-Maschetah complex, 6-70% slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Bromus inermis*	50	Yes	UPL
2. *Agropyron cristatum*	50	Yes	UPL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)
Prevalence Index = B/A =			5.00

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-02

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 09/18/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: WP-03
Investigator(s): NH CB | Section, Township, Range: Sec 24-T149N-R99W
Landform (hillside, terrace, etc.): depression | Local relief (concave, convex, none): concave | Slope (%): 4
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.70786 | Long: -103.288 | Datum: NAD 83
Soil Map Unit Name: E0701F Dogtooth-Janesburg-Cabba complex, 6-35% slopes | NWI classification: PEMA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes ____	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Distichlis spicata*	50	Yes	FACW
2. *Schoenoplectus pungens*	50	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30ft)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	50	x 1 =	50
FACW species	50	x 2 =	100
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		150 (B)

Prevalence Index = B/A = 1.50

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: WP-03

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present?	Yes X	No ___	Depth (inches): 4
Water Table Present?	Yes ___	No ___	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No ___	Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 09/19/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-03
Investigator(s): NH CB | Section, Township, Range: Sec 24-T149N-R99W
Landform (hillside, terrace, etc.): hillslope | Local relief (concave, convex, none): convex | Slope (%): 4
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.70782 | Long: -103.288 | Datum: NAD 83
Soil Map Unit Name: E0701F Dogtooth-Janesburg-Cabba complex, 6-35% slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Bromus inermis*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-03

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 09/17/2024

Applicant/Owner: Hiland Express | State: ND | Sampling Point: WP-04

Investigator(s): NH CB | Section, Township, Range: Sec 2-T150N-R100W

Landform (hillside, terrace, etc.): depression | Local relief (concave, convex, none): concave | Slope (%): 3

Subregion (LRR): LRR F, MLRA 54 | Lat: 47.84494 | Long: -103.437 | Datum: NAD 83

Soil Map Unit Name: E3559E Zahl-Max loams, 15-25% slopes | NWI classification: PEMA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes ____ No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Typha angustifolia*	30	Yes	OBL
2. *Spartina pectinata*	30	Yes	FACW
3. *Hordeum jubatum*	5	No	FACW
4. *Bromus inermis*	30	Yes	UPL
5. *Medicago sativa*	5	No	UPL
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30ft)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	30	x 1 =	30
FACW species	35	x 2 =	70
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	35	x 5 =	175
Column Totals:	100 (A)		275 (B)

Prevalence Index = B/A = 2.75

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: WP-04

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 09/17/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-04
Investigator(s): NH CB | Section, Township, Range: Sec 2-T150N-R100W
Landform (hillside, terrace, etc.): upland soil | Local relief (concave, convex, none): concave | Slope (%): 1
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.84503 | Long: -103.437 | Datum: NAD 83
Soil Map Unit Name: E3559E Zahl-Max loams, 15-25% slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Triticum aestivum*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
____ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-04

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 09/18/2024

Applicant/Owner: Hiland Express | State: ND | Sampling Point: WP-05

Investigator(s): NH CB | Section, Township, Range: Sec 19-T150N-R99W

Landform (hillside, terrace, etc.): depression | Local relief (concave, convex, none): concave | Slope (%): 2

Subregion (LRR): LRR F, MLRA 54 | Lat: 47.797 | Long: -103.397 | Datum: NAD 83

Soil Map Unit Name: E1403D Beisigl-Flasher-Telfer loamy fine sands, 6-15% slopes | NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes ____	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Typha angustifolia*	100	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30ft)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	100	x 1 =	100
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		100 (B)

Prevalence Index = B/A = 1.00

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: WP-05

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline City/County: McKenzie Sampling Date: 9/18/2024

Applicant/Owner: Hiland Express State: ND Sampling Point: UP-05

Investigator(s): NH CB Section, Township, Range: Sec 19-T150N-R99W

Landform (hillside, terrace, etc.): upland soil Local relief (concave, convex, none): concave Slope (%): 2

Subregion (LRR): LRR F, MLRA 54 Lat: 47.79712 Long: -103.397 Datum: NAD 83

Soil Map Unit Name: E1403D Beisigl-Flasher-Telfer loamy fine sands, 6-15% slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____	=Total Cover	
Herb Stratum (Plot size: 5ft)			
1. *Bromus inermis*	60	Yes	UPL
2. *Cirsium arvense*	40	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	=Total Cover	

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	40	x 4 =	160
UPL species	60	x 5 =	300
Column Totals:	100 (A)		460 (B)

Prevalence Index = B/A = 4.60

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-05

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 09/18/2024

Applicant/Owner: Hiland Express | State: ND | Sampling Point: WP-06

Investigator(s): NH CB | Section, Township, Range: Sec 19-T150N-R99W

Landform (hillside, terrace, etc.): depression | Local relief (concave, convex, none): concave | Slope (%): 2

Subregion (LRR): LRR F, MLRA 54 | Lat: 47.79734 | Long: -103.396 | Datum: NAD 83

Soil Map Unit Name: E3637D Zahl-Beisigl-Tally complex, 9-15% slopes | NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes ____ No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Typha angustifolia*	40	Yes	OBL
2. *Spartina pectinata*	30	Yes	FACW
3. *Cirsium arvense*	20	Yes	FACU
4. *Bromus inermis*	10	No	UPL
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30ft)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	40	x 1 =	40
FACW species	30	x 2 =	60
FAC species	0	x 3 =	0
FACU species	20	x 4 =	80
UPL species	10	x 5 =	50
Column Totals:	100 (A)		230 (B)

Prevalence Index = B/A = 2.30

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: WP-06

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 9/18/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-06
Investigator(s): NH CB | Section, Township, Range: Sec 19-T150N-R99W
Landform (hillside, terrace, etc.): upland soil | Local relief (concave, convex, none): concave | Slope (%): 2
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.79712 | Long: -103.397 | Datum: NAD 83
Soil Map Unit Name: E1403D Beisigl-Flasher-Telfer loamy fine sands, 6-15% slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Bromus inermis*	60	Yes	UPL
2. *Cirsium arvense*	40	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	40	x 4 =	160
UPL species	60	x 5 =	300
Column Totals:	100 (A)		460 (B)
Prevalence Index = B/A =			4.60

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
____ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-06

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 09/18/2024

Applicant/Owner: Hiland Express | State: ND | Sampling Point: WP-07

Investigator(s): NH CB | Section, Township, Range: Sec 19-T150N-R99W

Landform (hillside, terrace, etc.): depression | Local relief (concave, convex, none): concave | Slope (%): 1

Subregion (LRR): LRR F, MLRA 54 | Lat: 47.79744 | Long: -103.394 | Datum: NAD 83

Soil Map Unit Name: E1423F Flasher-Vebar-Parshall complex, 9-35% slopes | NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes ____	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Typha angustifolia*	40	Yes	OBL
2. *Spartina pectinata*	30	Yes	FACW
3. *Schoenoplectus tabernaemontani*	30	Yes	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30ft)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	70	x 1 =	70
FACW species	30	x 2 =	60
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		130 (B)

Prevalence Index = B/A = 1.30

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: WP-07

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 09/19/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-07
Investigator(s): NH CB | Section, Township, Range: Sec 19-T150N-R99W
Landform (hillside, terrace, etc.): hillslope | Local relief (concave, convex, none): convex | Slope (%): 1
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.79747 | Long: -103.393 | Datum: NAD 83
Soil Map Unit Name: E1423F Flasher-Vebar-Parshall complex, 9-35% slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____	=Total Cover	
Herb Stratum (Plot size: 5ft)			
1. *Bromus inermis*	50	Yes	UPL
2. *Cirsium arvense*	50	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	=Total Cover	

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	50	x 4 =	200
UPL species	50	x 5 =	250
Column Totals:	100 (A)		450 (B)
Prevalence Index = B/A =			4.50

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
____ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-07

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline City/County: McKenzie Sampling Date: 09/18/2024

Applicant/Owner: Hiland Express State: ND Sampling Point: WP-08

Investigator(s): NH CB Section, Township, Range: Sec 20-T150N-R99W

Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): LRR F, MLRA 54 Lat: 47.79704 Long: -103.377 Datum: NAD 83

Soil Map Unit Name: E3637D Zahl-Beisigl-Tally complex, 9-15% slopes NWI classification: PEMA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes ____ No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____	=Total Cover	
Herb Stratum (Plot size: 5ft)			
1. *Spartina pectinata*	80	Yes	FACW
2. *Schoenoplectus tabernaemontani*	20	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	=Total Cover	

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	80	x 2 =	160
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		180 (B)

Prevalence Index = B/A = 1.80

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: WP-08

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 09/19/2024

Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-08

Investigator(s): NH CB | Section, Township, Range: Sec 20-T150N-R99W

Landform (hillside, terrace, etc.): hillslope | Local relief (concave, convex, none): convex | Slope (%): 1

Subregion (LRR): LRR F, MLRA 54 | Lat: 47.79701 | Long: -103.377 | Datum: NAD 83

Soil Map Unit Name: E3637D Zahl-Beisigl-Tally complex, 9-15% slopes | NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Bromus inermis*	60	Yes	UPL
2. *Andropogon gerardii*	40	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	40	x 4 =	160
UPL species	60	x 5 =	300
Column Totals:	100 (A)		460 (B)

Prevalence Index = B/A = 4.60

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-08

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 09/18/2024

Applicant/Owner: Hiland Express | State: ND | Sampling Point: WP-09

Investigator(s): NH CB | Section, Township, Range: Sec 20-T150N-R99W

Landform (hillside, terrace, etc.): depression | Local relief (concave, convex, none): concave | Slope (%): 1

Subregion (LRR): LRR F, MLRA 54 | Lat: 47.79676 | Long: -103.375 | Datum:

Soil Map Unit Name: E3637D Zahl-Beisigl-Tally complex, 9-15% slopes | NWI classification: PEMA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes ____	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____	=Total Cover	
Herb Stratum (Plot size: 5ft)			
1. *Spartina pectinata*	100	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	=Total Cover	

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	100	x 2 =	200
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		200 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: WP-09

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 09/19/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-09
Investigator(s): NH CB | Section, Township, Range: Sec 20-T150N-R99W
Landform (hillside, terrace, etc.): hillslope | Local relief (concave, convex, none): convex | Slope (%): 1
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.79683 | Long: -103.375 | Datum: NAD 83
Soil Map Unit Name: E4139A Korchea-Fluvaquents complex, 0-2% slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft)			
1. *Symphoricarpos occidentalis*	80	Yes	UPL
2.			
3.			
4.			
5.			
	80 =Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Bromus inermis*	20	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	20 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 0	x 3 = 0
FACU species 0	x 4 = 0
UPL species 100	x 5 = 500
Column Totals: 100 (A)	500 (B)
Prevalence Index = B/A =	5.00

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
____ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-09

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 09/18/2024

Applicant/Owner: Hiland Express | State: ND | Sampling Point: WP-10

Investigator(s): NH CB | Section, Township, Range: Sec 20-T150N-R99W

Landform (hillside, terrace, etc.): depression | Local relief (concave, convex, none): concave | Slope (%): 2

Subregion (LRR): LRR F, MLRA 54 | Lat: 47.79648 | Long: -103.37 | Datum: NAD 83

Soil Map Unit Name: E3637D Zahl-Beisigl-Tally complex, 9-15% slopes | NWI classification: PEMA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes ____ No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____	=Total Cover	
Herb Stratum (Plot size: 5ft)			
1. *Typha angustifolia*	60	Yes	OBL
2. *Spartina pectinata*	25	Yes	FACW
3. *Persicaria amphibia*	15	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	=Total Cover	

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	75	x 1 =	75
FACW species	25	x 2 =	50
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		125 (B)

Prevalence Index = B/A = 1.25

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: WP-10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 09/19/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-10
Investigator(s): NH CB | Section, Township, Range: Sec 20-T150N-R99W
Landform (hillside, terrace, etc.): hillslope | Local relief (concave, convex, none): convex | Slope (%): 2
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.79641 | Long: -103.37 | Datum: NAD 83
Soil Map Unit Name: E3637D Zahl-Beisigl-Tally complex, 9-15% slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____	=Total Cover	
Herb Stratum (Plot size: 5ft)			
1. *Bromus inermis*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	=Total Cover	

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
____ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 09/18/2024

Applicant/Owner: Hiland Express | State: ND | Sampling Point: WP-11

Investigator(s): NH CB | Section, Township, Range: Sec 3-T149N-R99W

Landform (hillside, terrace, etc.): depression | Local relief (concave, convex, none): concave | Slope (%): 3

Subregion (LRR): LRR F, MLRA 54 | Lat: 47.74756 | Long: -103.337 | Datum: NAD 83

Soil Map Unit Name: E4561F Manning-Schaller-Wabek complex, 6-35% slopes | NWI classification: PEMC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes ____	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____	=Total Cover	
Herb Stratum (Plot size: 5ft)			
1. *Typha angustifolia*	50	Yes	OBL
2. *Spartina pectinata*	50	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	=Total Cover	

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	50	x 1 =	50
FACW species	50	x 2 =	100
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		150 (B)

Prevalence Index = B/A = 1.50

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: WP-11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- X Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 09/19/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-11
Investigator(s): NH CB | Section, Township, Range: Sec 3-T149N-R99W
Landform (hillside, terrace, etc.): hillslope | Local relief (concave, convex, none): convex | Slope (%): 3
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.74761 | Long: -103.337 | Datum: NAD 83
Soil Map Unit Name: E0447B Daglum-Belfield complex, 0-6% slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft)			
1. *Symphoricarpos occidentalis*	50	Yes	UPL
2.			
3.			
4.			
5.			
	50 =Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Cirsium arvense*	50	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	50 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	50	x 4 =	200
UPL species	50	x 5 =	250
Column Totals:	100 (A)		450 (B)
Prevalence Index = B/A =			4.50

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
____ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline City/County: McKenzie Sampling Date: 09/18/2024

Applicant/Owner: Hiland Express State: ND Sampling Point: WP-12

Investigator(s): NH CB Section, Township, Range: Sec 10-T149N-R99W

Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): LRR F, MLRA 54 Lat: 47.74622 Long: -103.332 Datum: NAD 83

Soil Map Unit Name: E0515B Rhoades-Daglum complex, 0-6% slopes NWI classification: PEMC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes ____ No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____	=Total Cover	
Herb Stratum (Plot size: 5ft)			
1. *Typha angustifolia*	100	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	=Total Cover	

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	100	x 1 =	100
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		100 (B)

Prevalence Index = B/A = 1.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: WP-12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 09/19/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-12
Investigator(s): NH CB | Section, Township, Range: Sec 10-T149N-R99W
Landform (hillside, terrace, etc.): hillslope | Local relief (concave, convex, none): convex | Slope (%): 1
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.74613 | Long: -103.333 | Datum: NAD 83
Soil Map Unit Name: E0515B Rhoades-Daglum complex, 0-6% slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____	=Total Cover	
Herb Stratum (Plot size: 5ft)			
1. *Cirsium arvense*	100	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	=Total Cover	

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	100	x 4 =	400
UPL species	0	x 5 =	0
Column Totals:	100 (A)		400 (B)
Prevalence Index = B/A =			4.00

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
____ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline City/County: McKenzie Sampling Date: 09/18/2024

Applicant/Owner: Hiland Express State: ND Sampling Point: WP-13

Investigator(s): NH CB Section, Township, Range: Sec 30-T149N-R98W

Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): LRR F, MLRA 54 Lat: 47.69246 Long: -103.271 Datum: NAD 83

Soil Map Unit Name: E0515B Rhoades-Daglum complex, 0-6% slopes NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes ____ No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____	=Total Cover	
Herb Stratum (Plot size: 5ft)			
1. *Spartina pectinata*	100	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	=Total Cover	

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	100	x 2 =	200
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		200 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: WP-13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- X Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 09/19/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-13
Investigator(s): NH CB | Section, Township, Range: Sec 30-T149N-R98W
Landform (hillside, terrace, etc.): hillslope | Local relief (concave, convex, none): convex | Slope (%): 1
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.69241 | Long: -103.271 | Datum: NAD 83
Soil Map Unit Name: E0515B Rhoades-Daglum complex, 0-6% slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____	=Total Cover	
Herb Stratum (Plot size: 5ft)			
1. *Bromus inermis*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	=Total Cover	

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)
Prevalence Index = B/A =			5.00

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
____ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 09/18/2024

Applicant/Owner: Hiland Express | State: ND | Sampling Point: WP-14

Investigator(s): NH CB | Section, Township, Range: Sec 30-T149N-R98W

Landform (hillside, terrace, etc.): depression | Local relief (concave, convex, none): concave | Slope (%): 1

Subregion (LRR): LRR F, MLRA 54 | Lat: 47.69185 | Long: -103.27 | Datum: NAD 83

Soil Map Unit Name: E0447B Daglum-Belfield complex, 0-6% slopes | NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes ____	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____	=Total Cover	
Herb Stratum (Plot size: 5ft)			
1. *Spartina pectinata*	100	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	=Total Cover	

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	100	x 2 =	200
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		200 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: WP-14

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- X Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline City/County: McKenzie Sampling Date: 09/19/2024

Applicant/Owner: Hiland Express State: ND Sampling Point: UP-14

Investigator(s): NH CB Section, Township, Range: Sec 30-T149N-R98W

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 1

Subregion (LRR): LRR F, MLRA 54 Lat: 47.69181 Long: -103.27 Datum: NAD 83

Soil Map Unit Name: E0447B Daglum-Belfield complex, 0-6% slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____	=Total Cover	
Herb Stratum (Plot size: 5ft)			
1. *Bromus inermis*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	=Total Cover	

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 0	x 3 = 0
FACU species 0	x 4 = 0
UPL species 100	x 5 = 500
Column Totals: 100 (A)	500 (B)
Prevalence Index = B/A =	5.00

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-14

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 9/16/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-101
Investigator(s): NH CB | Section, Township, Range: Sec 7-T151N-R100W
Landform (hillside, terrace, etc.): upland soil | Local relief (concave, convex, none): concave | Slope (%): 5
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.91282 | Long: -103.529 | Datum: NAD 83
Soil Map Unit Name: E3567F Zahl-Max loams, 15-45% slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft)			
1. *Symphoricarpos occidentalis*	20	Yes	UPL
2.			
3.			
4.			
5.			
	20 =Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Bromus inermis*	80	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	80 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		
% Bare Ground in Herb Stratum ____			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)
Prevalence Index = B/A =			5.00

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
____ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL

Sampling Point: UP-101

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 9/16/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-102
Investigator(s): NH CB | Section, Township, Range: Sec 17-T151N-R100W
Landform (hillside, terrace, etc.): upland soil | Local relief (concave, convex, none): concave | Slope (%): 5
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.90225 | Long: -103.517 | Datum: NAD 83
Soil Map Unit Name: E3567F Zahl-Max loams, 15-45% slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft)			
1. *Symphoricarpos occidentalis*	20	Yes	UPL
2.			
3.			
4.			
5.			
	20 =Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Bromus inermis*	80	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	80 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 0	x 3 = 0
FACU species 0	x 4 = 0
UPL species 100	x 5 = 500
Column Totals: 100 (A)	500 (B)
Prevalence Index = B/A =	5.00

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
____ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL

Sampling Point: UP-102

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 9/16/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-103
Investigator(s): NH CB | Section, Township, Range: Sec 21-T151N-R100W
Landform (hillside, terrace, etc.): upland soil | Local relief (concave, convex, none): concave | Slope (%): 3
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.88265 | Long: -103.497 | Datum: NAD 83
Soil Map Unit Name: E1423F Flasher-Vebar-Parshall complex, 9-35% slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Bromus inermis*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)
Prevalence Index = B/A =			5.00

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
____ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-103

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 9/16/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-104
Investigator(s): NH CB | Section, Township, Range: Sec 21-T151N-R100W
Landform (hillside, terrace, etc.): upland soil | Local relief (concave, convex, none): concave | Slope (%): 3
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.87958 | Long: -103.497 | Datum: NAD 83
Soil Map Unit Name: E3609F Zahl-Cabba-Maschetah complex, 6-70% slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Bromus inermis*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)
Prevalence Index = B/A =			5.00

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
____ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-104

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 9/17/2024

Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-105

Investigator(s): NH CB | Section, Township, Range: Sec 28-T151N-R100W

Landform (hillside, terrace, etc.): upland soil | Local relief (concave, convex, none): concave | Slope (%): 2

Subregion (LRR): LRR F, MLRA 54 | Lat: 47.87542 | Long: -103.497 | Datum: NAD 83

Soil Map Unit Name: E3609F Zahl-Cabba-Maschetah complex, 6-70% slopes | NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft)			
1. *Symphoricarpos occidentalis*	100	Yes	UPL
2.			
3.			
4.			
5.			
	100 =Total Cover		
Herb Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	=Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-105

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? Yes ___ No ___ Depth (inches): ___

(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 9/17/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-106
Investigator(s): NH CB | Section, Township, Range: Sec 28-T151N-R100W
Landform (hillside, terrace, etc.): upland soil | Local relief (concave, convex, none): concave | Slope (%): 2
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.87471 | Long: -103.497 | Datum: NAD 83
Soil Map Unit Name: E3609F Zahl-Cabba-Maschetah complex, 6-70% slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft)			
1. *Symphoricarpos occidentalis*	80	Yes	UPL
2.			
3.			
4.			
5.			
	80 =Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Medicago sativa*	20	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	20 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)
Prevalence Index = B/A =			5.00

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
____ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-106

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 9/17/2024

Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-107

Investigator(s): NH CB | Section, Township, Range: Sec 33-T151N-R100W

Landform (hillside, terrace, etc.): upland soil | Local relief (concave, convex, none): concave | Slope (%): 2

Subregion (LRR): LRR F, MLRA 54 | Lat: 47.8603 | Long: -103.496 | Datum: NAD 83

Soil Map Unit Name: E1423F Flasher-Vebar-Parshall complex, 9-35% slopes | NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Bromus inermis*	95	Yes	UPL
2. *Medicago sativa*	5	No	UPL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-107

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 9/17/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-108
Investigator(s): NH CB | Section, Township, Range: Sec 33-T151N-R100W
Landform (hillside, terrace, etc.): upland soil | Local relief (concave, convex, none): concave | Slope (%): 2
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.85975 | Long: -103.485 | Datum: NAD 83
Soil Map Unit Name: E3637D Zahl-Beisigl-Tally complex, 9-15% slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____	=Total Cover	
Herb Stratum (Plot size: 5ft)			
1. *Agropyron cristatum*	50	Yes	UPL
2. *Bromus inermis*	30	Yes	UPL
3. *Melilotus officinalis*	20	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	=Total Cover	

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	20	x 4 =	80
UPL species	80	x 5 =	400
Column Totals:	100 (A)		480 (B)

Prevalence Index = B/A = 4.80

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
____ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-108

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 9/17/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-109
Investigator(s): NH CB | Section, Township, Range: Sec 34-T151N-R100W
Landform (hillside, terrace, etc.): upland soil | Local relief (concave, convex, none): concave | Slope (%): 3
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.8597 | Long: -103.469 | Datum: NAD 83
Soil Map Unit Name: E3567F Zahl-Max loams, 15-45% slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Bromus inermis*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)
Prevalence Index = B/A =			5.00

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
____ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-109

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 9/17/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-110
Investigator(s): NH CB | Section, Township, Range: Sec 1-T150N-R100W
Landform (hillside, terrace, etc.): upland soil | Local relief (concave, convex, none): concave | Slope (%): 2
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.8351 | Long: -103.428 | Datum: NAD 83
Soil Map Unit Name: E3541C Williams-Zahl loams, 6-9% slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Bromus inermis*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
____ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-110

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 9/17/2024

Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-111

Investigator(s): NH CB | Section, Township, Range: Sec 12-T150N-R100W

Landform (hillside, terrace, etc.): upland soil | Local relief (concave, convex, none): concave | Slope (%): 1

Subregion (LRR): LRR F, MLRA 54 | Lat: 47.82707 | Long: -103.422 | Datum: NAD 83

Soil Map Unit Name: E3541C Williams-Zahl loams, 6-9% slopes | NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____	=Total Cover	
Herb Stratum (Plot size: 5ft)			
1.			
2. *Bromus inermis*	100	Yes	UPL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	=Total Cover	

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-111

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 9/17/2024

Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-112

Investigator(s): NH CB | Section, Township, Range: Sec 24-T150N-R100W

Landform (hillside, terrace, etc.): upland soil | Local relief (concave, convex, none): concave | Slope (%): 1

Subregion (LRR): LRR F, MLRA 54 | Lat: 47.80291 | Long: -103.416 | Datum: NAD 83

Soil Map Unit Name: E3541B Williams-Zahl loams, 3-6% slopes | NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix amygdaloides*	30	Yes	FACW
2.			
3.			
4.			
	30	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
Herb Stratum (Plot size: 5ft)			
1. *Bromus inermis*	70	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	70	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	70	x 5 =	350
Column Totals:	100 (A)		410 (B)
Prevalence Index = B/A =			4.10

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-112

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 9/17/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-113
Investigator(s): NH CB | Section, Township, Range: Sec 24-T150N-R100W
Landform (hillside, terrace, etc.): upland soil | Local relief (concave, convex, none): concave | Slope (%): 1
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.79839 | Long: -103.414 | Datum: NAD 83
Soil Map Unit Name: E3541C Williams-Zahl loams, 6-9% slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Bromus inermis*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)
Prevalence Index = B/A =			5.00

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-113

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline City/County: McKenzie Sampling Date: 9/18/2024

Applicant/Owner: Hiland Express State: ND Sampling Point: UP-114

Investigator(s): NH CB Section, Township, Range: Sec 19-T150N-R99W

Landform (hillside, terrace, etc.): upland soil Local relief (concave, convex, none): concave Slope (%): 2

Subregion (LRR): LRR F, MLRA 54 Lat: 47.79712 Long: -103.397 Datum: NAD 83

Soil Map Unit Name: E1403D Beisigl-Flasher-Telfer loamy fine sands, 6-15% slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Bromus inermis*	60	Yes	UPL
2. *Cirsium arvense*	40	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	40	x 4 =	160
UPL species	60	x 5 =	300
Column Totals:	100 (A)		460 (B)

Prevalence Index = B/A = 4.60

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-114

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 9/18/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-115
Investigator(s): NH CB | Section, Township, Range: Sec 20-T150N-R99W
Landform (hillside, terrace, etc.): upland soil | Local relief (concave, convex, none): concave | Slope (%): 1
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.79667 | Long: -103.37 | Datum: NAD 83
Soil Map Unit Name: E4139A Korchea-Fluvaquents complex, 0-2% slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft)			
1. *Symphoricarpos occidentalis*	50	Yes	UPL
2.			
3.			
4.			
5.			
	50 =Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Bromus inermis*	30	Yes	UPL
2. *Cirsium arvense*	20	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	50 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	20	x 4 =	80
UPL species	80	x 5 =	400
Column Totals:	100 (A)		480 (B)
Prevalence Index = B/A =			4.80

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
____ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL

Sampling Point: UP-115

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 9/18/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-116
Investigator(s): NH CB | Section, Township, Range: Sec 20-T150N-R99W
Landform (hillside, terrace, etc.): upland soil | Local relief (concave, convex, none): flat | Slope (%): 1
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.79543 | Long: -103.369 | Datum: NAD 83
Soil Map Unit Name: E1333C Vebar-Cohagen fine sandy loams, 6-9% slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Bromus inermis*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)
Prevalence Index = B/A =			5.00

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
____ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-116

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 9/18/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-117
Investigator(s): NH CB | Section, Township, Range: Sec 28-T150N-R99W
Landform (hillside, terrace, etc.): upland soil | Local relief (concave, convex, none): concave | Slope (%): 3
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.78206 | Long: -103.368 | Datum: NAD 83
Soil Map Unit Name: E3567F Zahl-Max loams, 15-45% slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft)			
1. *Symphoricarpos occidentalis*	10	Yes	UPL
2.			
3.			
4.			
5.			
	10 =Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Bromus inermis*	90	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	90 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		
% Bare Ground in Herb Stratum ____			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)
Prevalence Index = B/A =			5.00

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
____ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL

Sampling Point: UP-117

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 9/18/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-118
Investigator(s): NH CB | Section, Township, Range: Sec 33-T150N-R99W
Landform (hillside, terrace, etc.): upland soil | Local relief (concave, convex, none): concave | Slope (%): 1
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.7641 | Long: -103.364 | Datum: NAD 83
Soil Map Unit Name: E3559E Zahl-Max loams, 15-25% slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Medicago sativa*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)
Prevalence Index = B/A =			5.00

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-118

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 9/18/2024

Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-119

Investigator(s): NH CB | Section, Township, Range: Sec 4-T149N-R99W

Landform (hillside, terrace, etc.): upland swale | Local relief (concave, convex, none): concave | Slope (%): 1

Subregion (LRR): LRR F, MLRA 54 | Lat: 47.76138 | Long: -103.363 | Datum: NAD 83

Soil Map Unit Name: E3541C Willliams-Zahl loams, 6-9% slopes | NWI classification: X

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No ____	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft)			
1. *Symphoricarpos occidentalis*	10	Yes	UPL
2.			
3.			
4.			
5.			
	10 =Total Cover		
Herb Stratum (Plot size: 5ft)			
1.			
2. *Bromus inermis*	90	Yes	UPL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	90 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)
Prevalence Index = B/A =			5.00

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-119

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 9/18/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-120
Investigator(s): NH CB | Section, Township, Range: Sec 4-T149N-R99W
Landform (hillside, terrace, etc.): upland soil | Local relief (concave, convex, none): concave | Slope (%): 1
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.75934 | Long: -103.363 | Datum: NAD 83
Soil Map Unit Name: E3541C Williams-Zahl loams, 6-9% slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____	=Total Cover	
Herb Stratum (Plot size: 5ft)			
1.			
2. *Triticum aestivum*	50	Yes	UPL
3. *Avena sativa*	50	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	=Total Cover	

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	50	x 4 =	200
UPL species	50	x 5 =	250
Column Totals:	100 (A)		450 (B)

Prevalence Index = B/A = 4.50

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-120

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline City/County: McKenzie Sampling Date: 9/18/2024

Applicant/Owner: Hiland Express State: ND Sampling Point: UP-121

Investigator(s): NH CB Section, Township, Range: Sec 14-T149N-R99W

Landform (hillside, terrace, etc.): upland soil Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): LRR F, MLRA 54 Lat: 47.72883 Long: -103.308 Datum: NAD 83

Soil Map Unit Name: E0835A Wyola-Grail silty clay loams, 0-2% slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____	=Total Cover	
Herb Stratum (Plot size: 5ft)			
1. *Medicago sativa*	100	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	=Total Cover	

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 0	x 3 = 0
FACU species 0	x 4 = 0
UPL species 100	x 5 = 500
Column Totals: 100 (A)	500 (B)
Prevalence Index = B/A =	5.00

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-121

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 10/3/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-122
Investigator(s): NH EM | Section, Township, Range: Sec 17-T151N-R100W
Landform (hillside, terrace, etc.): upland soil | Local relief (concave, convex, none): concave | Slope (%): 4
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.90297 | Long: -103.51663 | Datum: NAD 83
Soil Map Unit Name: E3567F Zahl-Max loams, 15-45% slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft)			
1. *Symphoricarpos occidentalis*	50	Yes	UPL
2.			
3.			
4.			
5.			
	50 =Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Bromus inermis*	50	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	50 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		
% Bare Ground in Herb Stratum ____			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)
Prevalence Index = B/A =			5.00

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
____ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL

Sampling Point: UP-122

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 10/3/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-123
Investigator(s): NH EM | Section, Township, Range: Sec 28-T151N-R100W
Landform (hillside, terrace, etc.): upland soil | Local relief (concave, convex, none): concave | Slope (%): 2
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.87582 | Long: -103.49629 | Datum: NAD 83
Soil Map Unit Name: E3609F Zahl-Cabba-Maschetah complex, 6-70% slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No ____	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft)			
1. *Symphoricarpos occidentalis*	10	Yes	UPL
2.			
3.			
4.			
5.			
	10 =Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Bromus inermis*	90	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	90 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		
% Bare Ground in Herb Stratum ____			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)
Prevalence Index = B/A =			5.00

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
____ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL

Sampling Point: UP-123

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline | City/County: McKenzie | Sampling Date: 10/3/2024
Applicant/Owner: Hiland Express | State: ND | Sampling Point: UP-124
Investigator(s): NH EM | Section, Township, Range: Sec 28-T151N-R100W
Landform (hillside, terrace, etc.): upland soil | Local relief (concave, convex, none): concave | Slope (%): 2
Subregion (LRR): LRR F, MLRA 54 | Lat: 47.87515 | Long: -103.49638 | Datum: NAD 83
Soil Map Unit Name: E3609F Zahl-Cabba-Maschetah complex, 6-70% slopes | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: 15ft)			
1. *Symphoricarpos occidentalis*	10	Yes	UPL
2.			
3.			
4.			
5.			
	10 =Total Cover		
Herb Stratum (Plot size: 5ft)			
1. *Bromus inermis*	80	Yes	UPL
2. *Poa pratensis*	10	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	90 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	10	x 4 =	40
UPL species	90	x 5 =	450
Column Totals:	100 (A)		490 (B)
Prevalence Index = B/A =			4.90

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
____ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-124

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Great Plains Region
See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Hiland Express Spine Pipeline City/County: McKenzie Sampling Date: 11/01/2024

Applicant/Owner: Hiland Express State: ND Sampling Point: UP-125

Investigator(s): NH Section, Township, Range: Sec. 21-T150N-R99W

Landform (hillside, terrace, etc.): upland soil Local relief (concave, convex, none): flat Slope (%): 1

Subregion (LRR): LRR F, MLRA 54 Lat: 47.79418 Long: -103.36756 Datum: NAD 83

Soil Map Unit Name: E1333C Vebar-Cohagen fine sandy loams, 6-9% slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No ____	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____	=Total Cover	
Herb Stratum (Plot size: 5ft)			
1. *Wheat (crop)*	100	Yes	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	=Total Cover	

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: UP-125

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
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- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

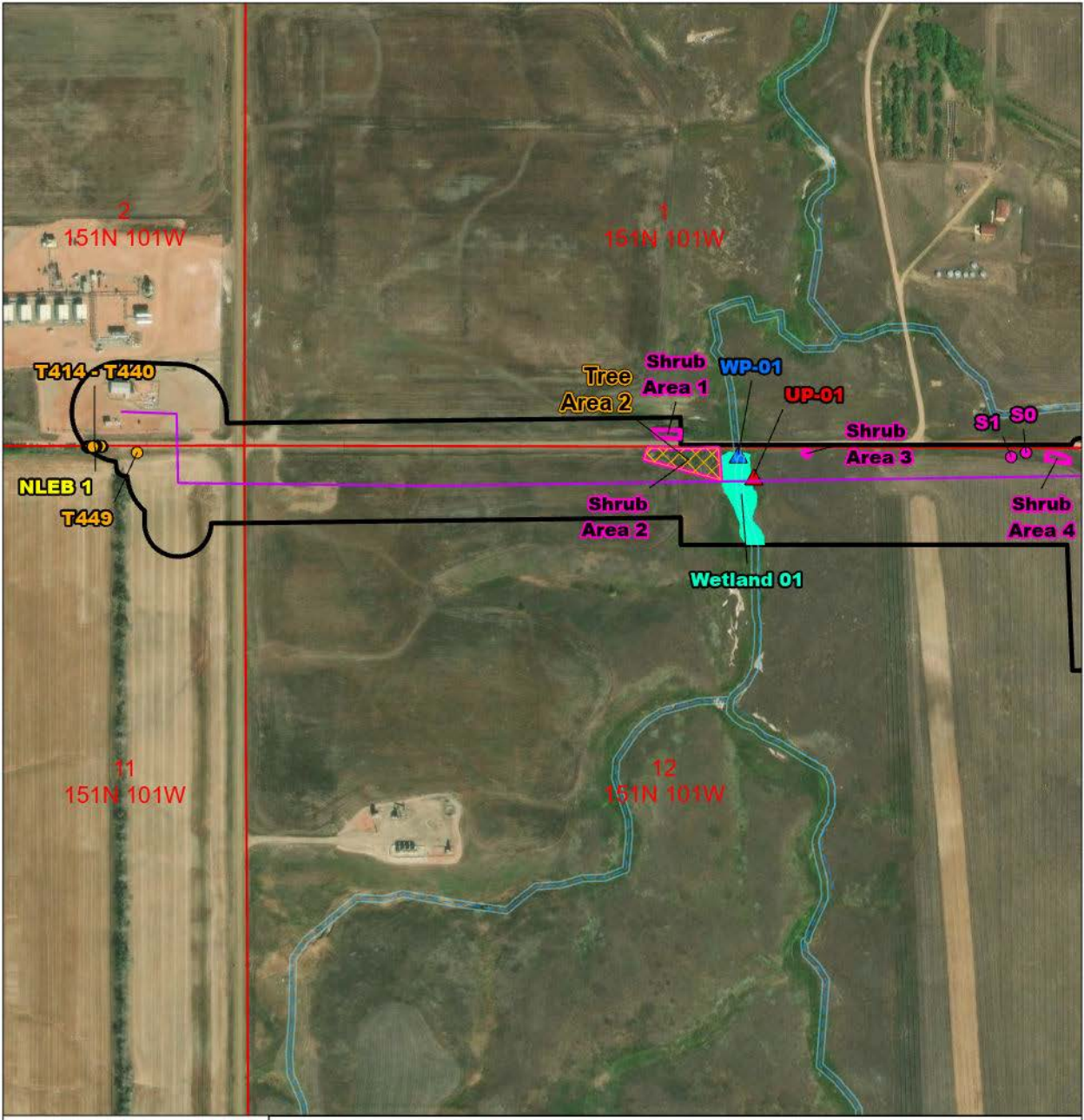
Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Appendix B – Natural Resource Inventory Figures



Hiland Express Spine Pipeline Project
McKenzie County, ND



- Proposed Project
- Survey Corridor
- NWI Signature

Field Survey Results

- Potential Northern Long-eared Bat Habitat
- Dakota Skipper and Regal Fritillary Habitat
- Regal Fritillary Habitat
- Noxious Weed
- Shrub Polygon
- Tree Polygon
- Waterbody
- Wetland
- Shrub Point
- Tree Point
- Hydric Observation Point
- Upland Observation Point

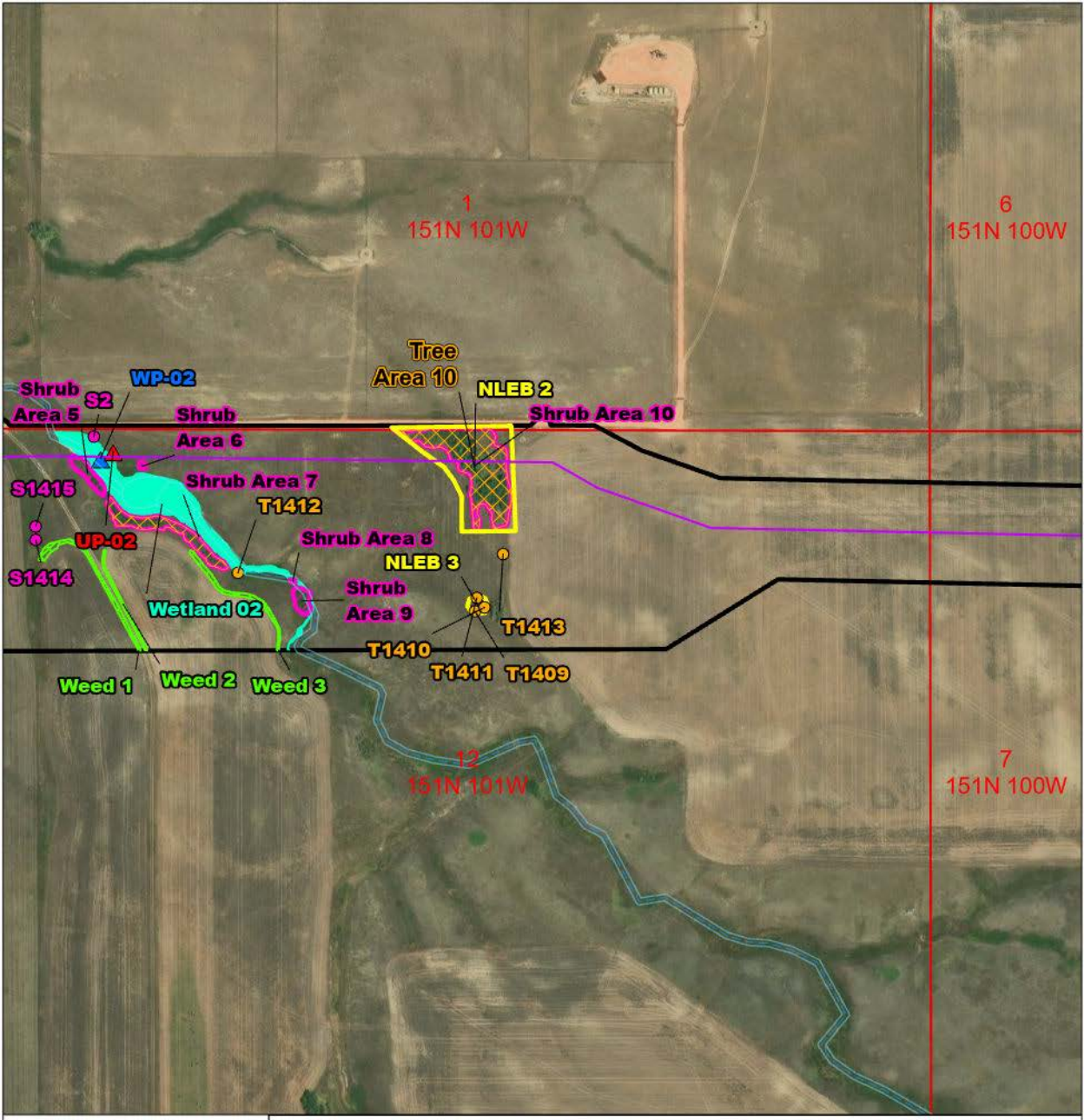
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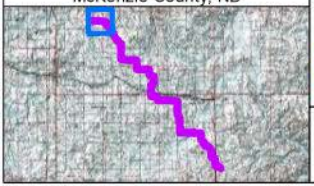
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Coordinate System: NAD 1983 UTM Zone 13N
Date: 1/9/2025 Author: B. Brooks

WEST



Hiland Express Spine Pipeline Project
McKenzie County, ND



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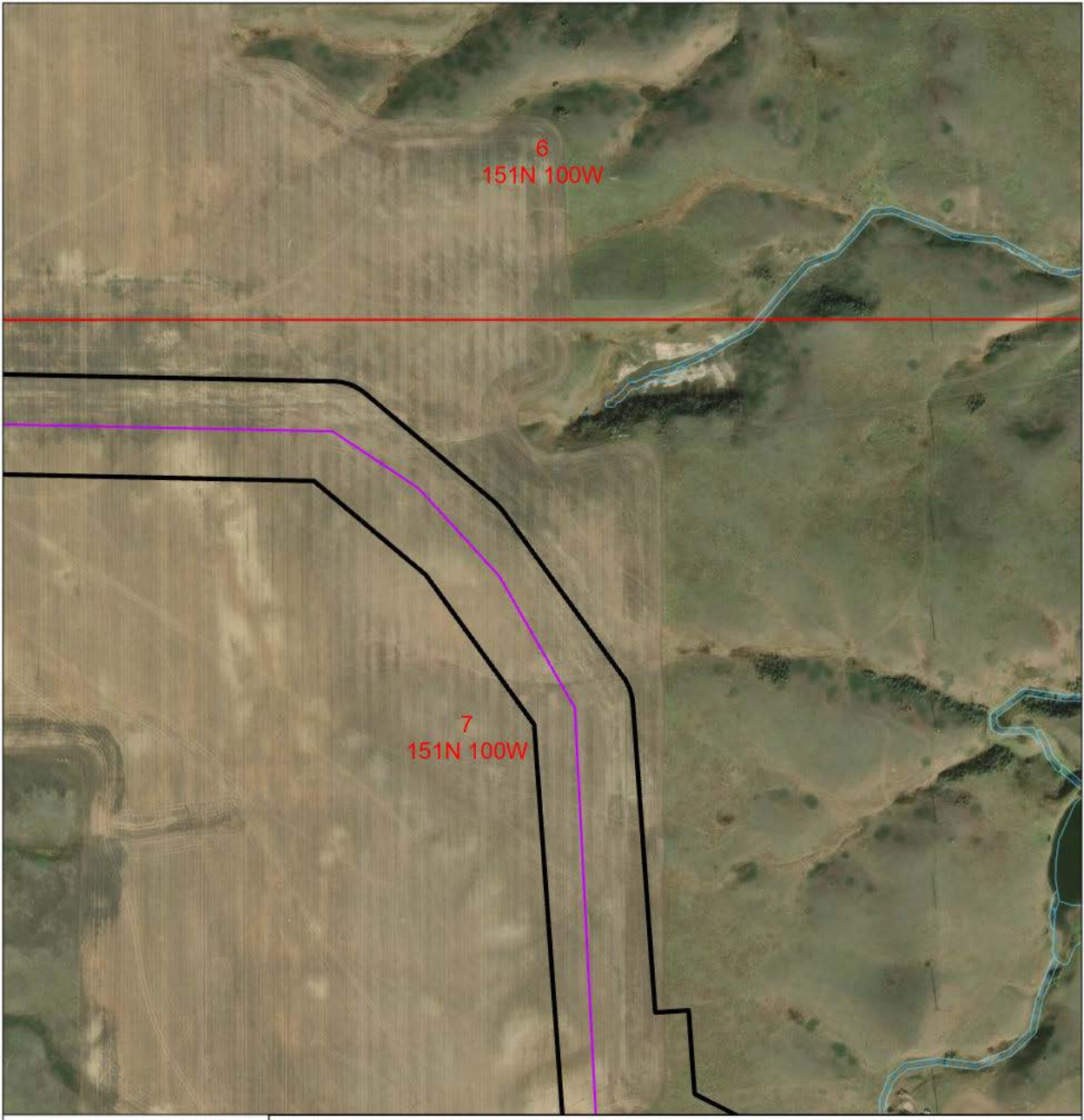
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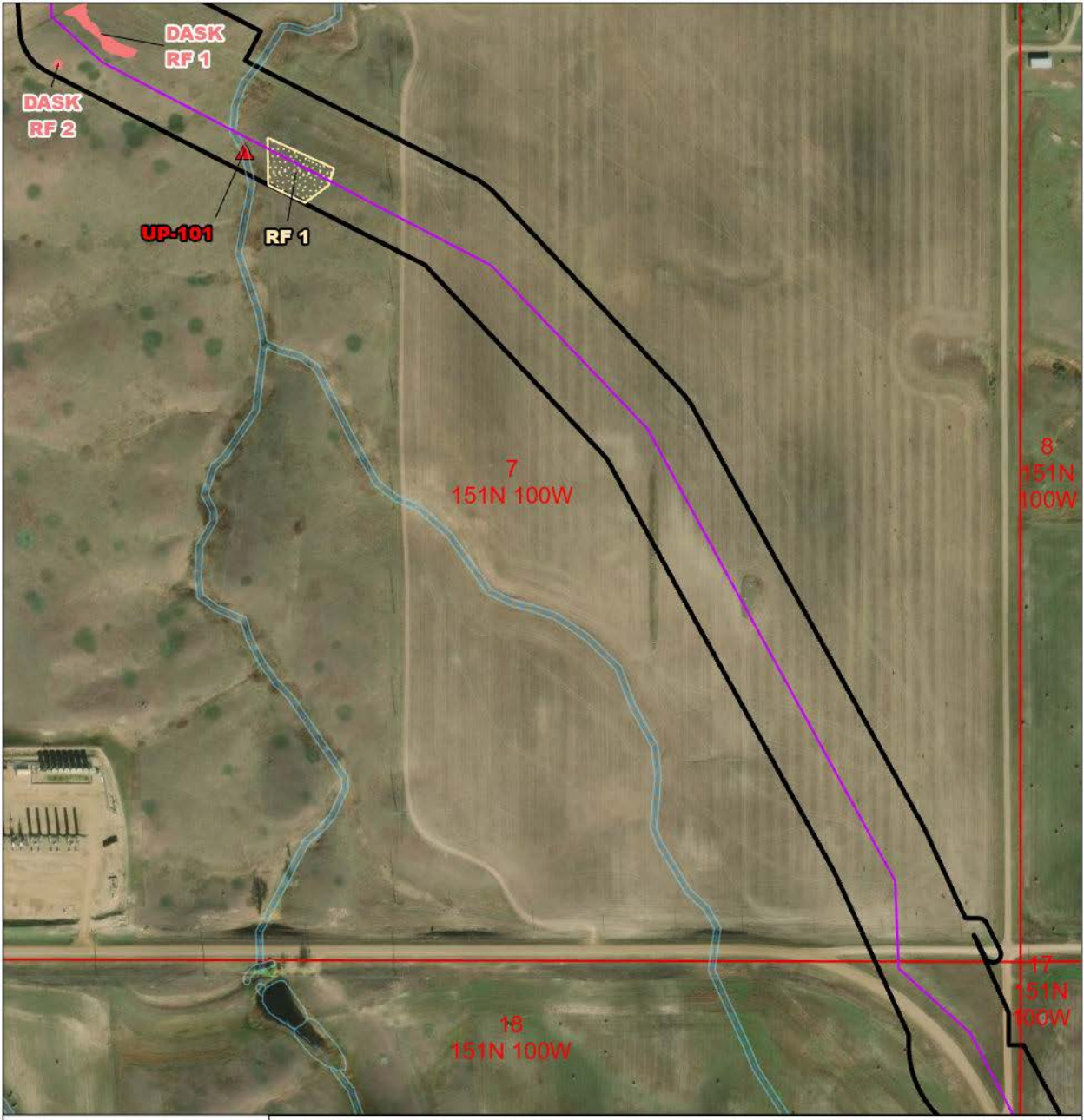
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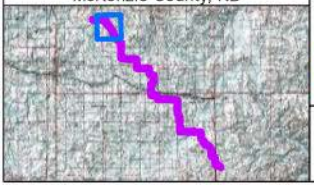
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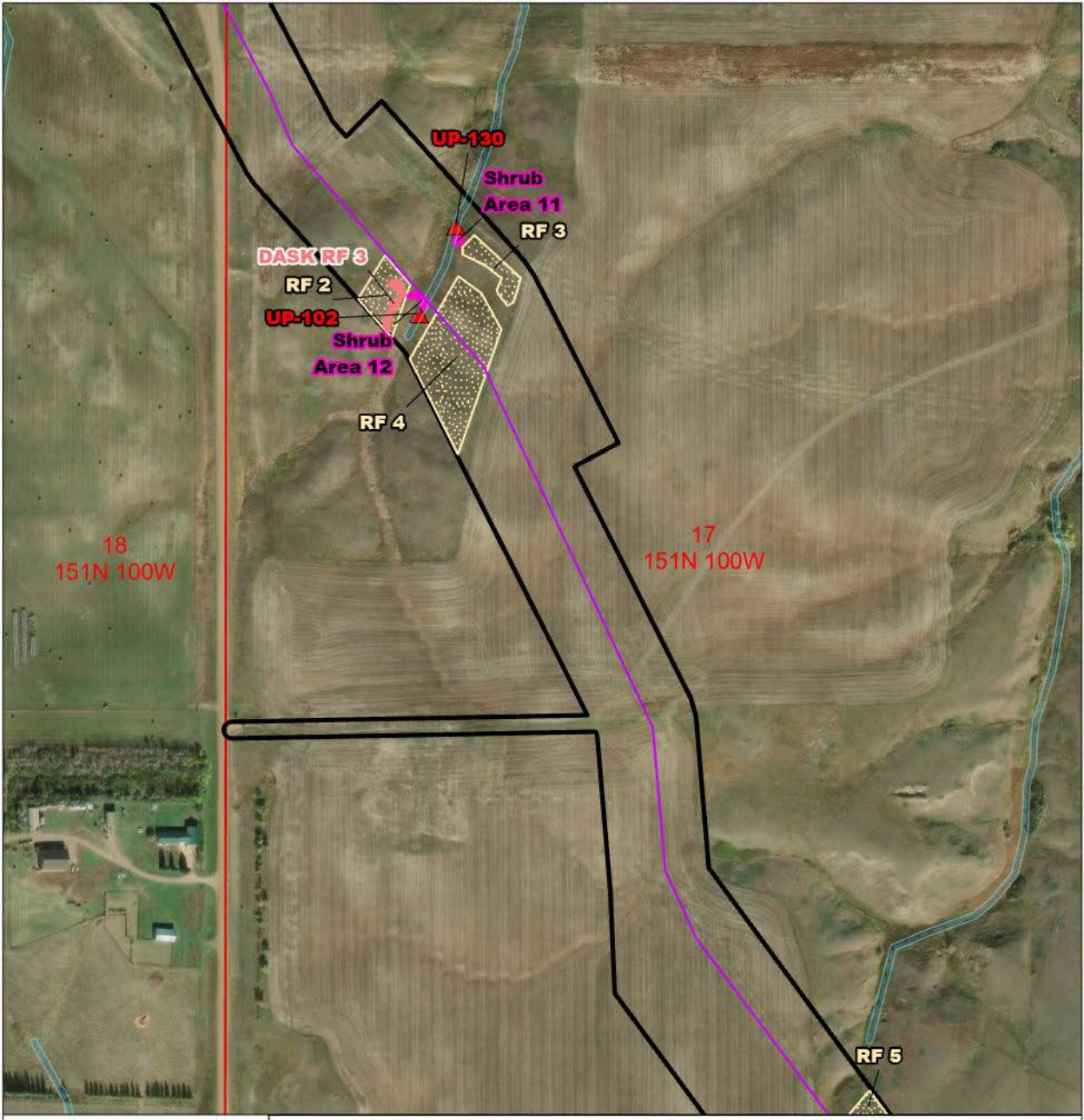
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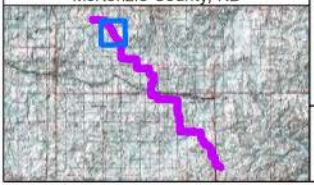
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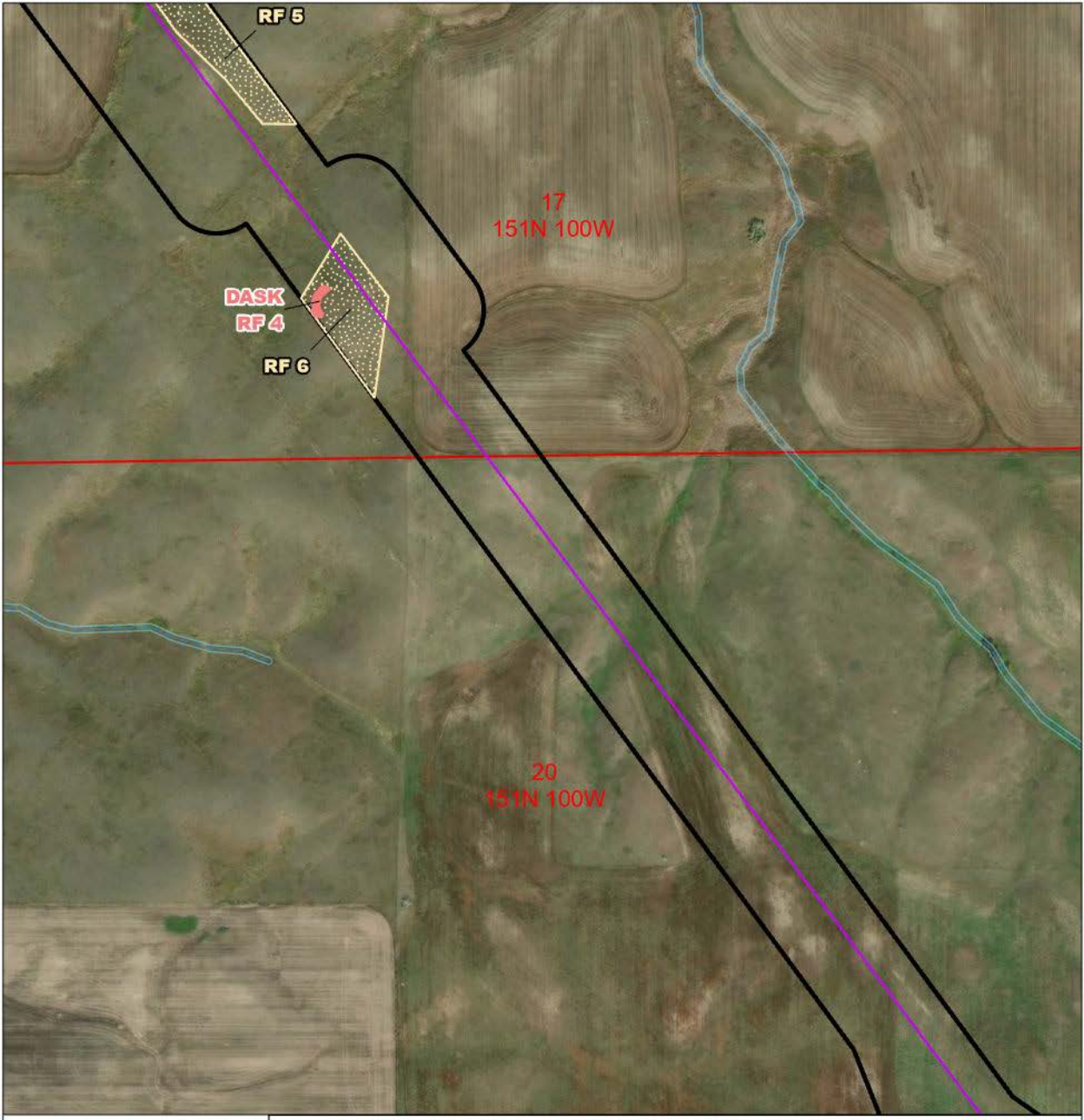
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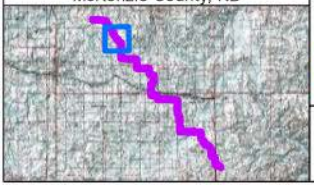
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WEST



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McKenzie County, ND



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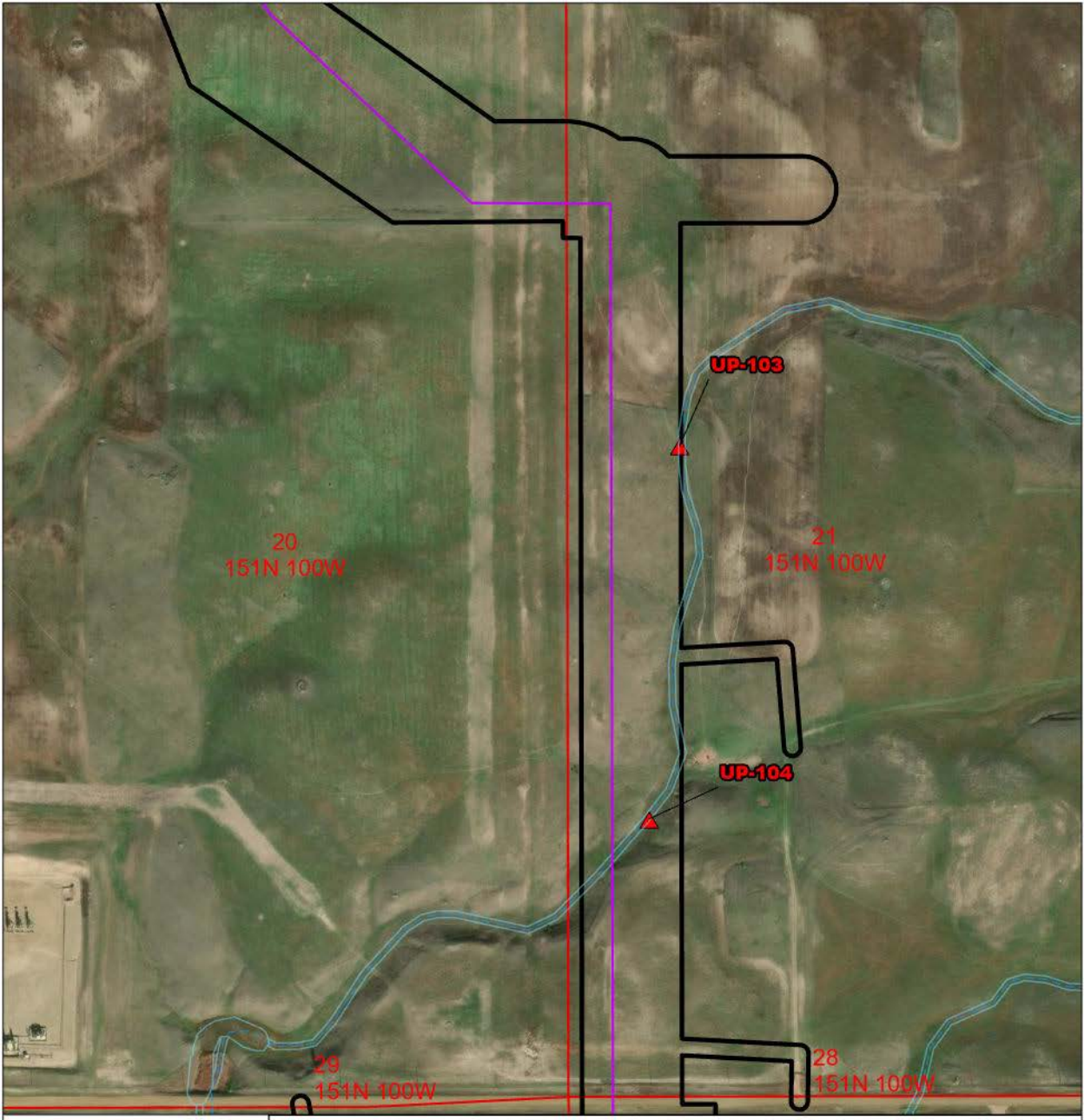
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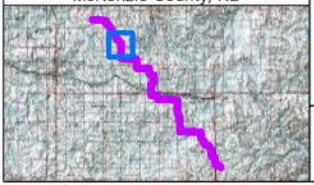
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WEST



Hiland Express Spine Pipeline Project
McKenzie County, ND



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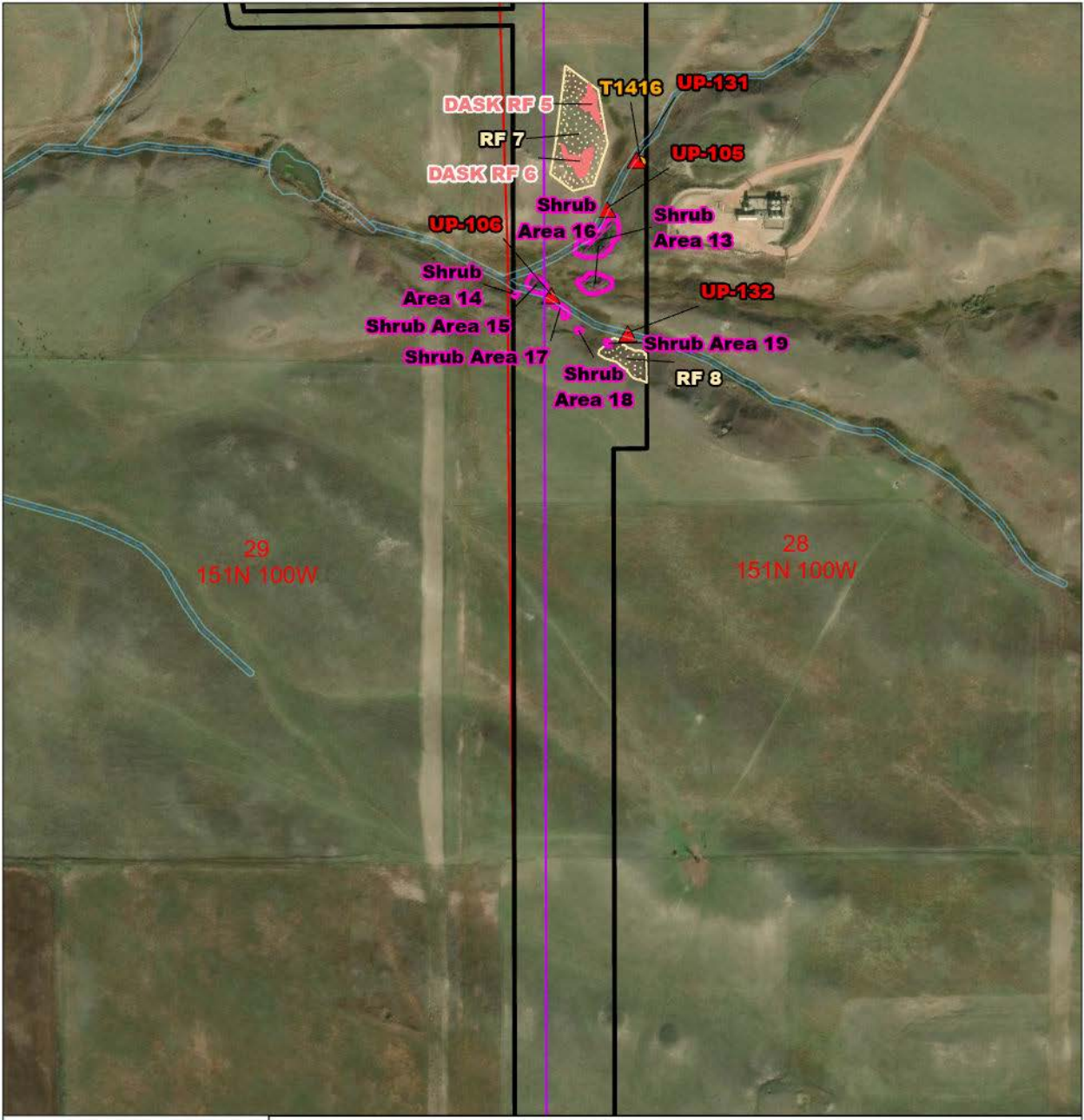
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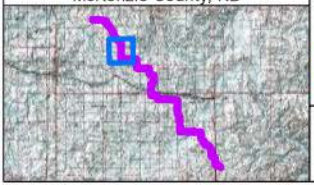
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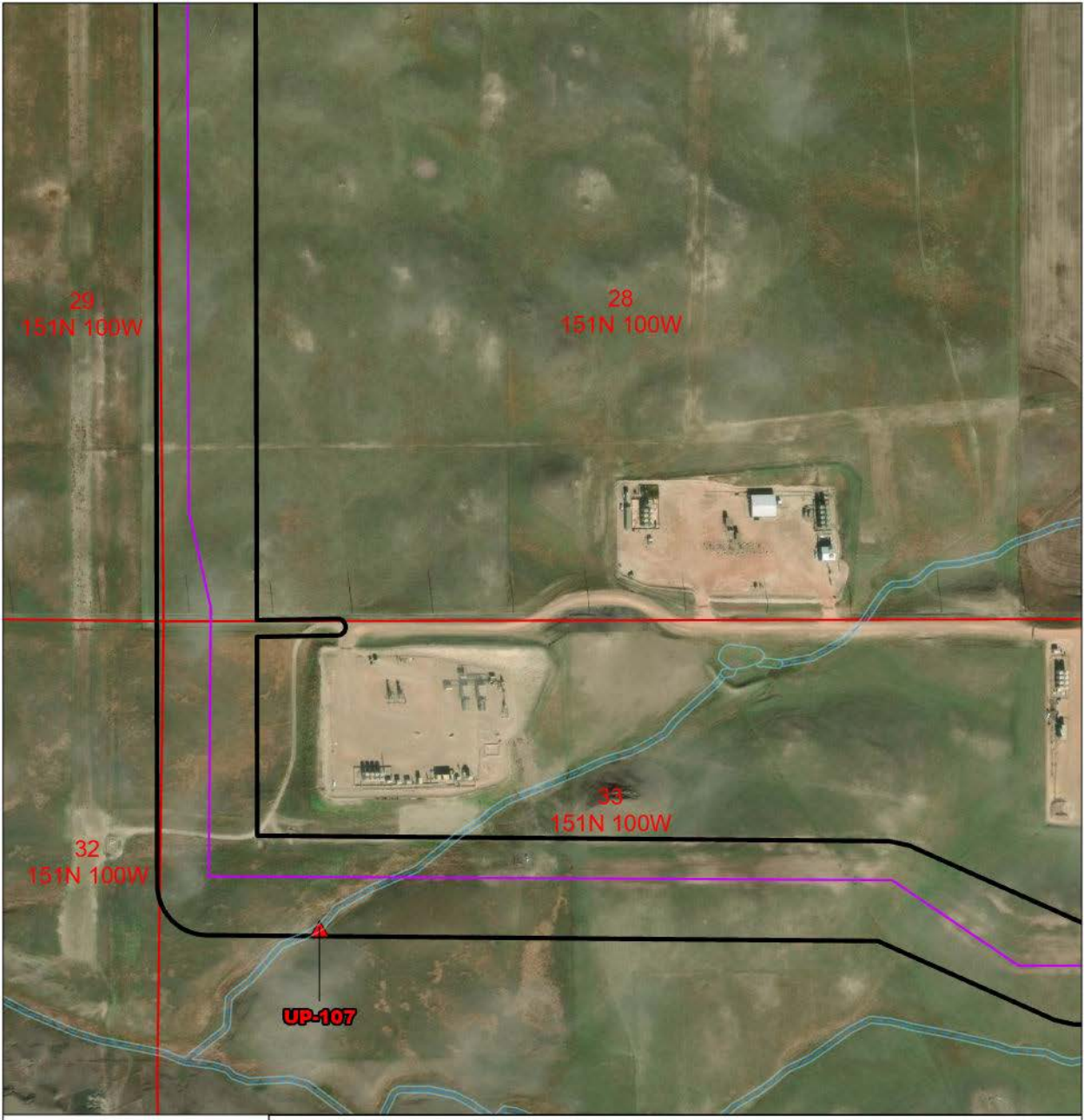
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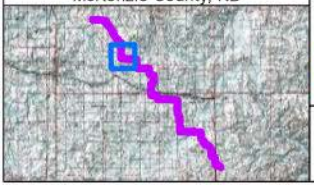
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Data Source: World Imagery
Coordinate System: NAD 1983 UTM Zone 13N
Date: 1/9/2025 Author: B. Brooks

WEST



Hiland Express Spine Pipeline Project
McKenzie County, ND



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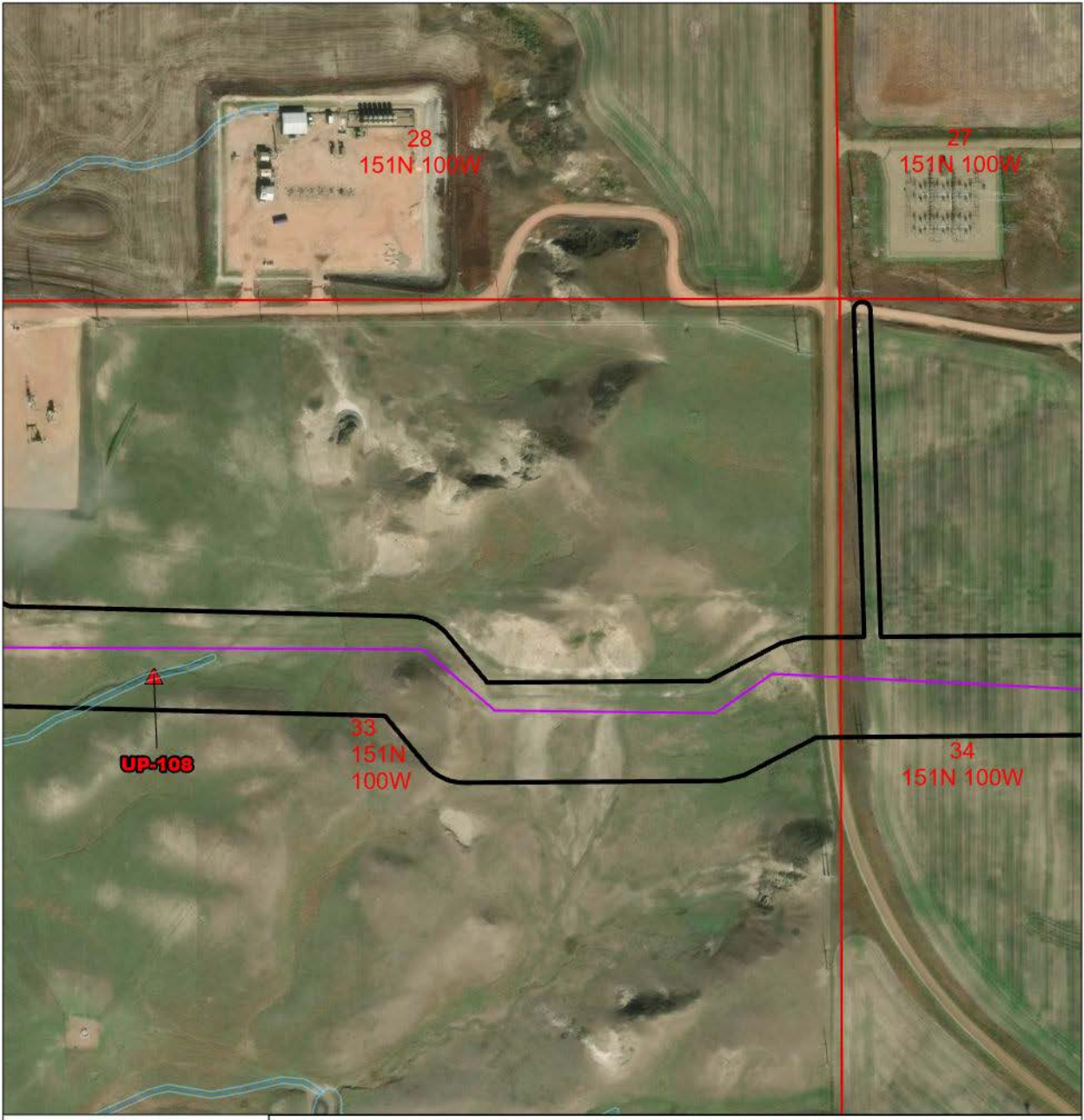
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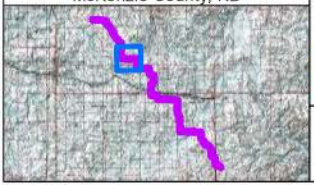
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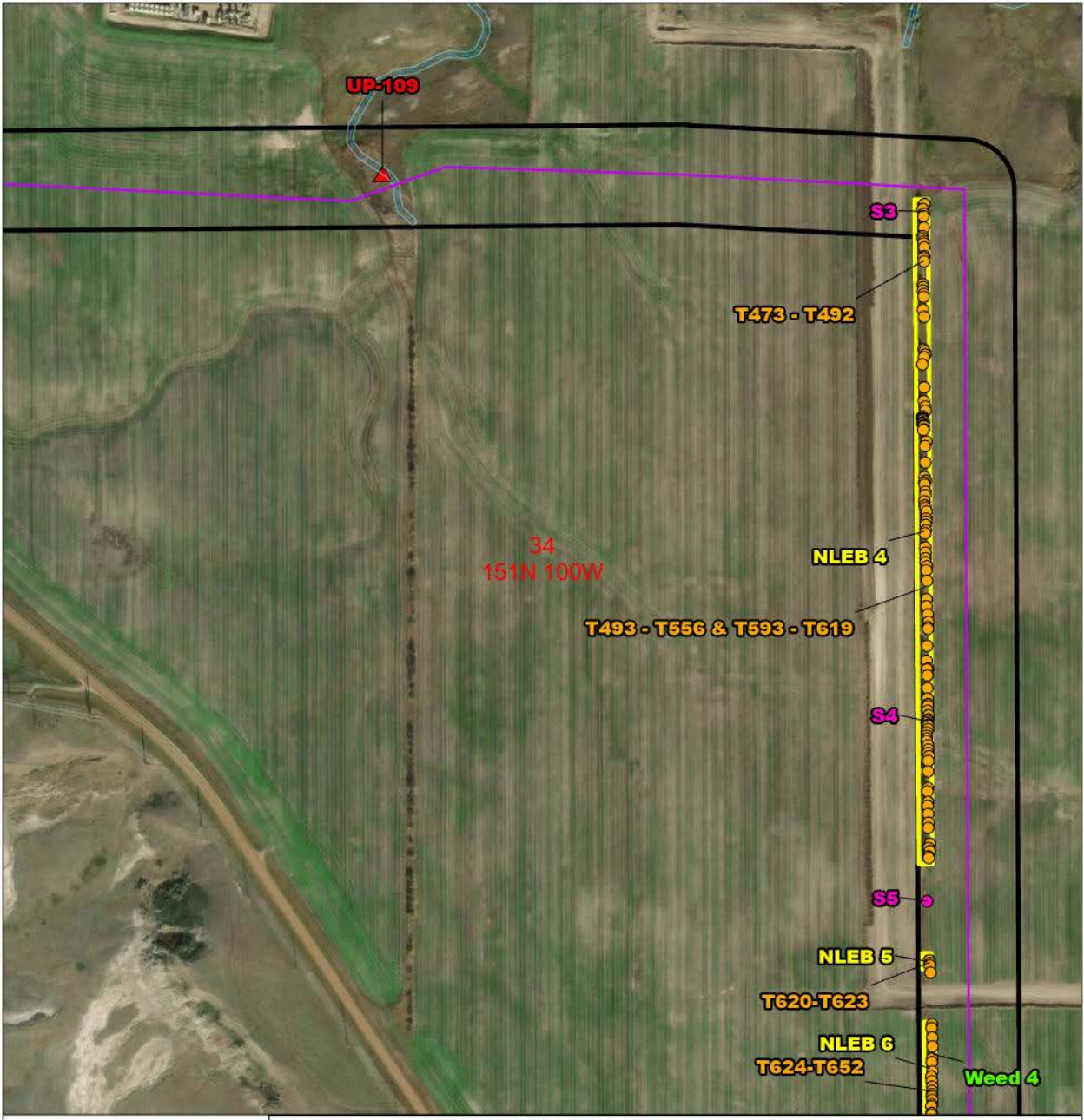
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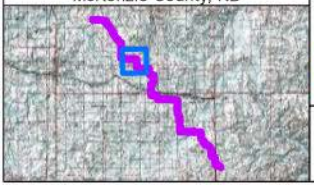
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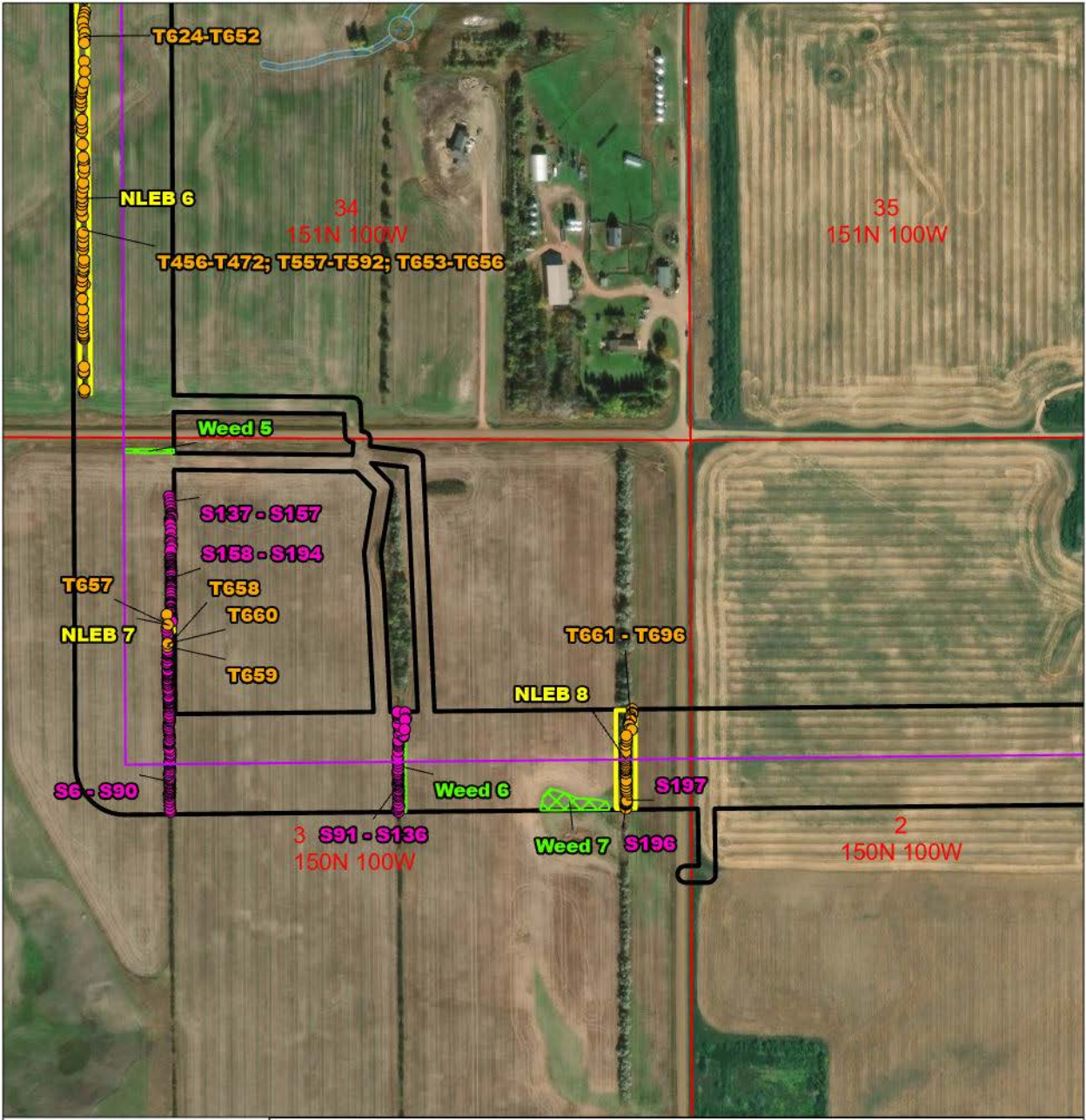
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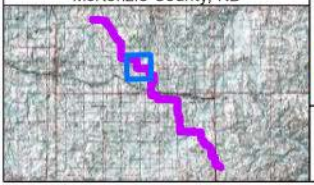
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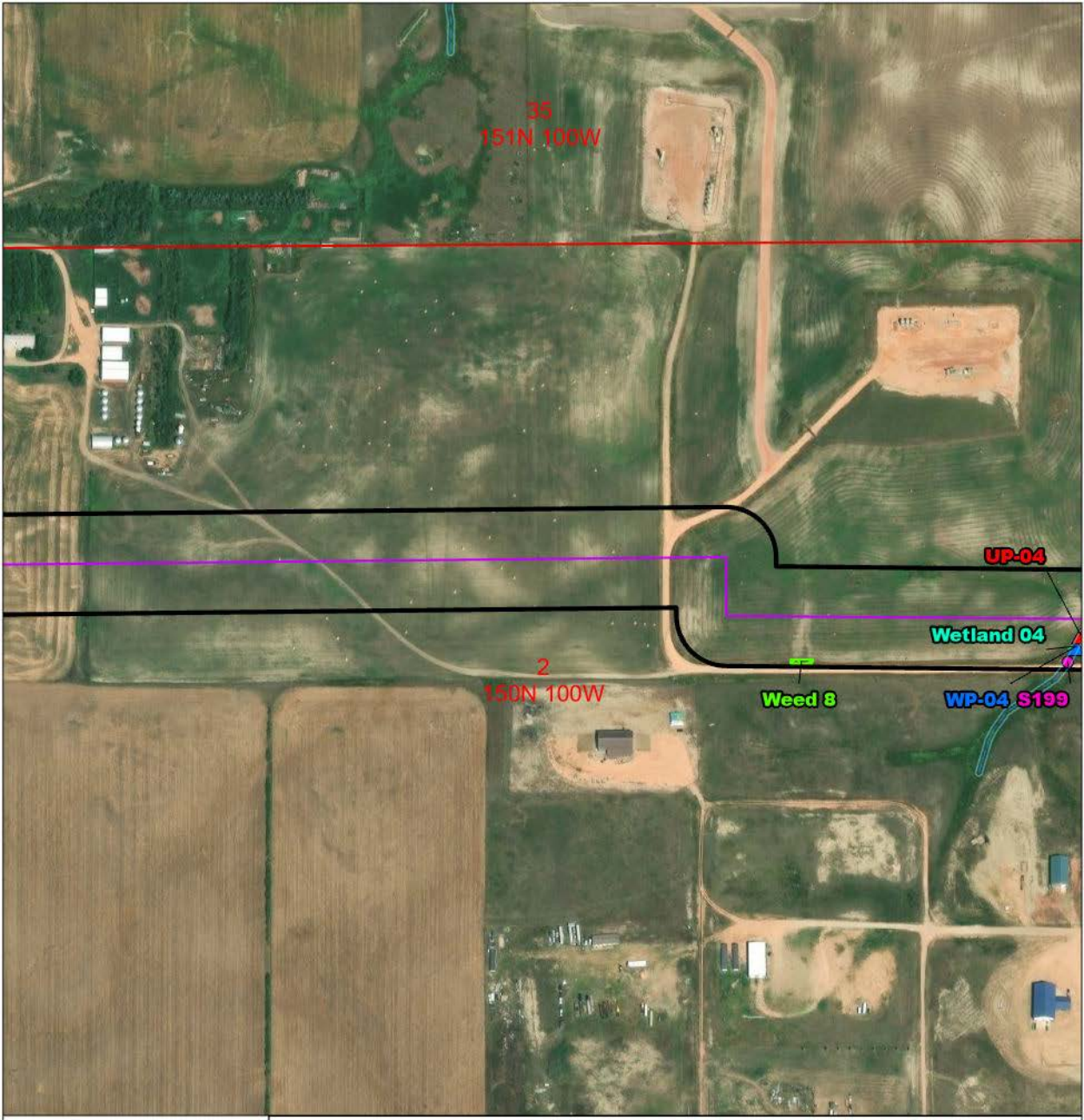
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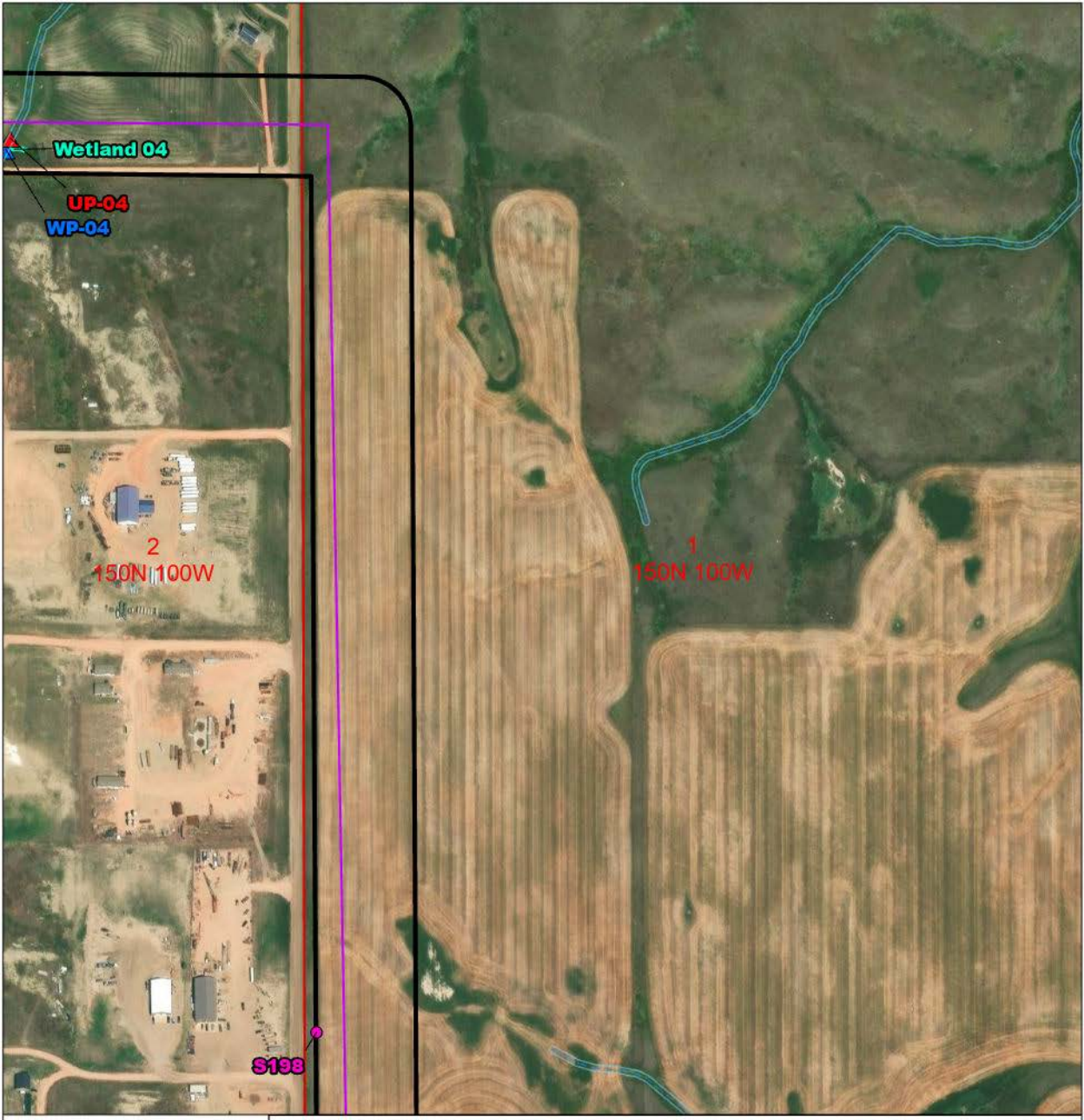
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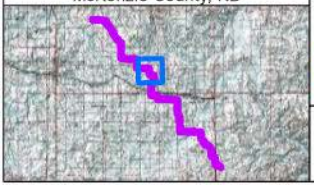
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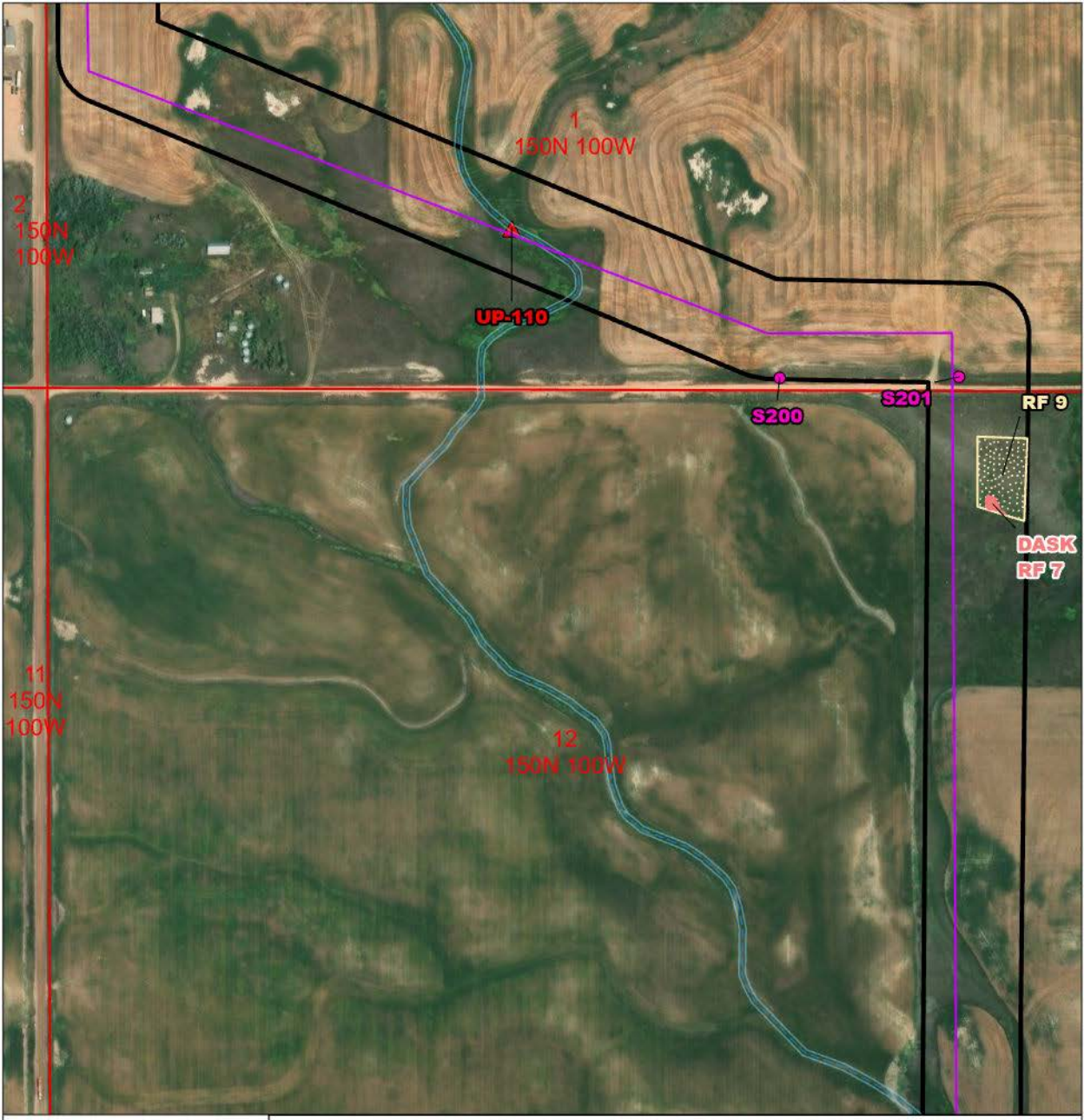
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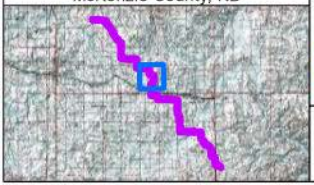
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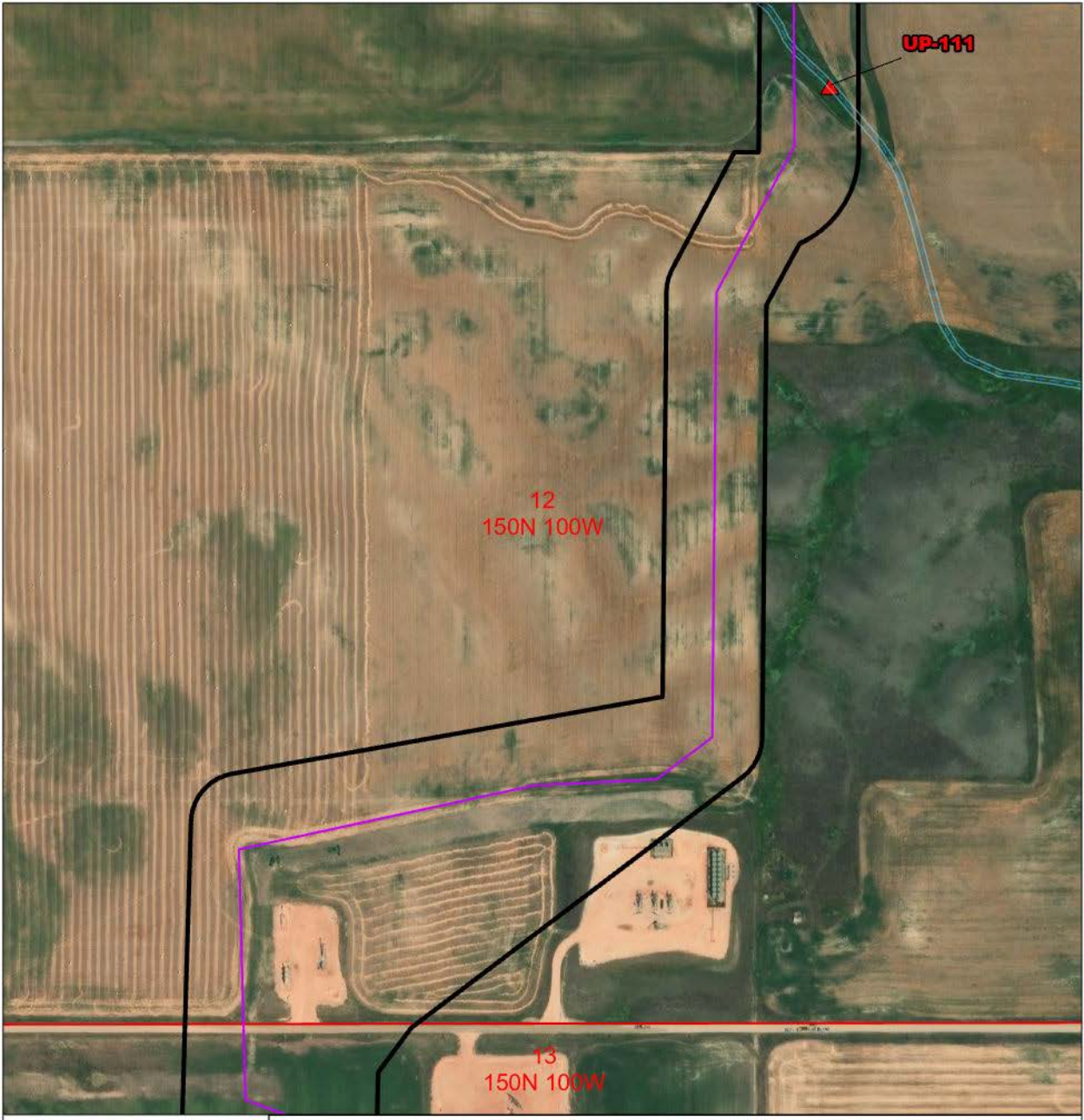
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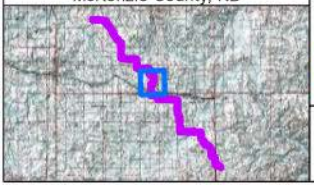
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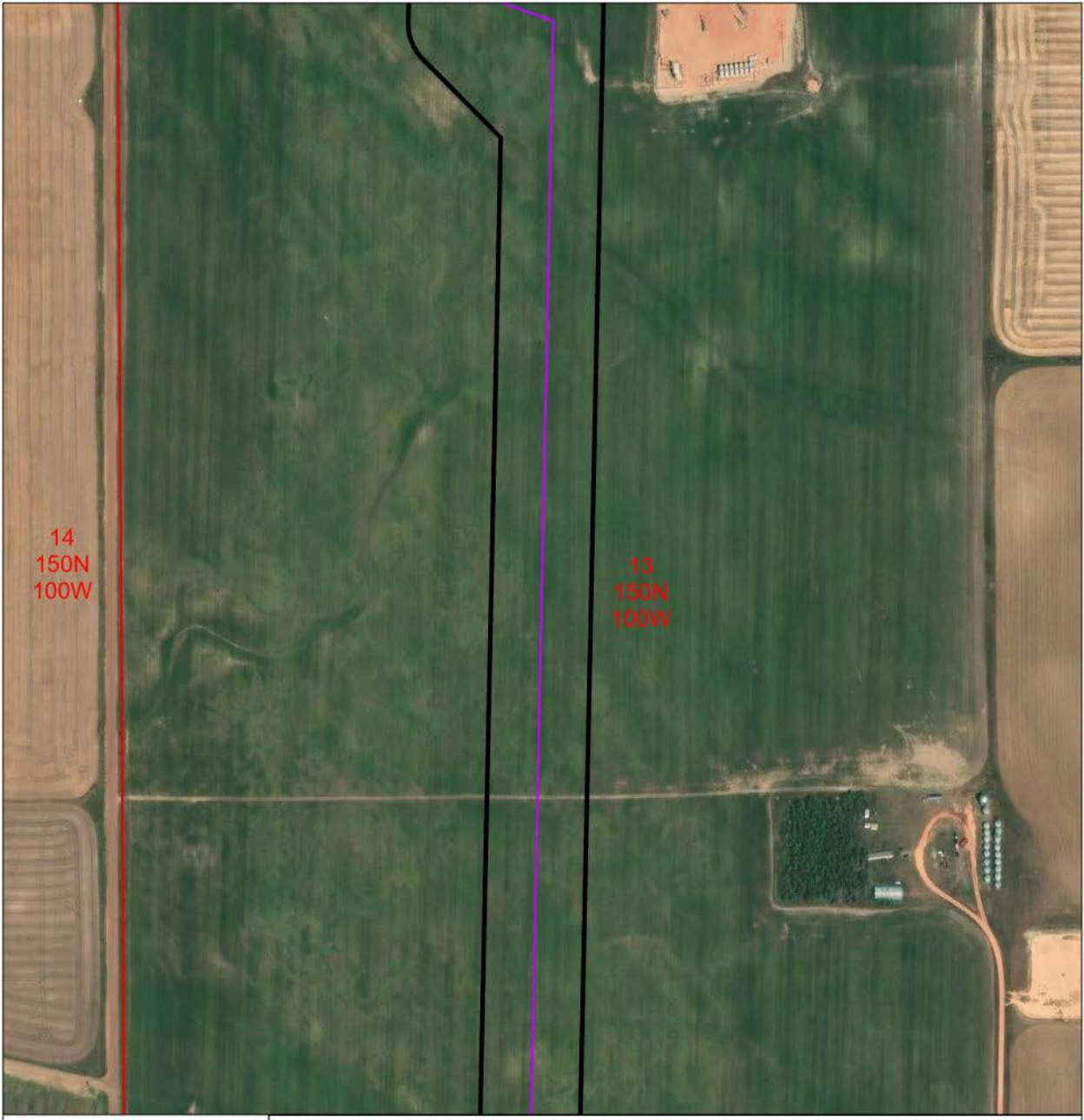
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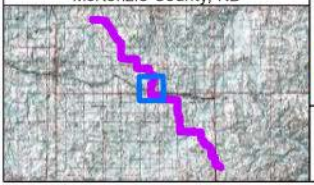
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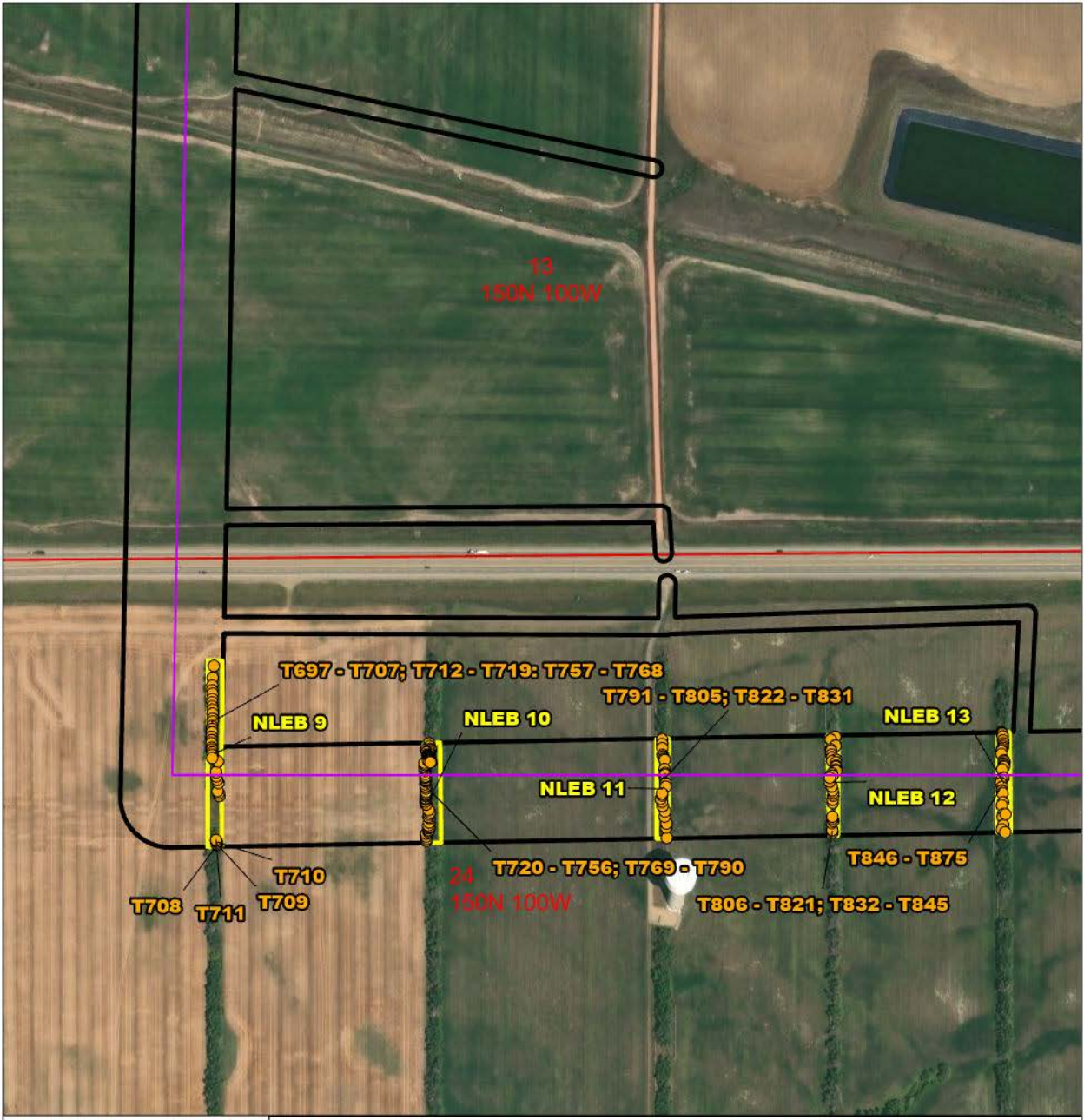
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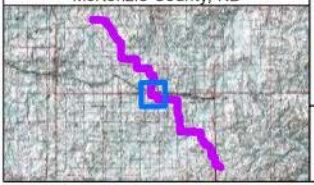
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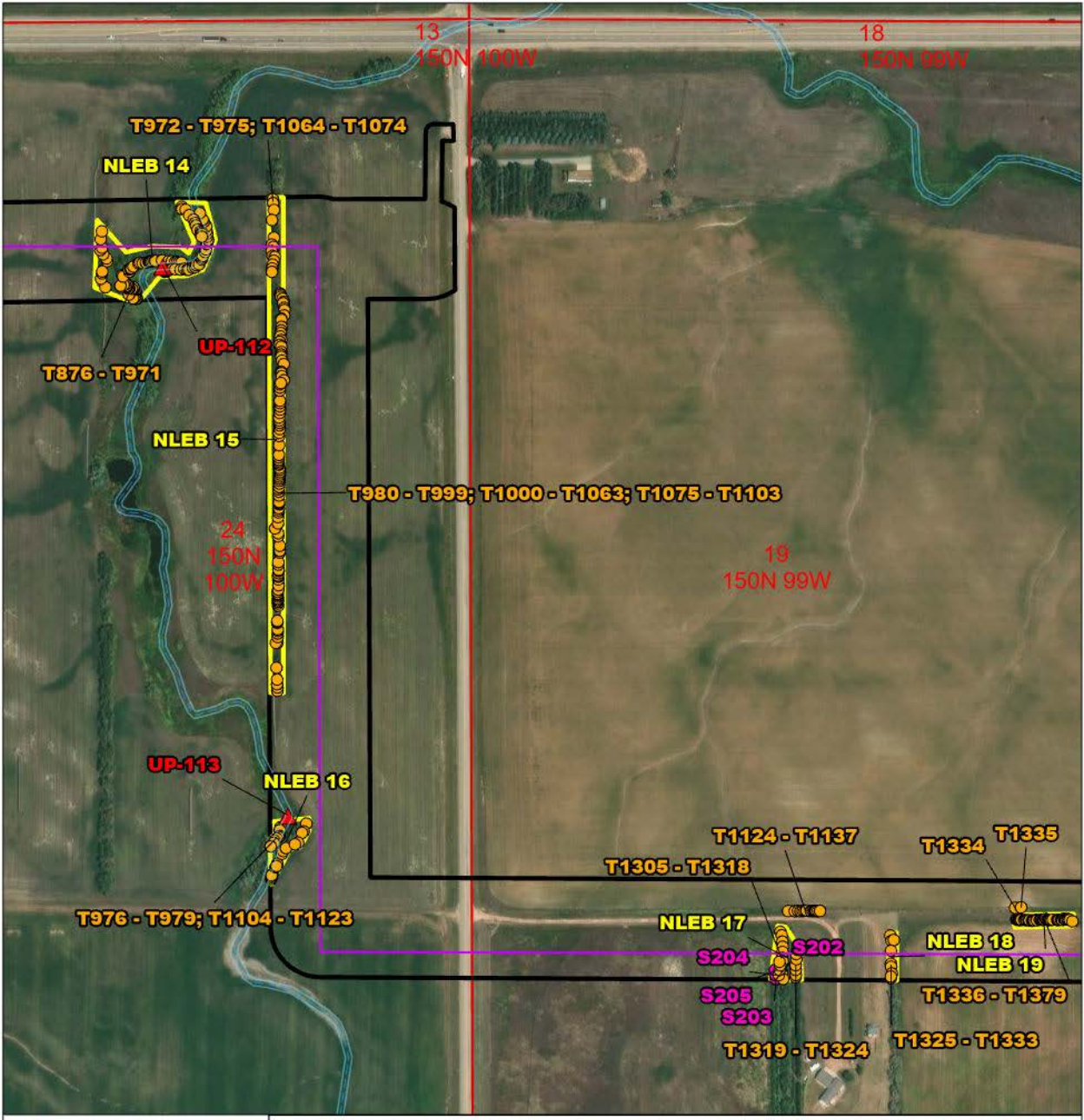
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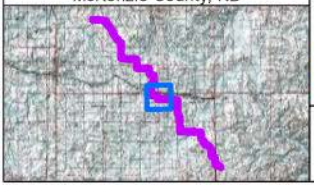
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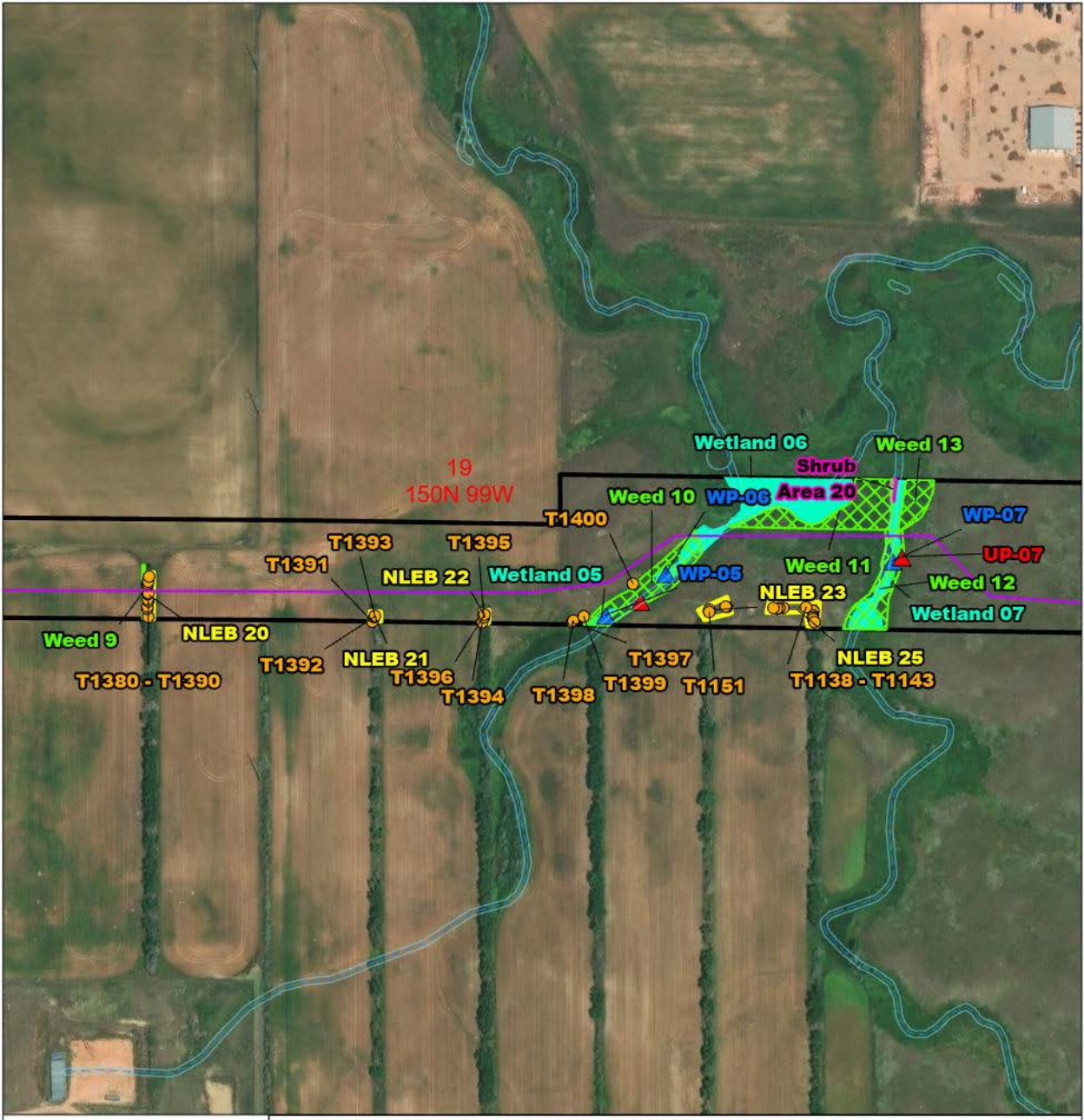
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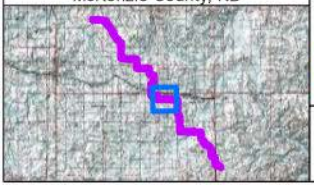
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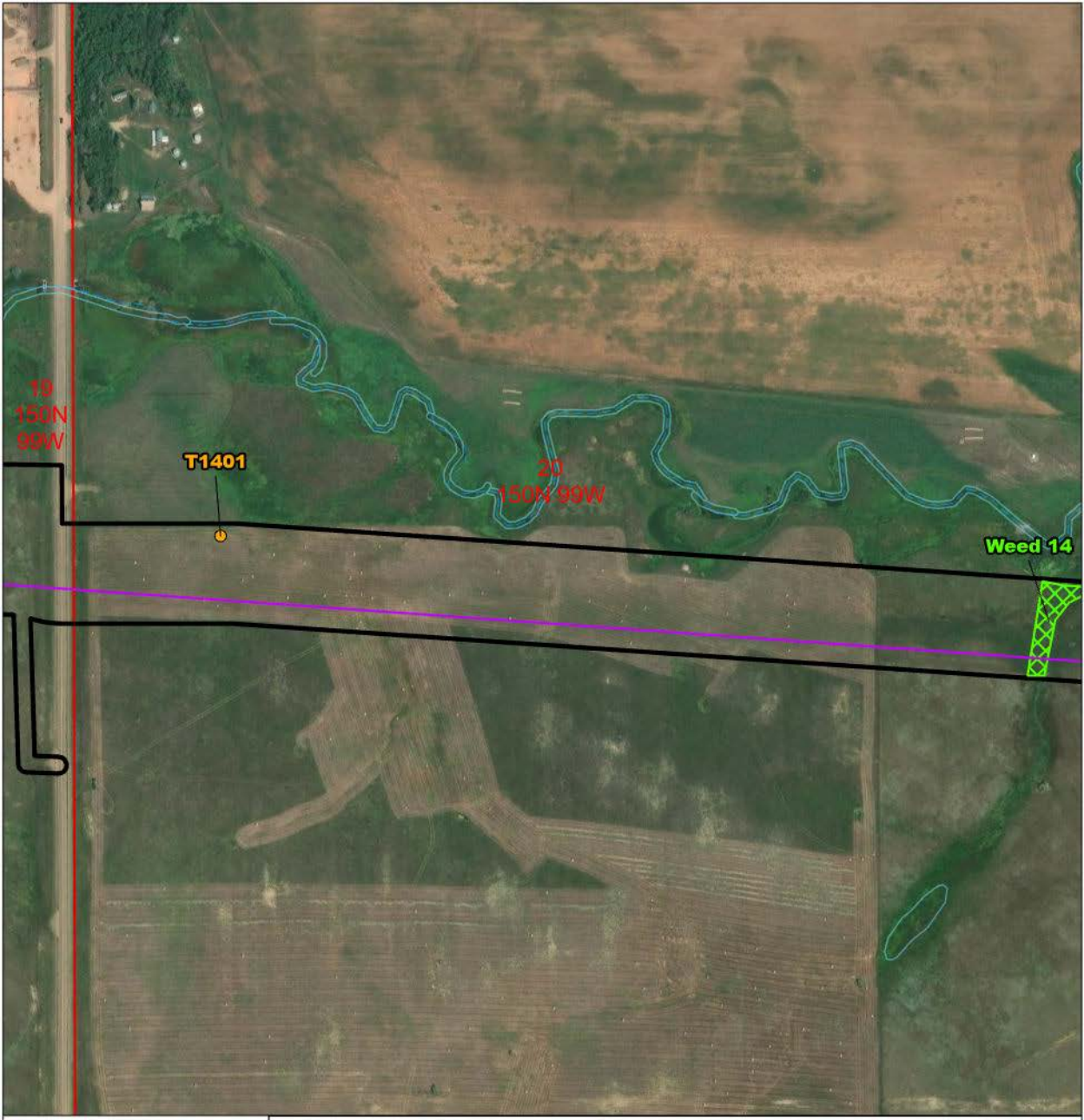
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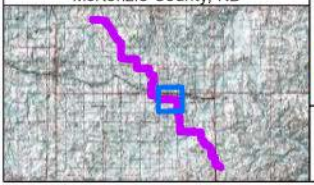
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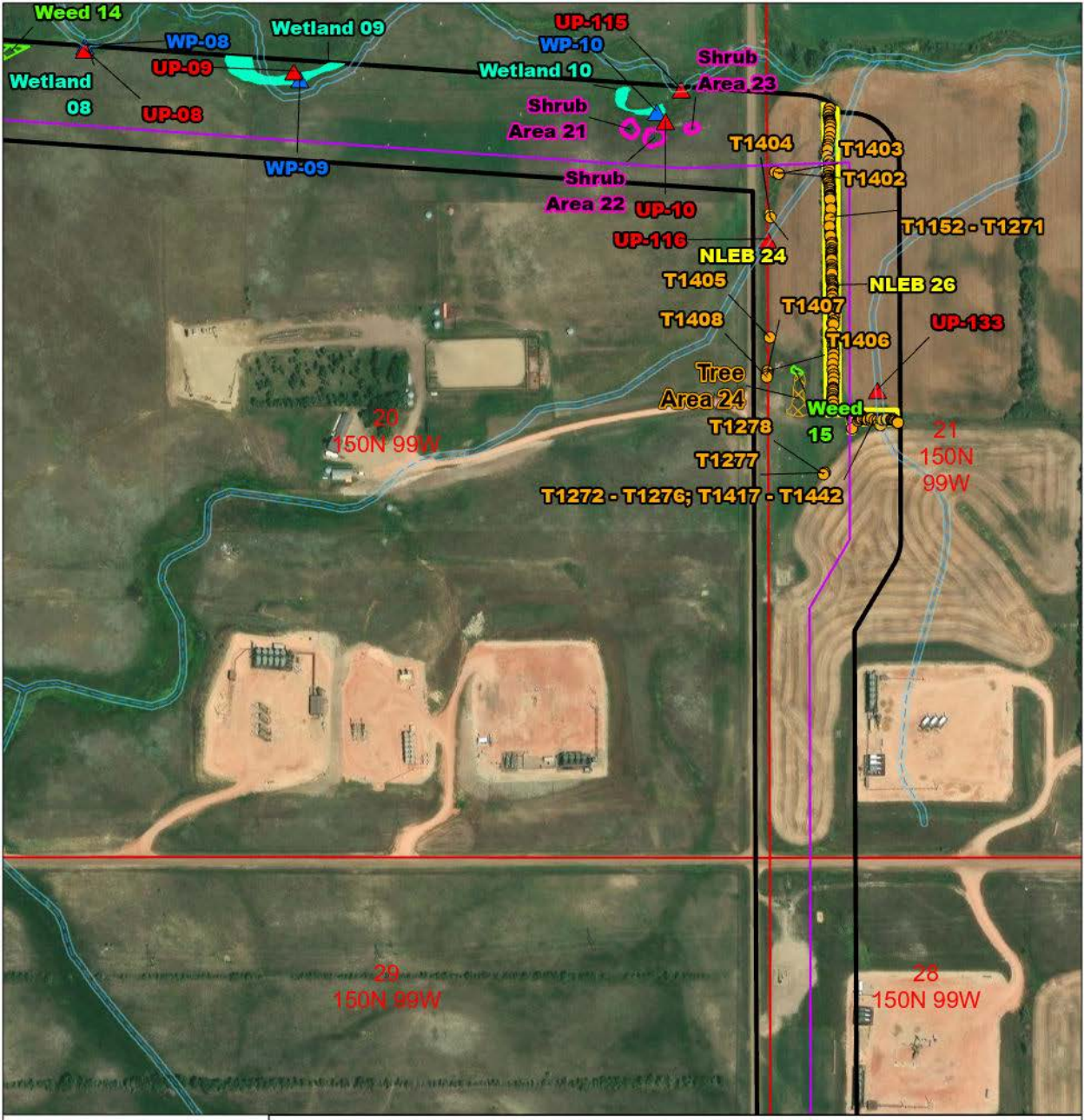
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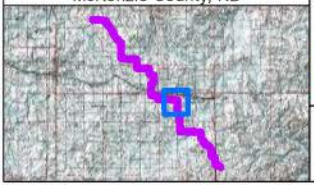
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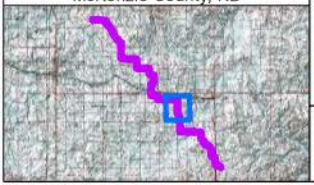
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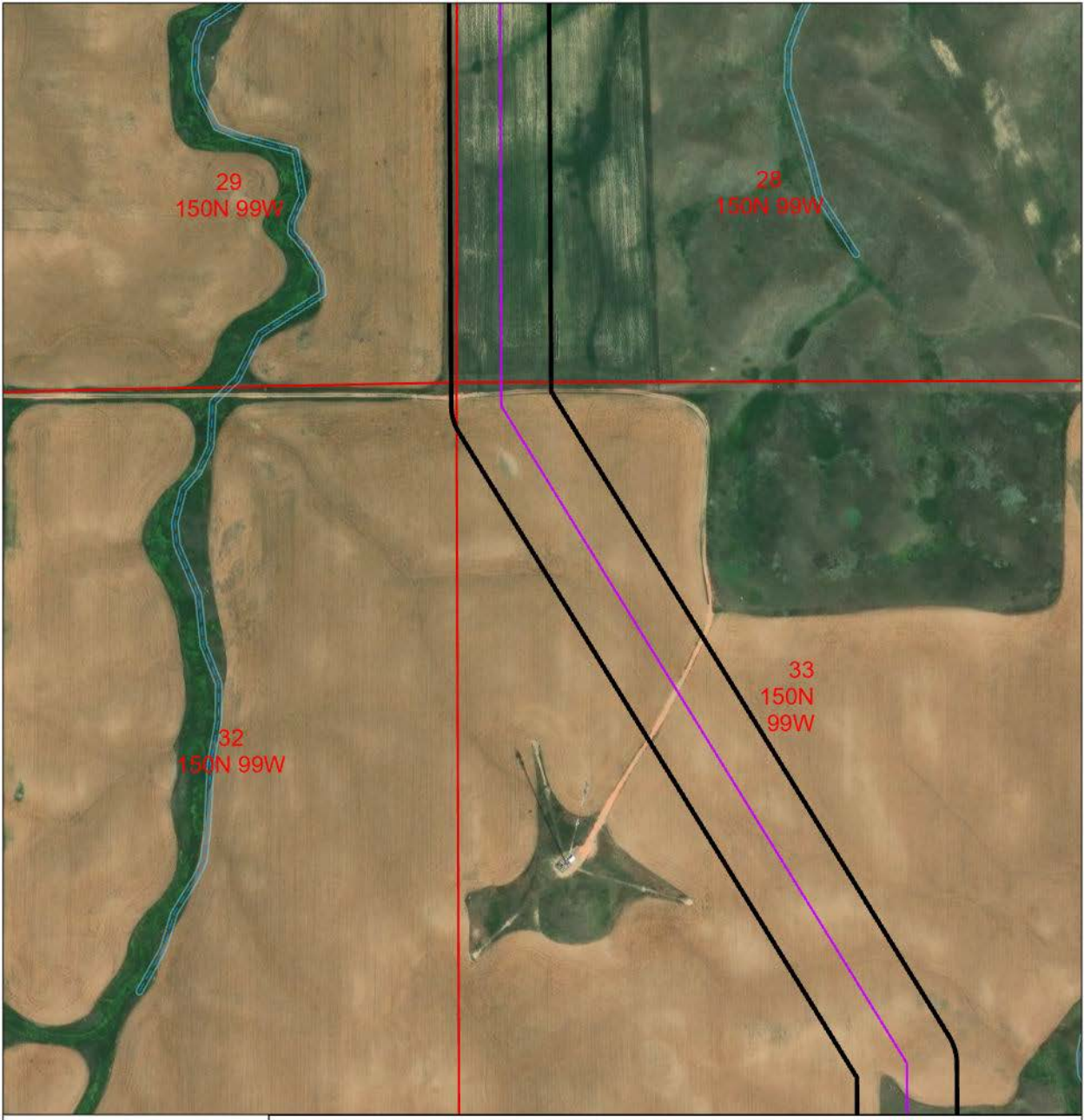
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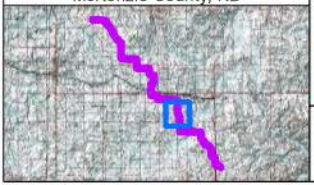
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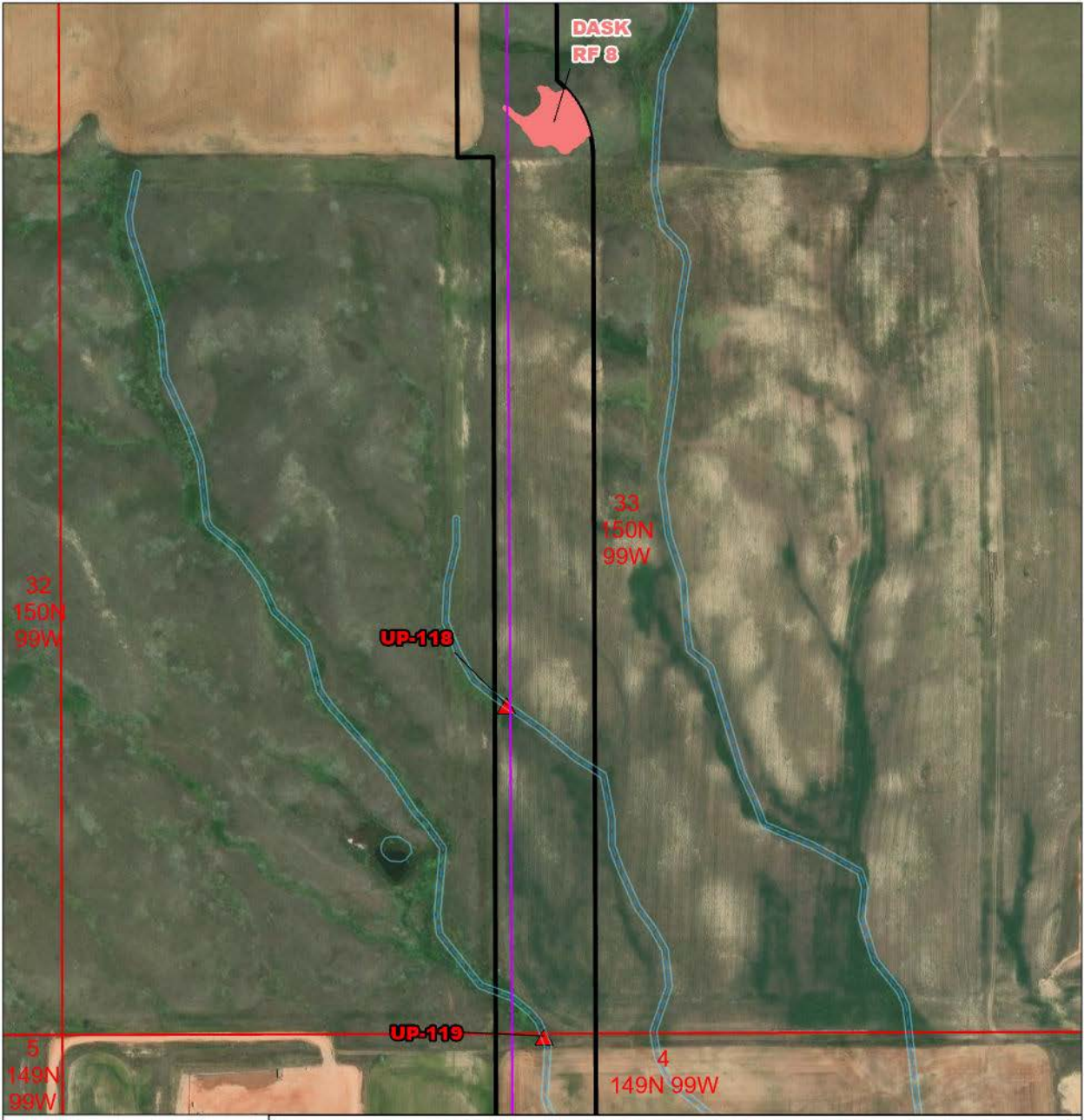
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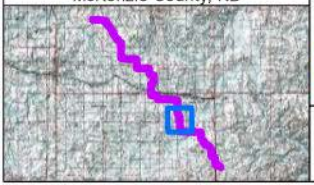
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- Tree Point
- Hydric Observation Point
- Upland Observation Point

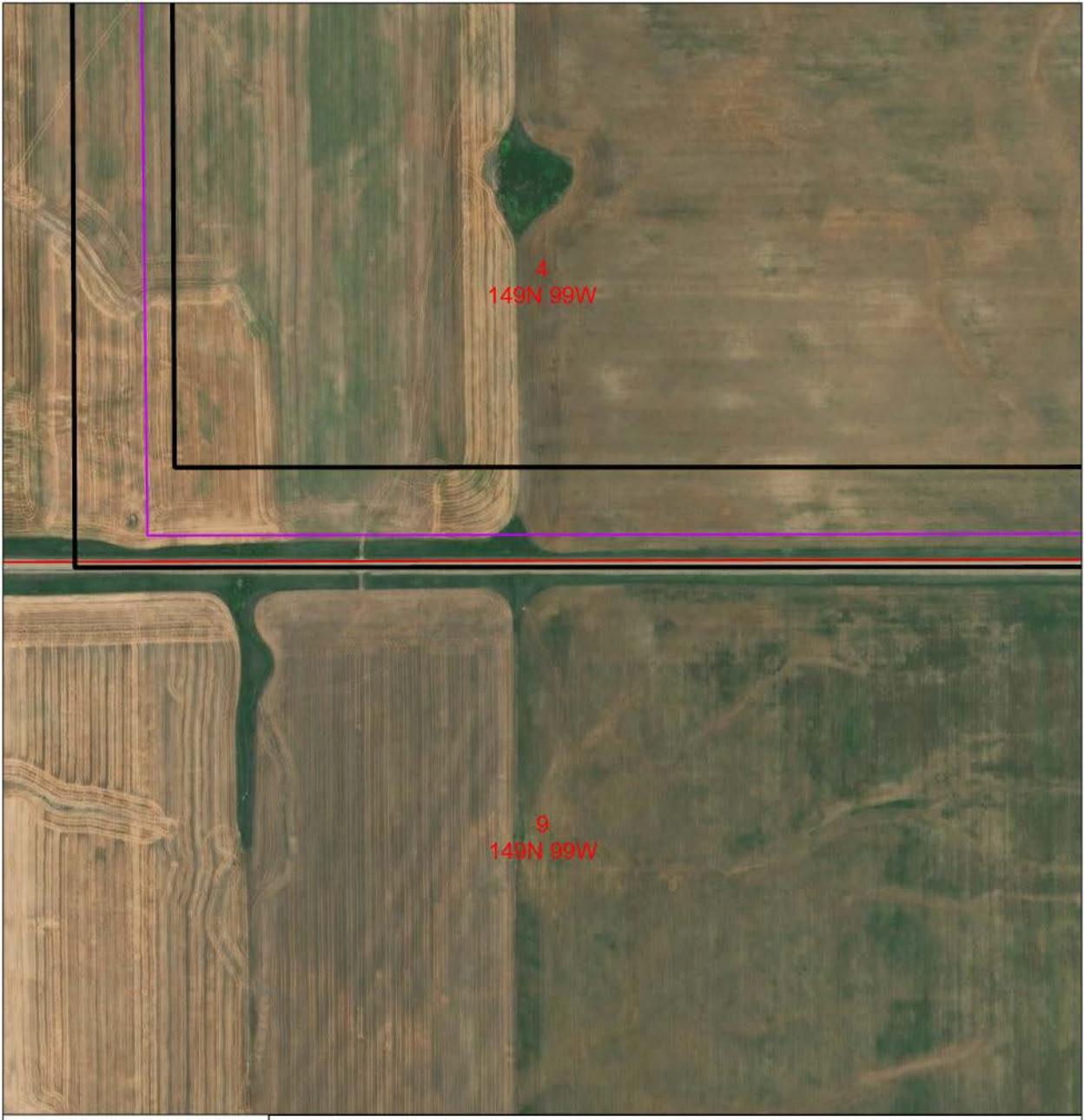
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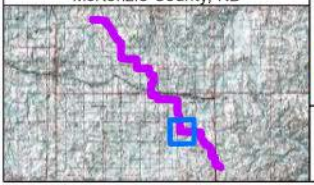
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Data Source: World Imagery
Coordinate System: NAD 1983 UTM Zone 13N
Date: 1/9/2025 Author: B. Brooks

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Hiland Express Spine Pipeline Project
McKenzie County, ND



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- Tree Polygon
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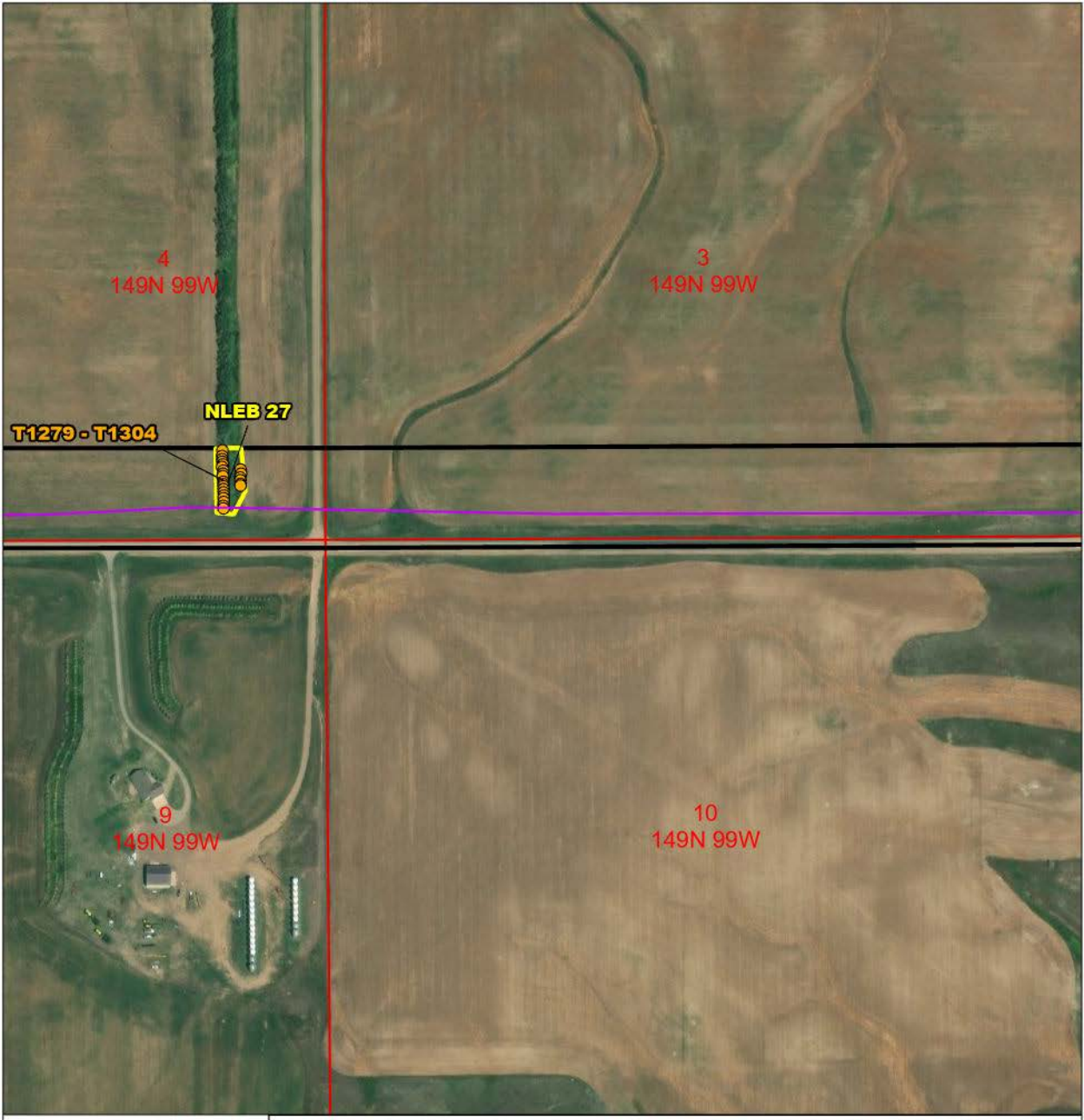
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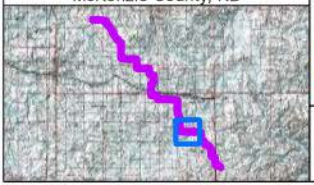
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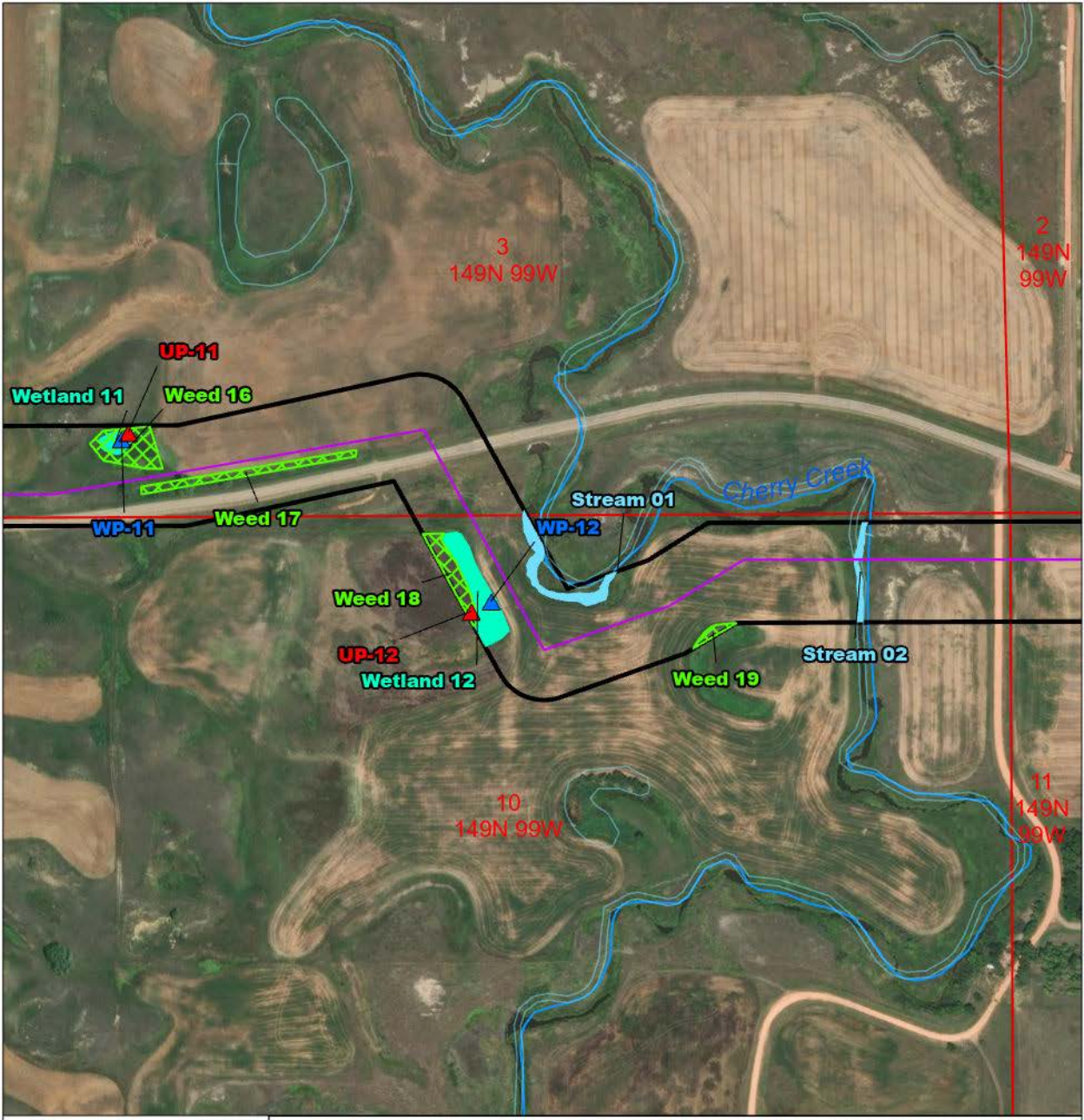
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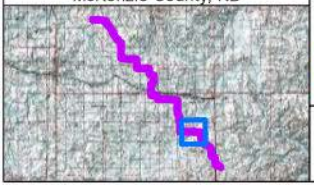
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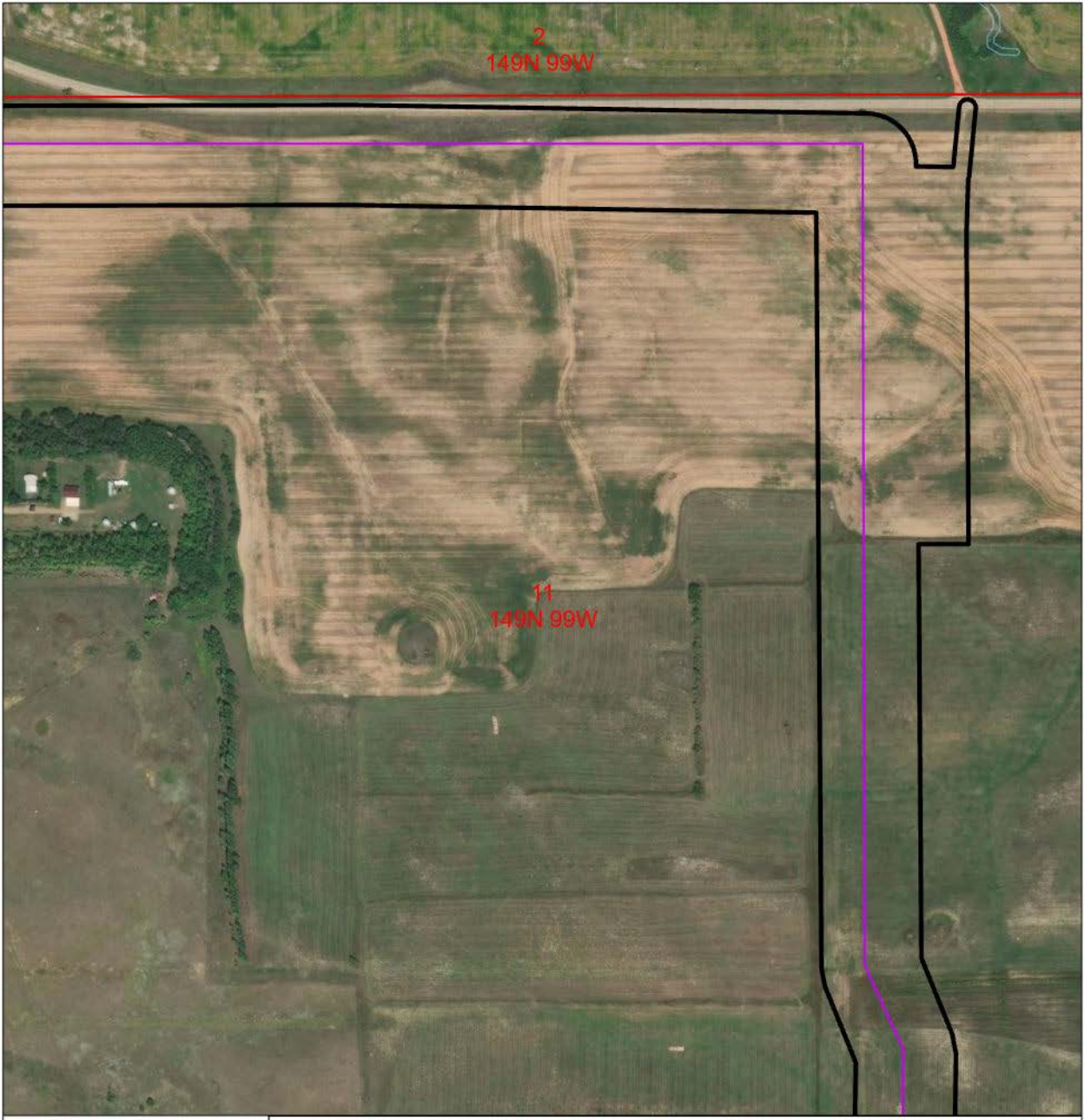
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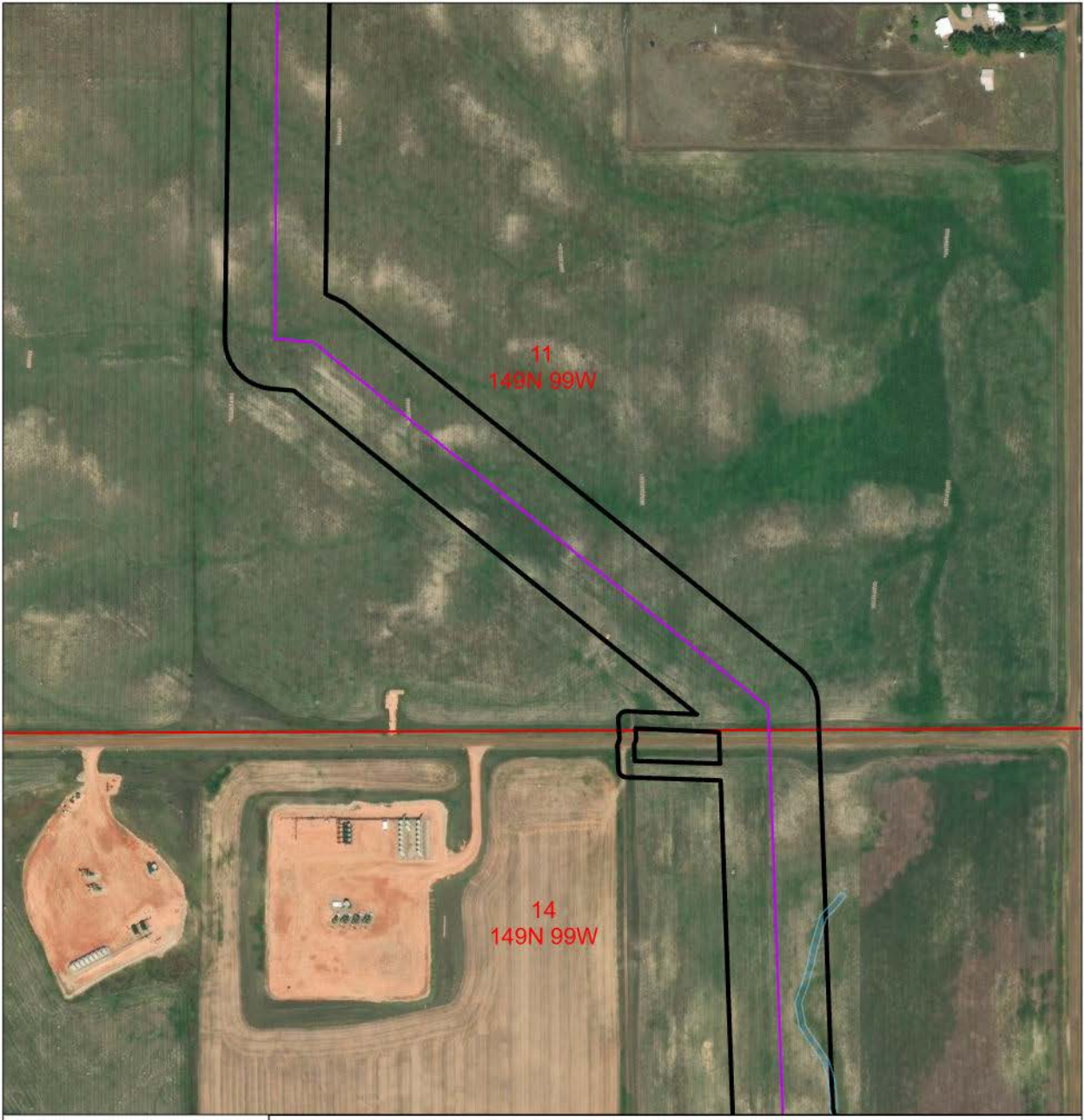
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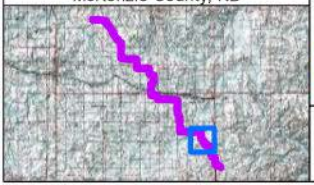
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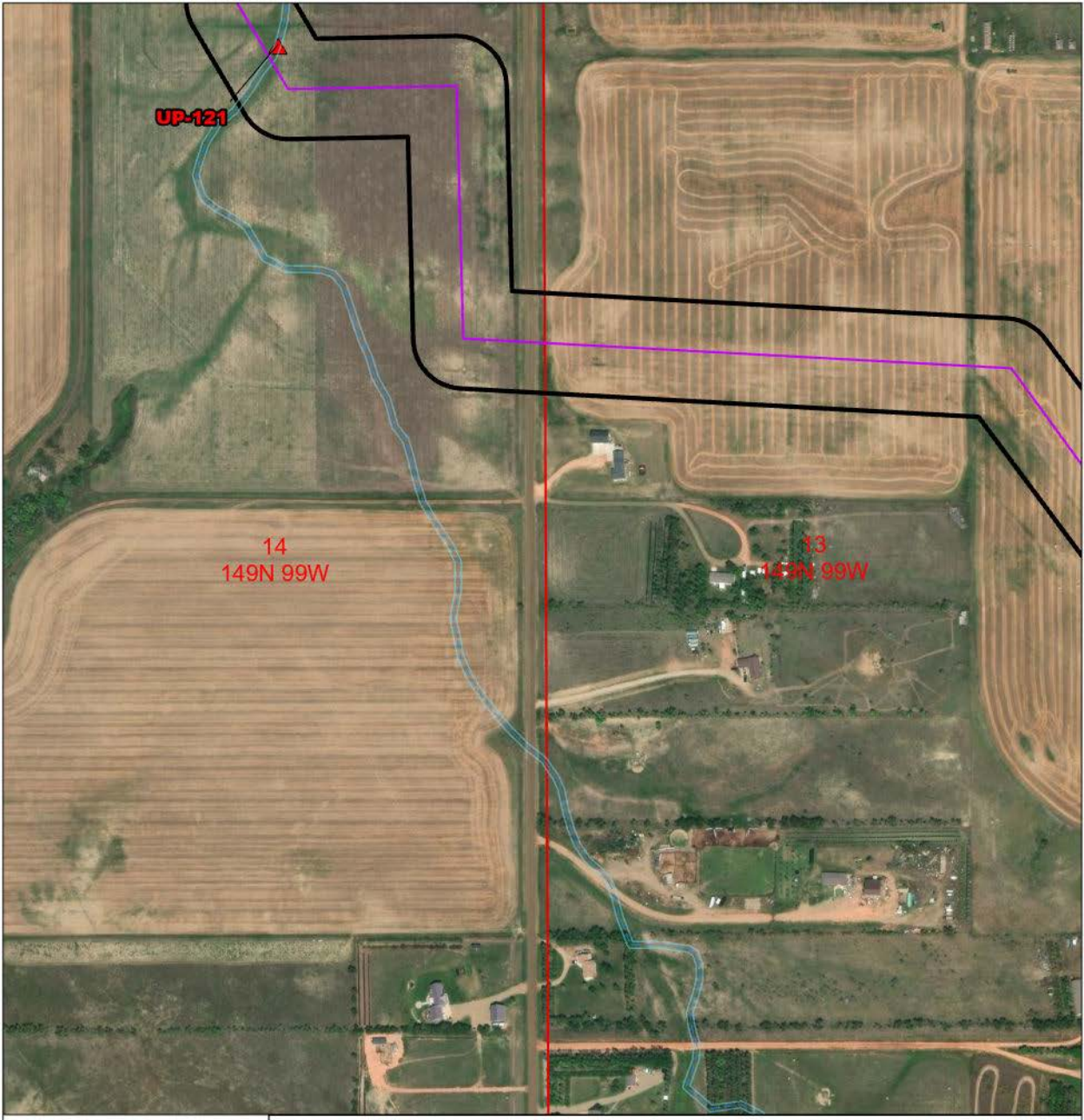
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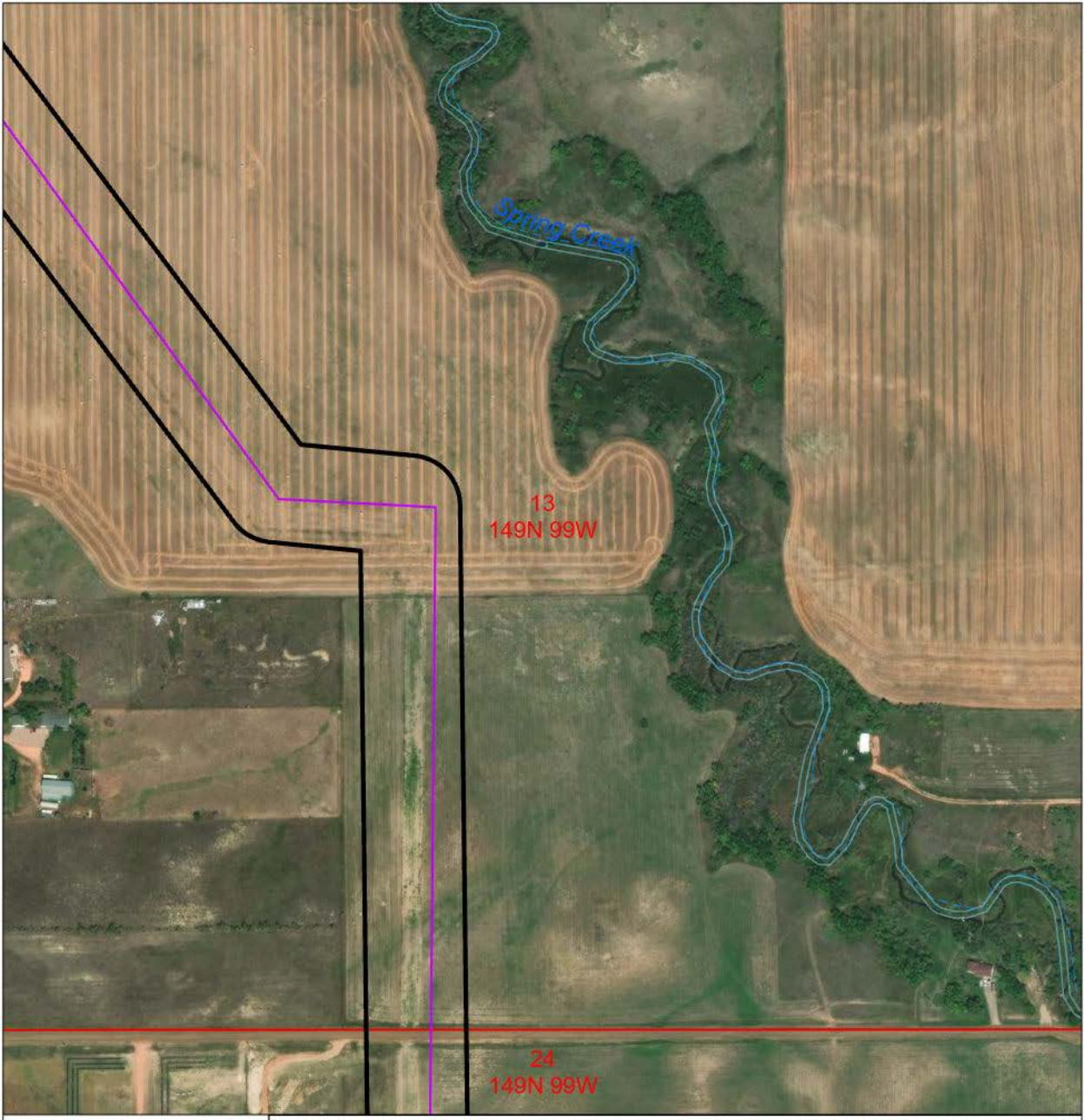
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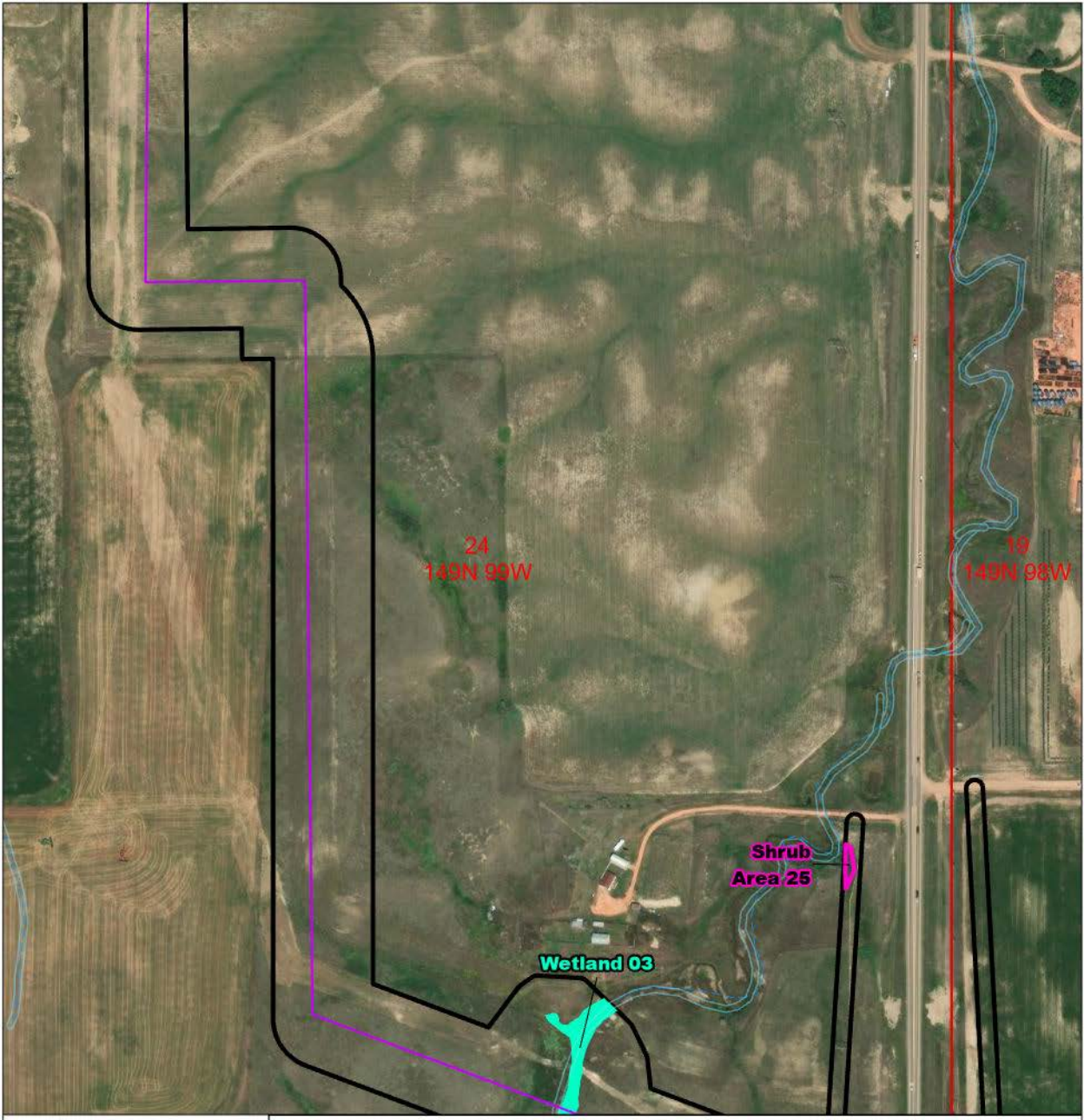
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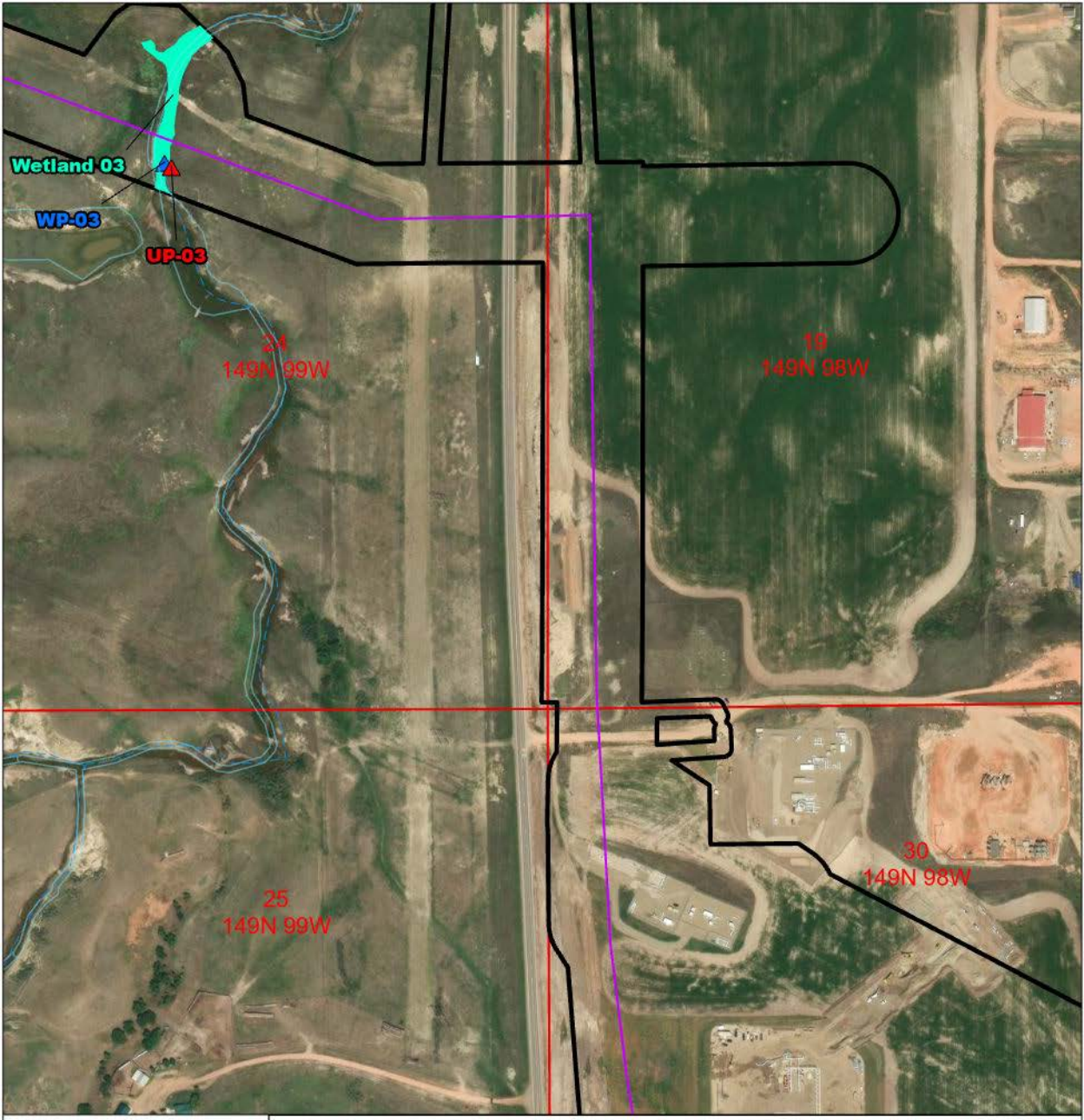
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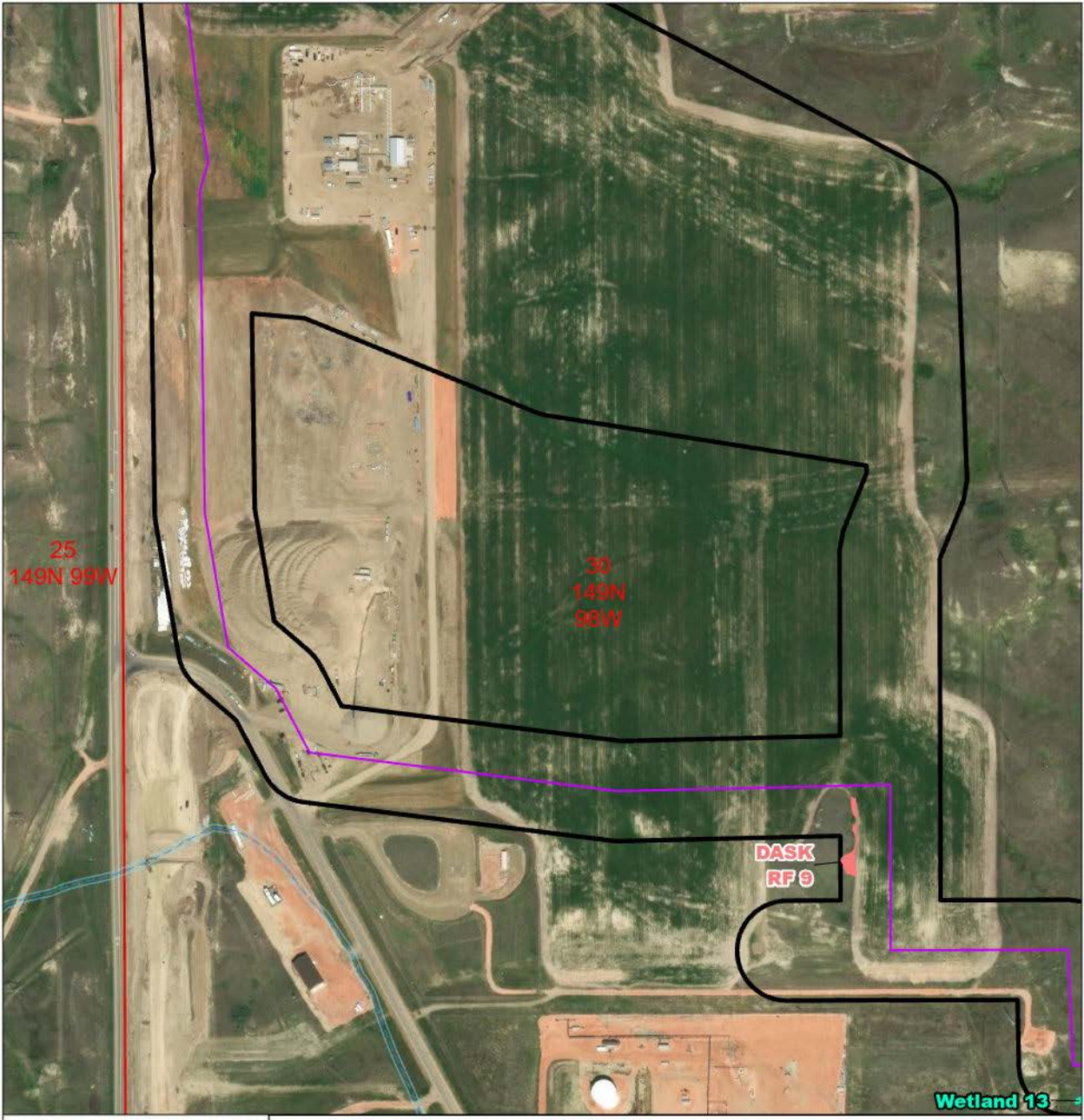
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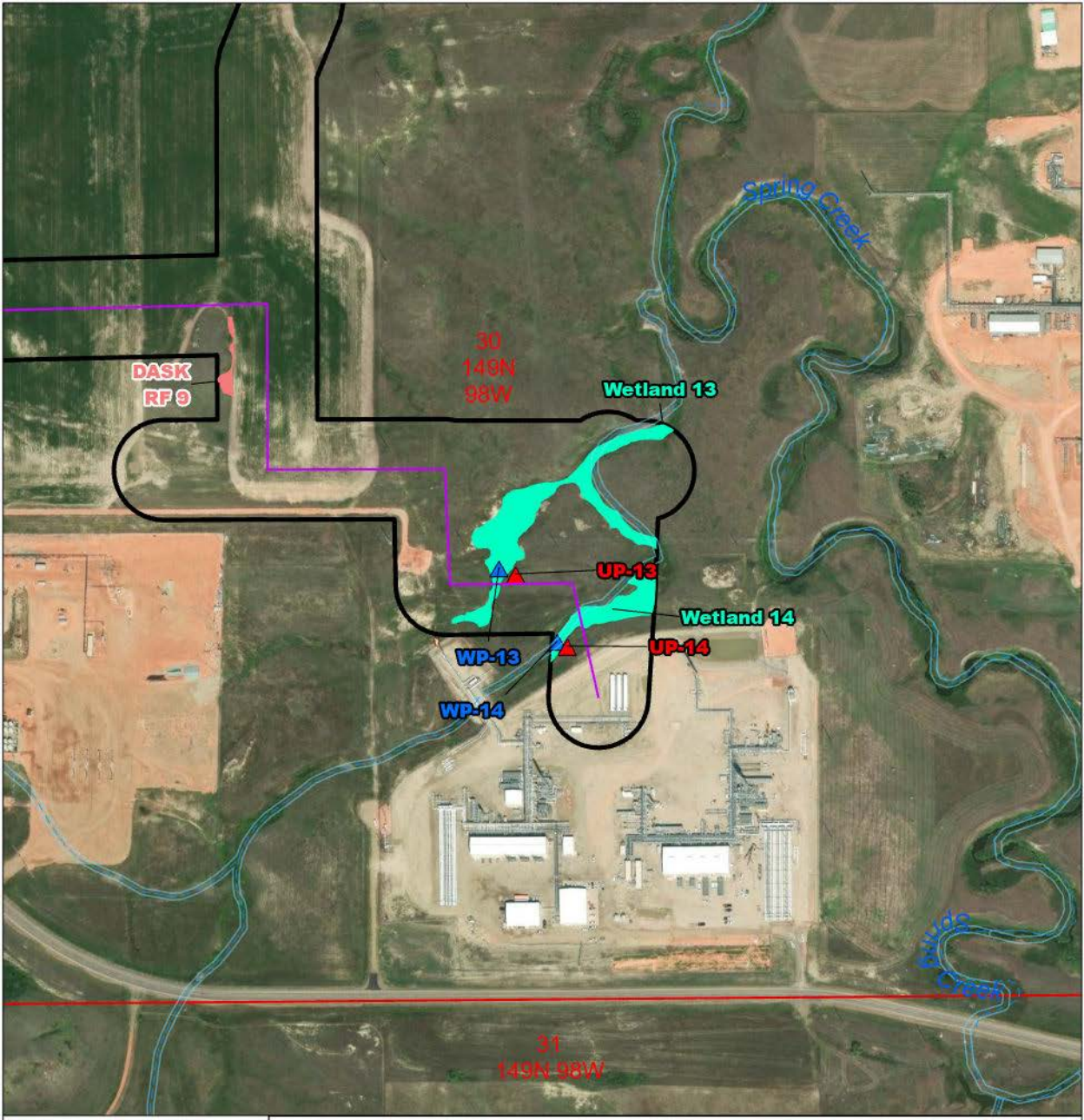
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N W E S

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Appendix C – Project Field Photographs



Photo 1. View of Wetland 2 (W-02) located South of 35th St NW in the North ½ of Sec. 12-T151N-R101W.



Photo 2. View of Dakota skipper and regal fritillary habitat (DASK RF 1) dominated by big bluestem located in the center of Sec. 7-T151N-R100W



Photo 3. View at upland observation point UP-101 of upland swale dominated by smooth brome located in the center of Sec. 7-T151N-R100W.

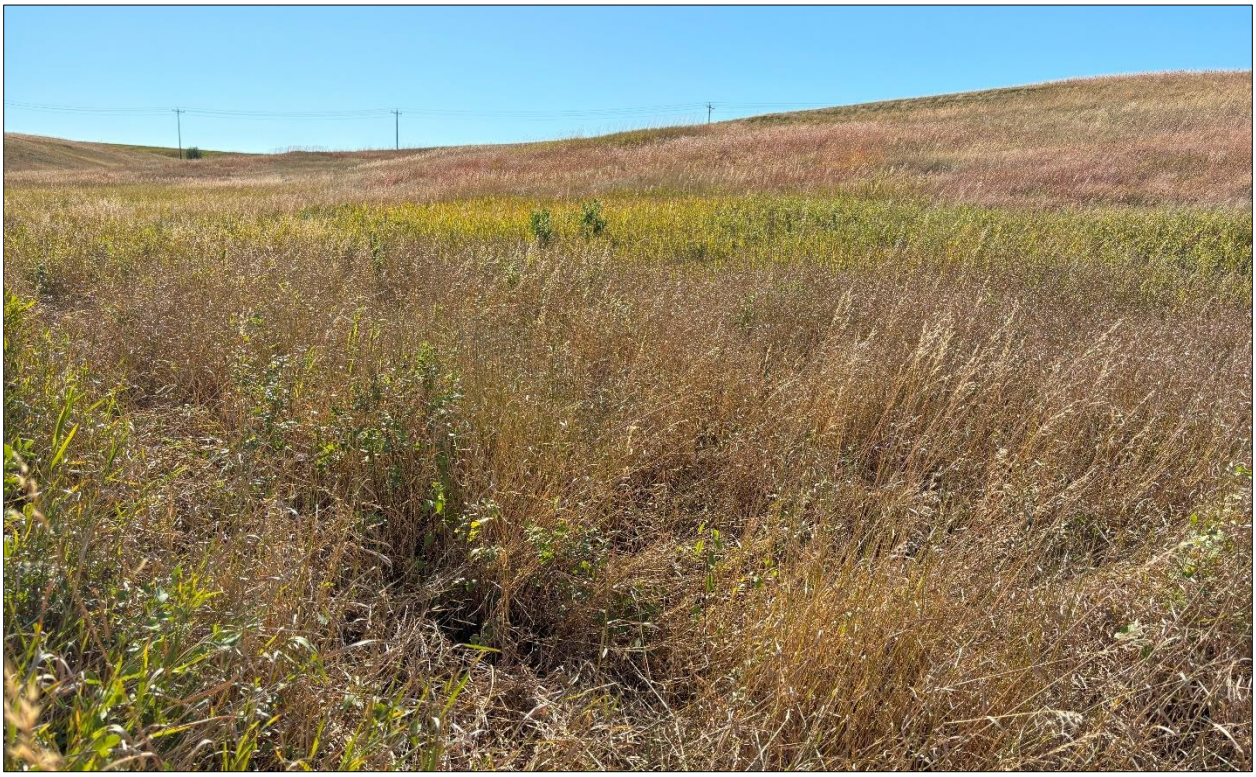


Photo 4. View at upland observation point UP-102 of upland swale dominated by smooth brome and western snowberry located in the NW ¼ of Sec. 17-T151N-R100W on the East side of County Rd 16.



Photo 5. View of regal fritillary habitat (RF 6) dominated by porcupine grass and sand reed grass located in the South ½ of Sec. 17-T151N-R100W.



Photo 6. View at upland observation point UP-105 of an upland swale dominated by barnyard grass and western snowberry located in the NW ¼ of Sec. 28-T151N-R100W, South of 32nd St NW.

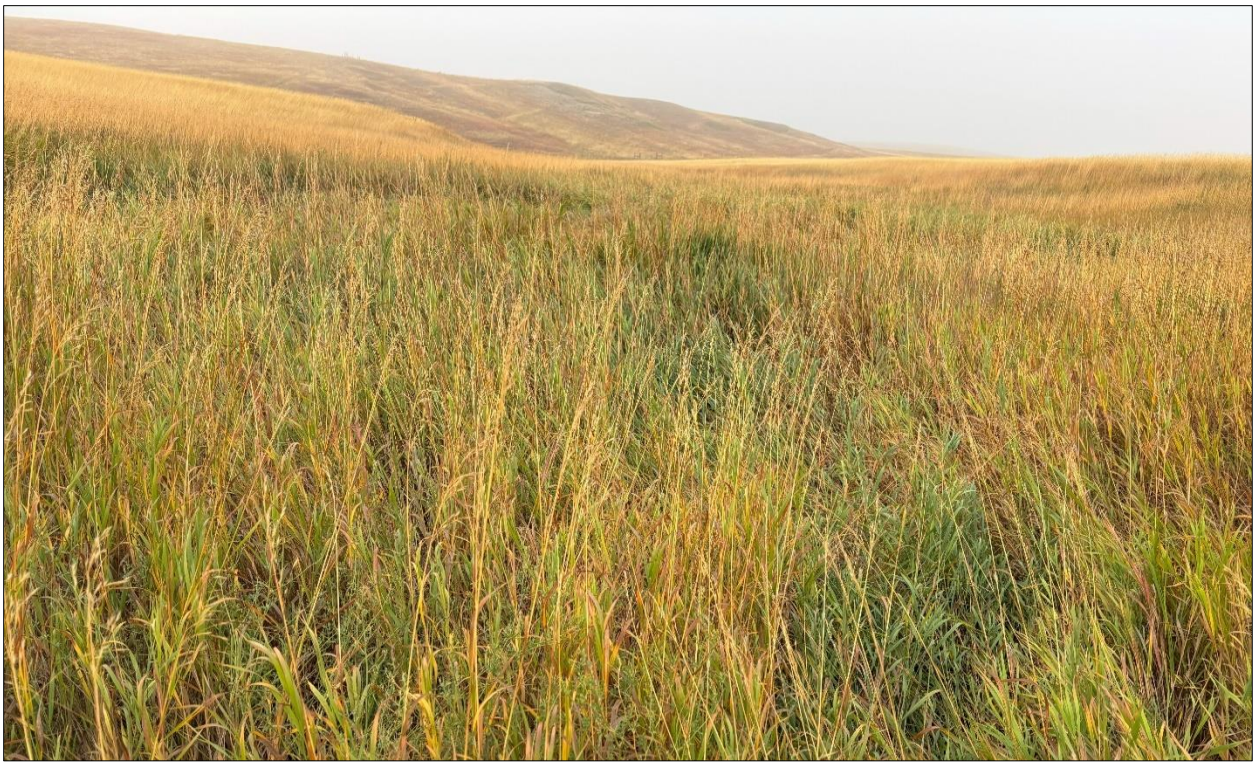


Photo 7. View at upland observation point UP-107 of an upland swale dominated by smooth brome located in the NW ¼ of Sec. 33-T151N-R100W.



Photo 8. View of Wetland 6 (W-06) dominated by cattail and prairie cordgrass located in the East ½ of Sec. 19-T150N-R99W on the West side of 131st Ave NW.

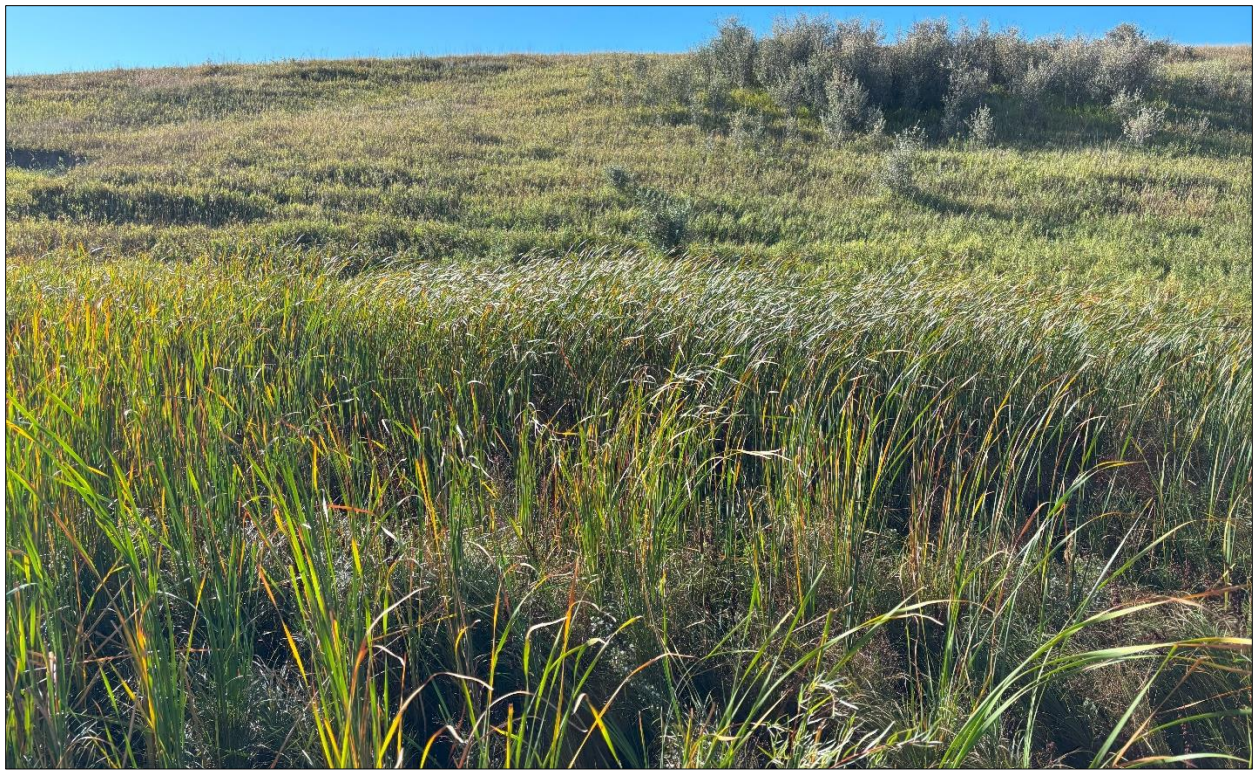


Photo 9. View of Wetland 10 (W-10) dominated by cattail and prairie cordgrass located in the SE ¼ of Sec. 20-T150N-R99W on the West side of 130th Ave NW.



Photo 10. View of Dakota skipper and regal fritillary habitat (DASK FR 8) dominated by little bluestem located in the West ½ of Sec. 33-T150N-R99W.

Appendix D. Tree and Shrub Inventory

Attributes of the tree points.

Feature	Name	Classification	Location	Species 1	Count
Tree Point	T414	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T415	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T416	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T417	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T418	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T419	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T420	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T421	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T422	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T423	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T424	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T425	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T426	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T427	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T428	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T429	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T430	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T431	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T432	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T433	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T434	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T435	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T436	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T437	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T438	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T439	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T440	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T441	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T442	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T443	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T444	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T445	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T446	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T447	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T448	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T449	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T450	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T451	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T452	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T453	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T454	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T455	Natural growth	Sec. 11, T151N, R101W	Siberian elm	1
Tree Point	T456	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T457	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T458	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T459	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T460	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T461	Planted	Sec. 34, T151N, R100W	Ponderosa pine	1
Tree Point	T462	Planted	Sec. 34, T151N, R100W	Ponderosa pine	1

Tree Point	T463	Planted	Sec. 34, T151N, R100W	Ponderosa pine	1
Tree Point	T464	Planted	Sec. 34, T151N, R100W	Ponderosa pine	1
Tree Point	T465	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T466	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T467	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T468	Planted	Sec. 34, T151N, R100W	Ponderosa pine	1
Tree Point	T469	Planted	Sec. 34, T151N, R100W	Ponderosa pine	1
Tree Point	T470	Planted	Sec. 34, T151N, R100W	Ponderosa pine	1
Tree Point	T471	Planted	Sec. 34, T151N, R100W	Ponderosa pine	1
Tree Point	T472	Planted	Sec. 34, T151N, R100W	Ponderosa pine	1
Tree Point	T473	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T474	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T475	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T476	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T477	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T478	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T479	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T480	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T481	Planted	Sec. 34, T151N, R100W	Russian olive	1
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Tree Point	T492	Planted	Sec. 34, T151N, R100W	Russian olive	1
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Tree Point	T494	Planted	Sec. 34, T151N, R100W	Russian olive	1
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Tree Point	T497	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T498	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T499	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T500	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T501	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T502	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T503	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T504	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T505	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T506	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T507	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T508	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T509	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T510	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T511	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T512	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T513	Planted	Sec. 34, T151N, R100W	Russian olive	1

Tree Point	T514	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T515	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T516	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T517	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T518	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T519	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T520	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T521	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T522	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T523	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T524	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T525	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T526	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T527	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T528	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T529	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T530	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T531	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T532	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T533	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T534	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T535	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T536	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T537	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T538	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T539	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T540	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T541	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T542	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T543	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T544	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T545	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T546	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T547	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T548	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T549	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T550	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T551	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T552	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T553	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T554	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T555	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T556	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T557	Planted	Sec. 34, T151N, R100W	Ponderosa pine	1
Tree Point	T558	Planted	Sec. 34, T151N, R100W	Ponderosa pine	1
Tree Point	T559	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T560	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T561	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T562	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T563	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T564	Planted	Sec. 34, T151N, R100W	Russian olive	1

Tree Point	T565	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T566	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T567	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T568	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T569	Planted	Sec. 34, T151N, R100W	Ponderosa pine	1
Tree Point	T570	Planted	Sec. 34, T151N, R100W	Ponderosa pine	1
Tree Point	T571	Planted	Sec. 34, T151N, R100W	Ponderosa pine	1
Tree Point	T572	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T573	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T574	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T575	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T576	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T577	Planted	Sec. 34, T151N, R100W	Ponderosa pine	1
Tree Point	T578	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T579	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T580	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T581	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T582	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T583	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T584	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T585	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T586	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T587	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T588	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T589	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T590	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T591	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T592	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T593	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T594	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T595	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T596	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T597	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T598	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T599	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T600	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T601	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T602	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T603	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T604	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T605	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T606	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T607	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T608	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T609	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T610	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T611	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T612	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T613	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T614	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T615	Planted	Sec. 34, T151N, R100W	Russian olive	1

Tree Point	T616	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T617	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T618	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T619	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T620	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T621	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T622	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T623	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T624	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T625	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T626	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T627	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T628	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T629	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T630	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T631	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T632	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T633	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T634	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T635	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T636	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T637	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T638	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T639	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T640	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T641	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T642	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T643	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T644	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T645	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T646	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T647	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T648	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T649	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T650	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T651	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T652	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T653	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T654	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T655	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T656	Planted	Sec. 34, T151N, R100W	Russian olive	1
Tree Point	T657	Planted	Sec. 31, T150N, R100W	Siberian elm	1
Tree Point	T658	Planted	Sec. 31, T150N, R100W	Siberian elm	1
Tree Point	T659	Planted	Sec. 31, T150N, R100W	Siberian elm	1
Tree Point	T660	Planted	Sec. 31, T150N, R100W	Siberian elm	1
Tree Point	T661	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T662	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T663	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T664	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T665	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T666	Planted	Sec. 31, T150N, R100W	Russian olive	1

Tree Point	T668	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T669	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T670	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T671	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T672	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T673	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T674	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T675	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T676	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T677	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T678	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T679	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T680	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T681	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T682	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T683	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T684	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T685	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T686	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T687	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T688	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T689	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T690	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T691	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T692	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T693	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T694	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T695	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T696	Planted	Sec. 31, T150N, R100W	Russian olive	1
Tree Point	T697	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T698	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T699	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T700	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T701	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T702	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T703	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T704	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T705	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T706	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T707	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T708	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T709	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T710	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T711	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T712	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T713	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T714	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T715	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T716	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T717	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T718	Planted	Sec. 24, T150N, R100W	Siberian elm	1

Tree Point	T719	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T720	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T721	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T722	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T723	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T724	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T725	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T726	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T727	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T728	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T729	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T730	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T731	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T732	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T733	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T734	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T735	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T736	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T737	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T738	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T739	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T740	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T741	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T742	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T743	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T744	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T745	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T746	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T747	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T748	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T749	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T750	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T751	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T752	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T753	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T754	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T755	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T756	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T757	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T758	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T759	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T760	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T761	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T762	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T763	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T764	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T765	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T766	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T767	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T768	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T769	Planted	Sec. 24, T150N, R100W	Siberian elm	1

Tree Point	T770	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T771	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T772	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T773	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T774	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T775	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T776	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T777	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T778	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T779	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T780	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T781	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T782	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T783	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T784	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T785	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T786	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T787	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T788	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T789	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T790	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T791	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T792	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T793	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T794	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T795	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T796	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T797	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T798	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T799	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T800	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T801	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T802	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T803	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T804	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T805	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T806	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T807	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T808	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T809	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T810	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T811	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T812	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T813	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T814	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T815	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T816	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T817	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T818	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T819	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T820	Planted	Sec. 24, T150N, R100W	Siberian elm	1

Tree Point	T821	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T822	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T823	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T824	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T825	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T826	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T827	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T828	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T829	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T830	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T831	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T832	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T833	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T834	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T835	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T836	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T837	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T838	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T839	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T840	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T841	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T842	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T843	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T844	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T845	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T846	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T847	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T848	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T849	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T850	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T851	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T852	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T853	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T854	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T855	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T856	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T857	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T858	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T859	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T860	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T861	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T862	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T863	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T864	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T865	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T866	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T867	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T868	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T869	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T870	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T871	Planted	Sec. 24, T150N, R100W	Siberian elm	1

Tree Point	T872	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T873	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T874	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T875	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T876	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T877	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T878	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T879	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T880	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T881	Natural growth	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T882	Natural growth	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T883	Natural growth	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T884	Natural growth	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T885	Natural growth	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T886	Natural growth	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T887	Natural growth	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T888	Natural growth	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T889	Natural growth	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T890	Natural growth	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T891	Natural growth	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T892	Natural growth	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T893	Natural growth	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T894	Natural growth	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T895	Natural growth	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T896	Natural growth	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T897	Natural growth	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T898	Natural growth	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T899	Natural growth	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T900	Natural growth	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T901	Natural growth	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T902	Natural growth	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T903	Natural growth	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T904	Natural growth	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T905	Natural growth	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T906	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T907	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T908	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T909	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T910	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T911	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T912	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T913	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T914	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T915	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T916	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T917	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T918	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T919	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T920	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T921	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T922	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1

Tree Point	T923	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T924	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T925	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T926	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T927	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T928	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T929	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T930	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T931	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T932	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T933	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T934	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T935	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T936	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T937	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T938	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T939	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T940	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T941	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T942	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T943	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T944	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T945	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T946	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T947	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T948	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T949	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T950	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T951	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T952	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T953	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T954	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T955	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T956	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T957	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T958	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T959	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T960	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T961	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T962	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T963	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T964	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T965	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T966	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T967	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T968	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T969	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T970	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T971	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T972	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T973	Planted	Sec. 24, T150N, R100W	Siberian elm	1

Tree Point	T974	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T975	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T976	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T977	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T978	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T979	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T980	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T981	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T982	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T983	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T984	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T985	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T986	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T987	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T988	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T989	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T990	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T991	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T992	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T993	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T994	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T995	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T996	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T997	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T998	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T999	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1000	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1001	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1002	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1003	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1004	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1005	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1006	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1007	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1008	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1009	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1010	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1011	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1012	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1013	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1014	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1015	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1016	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1017	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1018	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1019	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1020	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1021	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1022	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1023	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1024	Planted	Sec. 24, T150N, R100W	Siberian elm	1

Tree Point	T1025	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1026	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1027	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1028	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1029	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1030	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1031	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1032	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1033	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1034	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1035	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1036	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1037	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1038	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1039	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1040	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1041	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1042	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1043	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1044	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1045	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1046	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1047	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1048	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1049	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1050	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1051	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1052	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1053	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1054	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1055	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1056	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1057	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1058	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1059	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1060	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1061	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1062	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1063	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1064	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1065	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1066	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1067	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1068	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1069	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1070	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1071	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1072	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1073	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1074	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1075	Planted	Sec. 24, T150N, R100W	Siberian elm	1

Tree Point	T1076	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1077	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1078	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1079	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1080	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1081	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1082	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1083	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1084	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1085	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1086	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1087	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1088	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1089	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1090	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1091	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1092	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1093	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1094	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1095	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1096	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1097	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1098	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1099	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1100	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1101	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1102	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1103	Planted	Sec. 24, T150N, R100W	Siberian elm	1
Tree Point	T1104	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T1105	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T1106	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T1107	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T1108	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T1109	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T1110	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T1111	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T1112	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T1113	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T1114	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T1115	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T1116	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T1117	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T1118	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T1119	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T1120	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T1121	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T1122	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T1123	Natural growth	Sec. 24, T150N, R100W	Peachleaf willow	1
Tree Point	T1124	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1125	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1126	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1

Tree Point	T1127	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1128	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1129	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1130	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1131	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1132	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1133	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1134	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1135	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1136	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1137	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1138	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1139	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1140	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1141	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1142	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1143	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1144	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1145	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1146	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1147	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1148	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1149	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1150	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1151	Natural growth	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1152	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1153	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1154	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1155	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1156	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1157	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1158	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1159	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1160	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1161	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1162	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1163	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1164	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1165	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1166	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1167	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1168	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1169	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1170	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1171	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1172	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1173	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1174	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1175	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1176	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1177	Planted	Sec. 21, T150N, R99W	Siberian elm	1

Tree Point	T1178	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1179	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1180	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1181	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1182	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1183	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1184	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1185	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1186	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1187	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1188	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1189	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1190	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1191	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1192	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1193	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1194	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1195	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1196	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1197	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1198	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1199	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1200	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1201	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1202	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1203	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1204	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1205	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1206	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1207	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1208	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1209	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1210	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1211	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1212	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1213	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1214	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1215	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1216	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1217	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1218	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1219	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1220	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1221	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1222	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1223	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1224	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1225	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1226	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1227	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1228	Planted	Sec. 21, T150N, R99W	Siberian elm	1

Tree Point	T1229	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1230	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1231	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1232	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1233	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1234	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1235	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1236	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1237	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1238	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1239	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1240	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1241	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1242	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1243	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1244	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1245	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1246	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1247	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1248	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1249	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1250	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1251	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1252	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1253	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1254	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1255	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1256	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1257	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1258	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1259	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1260	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1261	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1262	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1263	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1264	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1265	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1266	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1267	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1268	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1269	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1270	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1271	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1272	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1273	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1274	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1275	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1276	Planted	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1277	Natural growth	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1278	Natural growth	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1279	Planted	Sec. 4, T149N, R99W	Siberian elm	1

Tree Point	T1280	Planted	Sec. 4, T149N, R99W	Siberian elm	1
Tree Point	T1281	Planted	Sec. 4, T149N, R99W	Siberian elm	1
Tree Point	T1282	Planted	Sec. 4, T149N, R99W	Siberian elm	1
Tree Point	T1283	Planted	Sec. 4, T149N, R99W	Siberian elm	1
Tree Point	T1284	Planted	Sec. 4, T149N, R99W	Siberian elm	1
Tree Point	T1285	Planted	Sec. 4, T149N, R99W	Siberian elm	1
Tree Point	T1286	Planted	Sec. 4, T149N, R99W	Siberian elm	1
Tree Point	T1287	Planted	Sec. 4, T149N, R99W	Siberian elm	1
Tree Point	T1288	Planted	Sec. 4, T149N, R99W	Siberian elm	1
Tree Point	T1289	Planted	Sec. 4, T149N, R99W	Siberian elm	1
Tree Point	T1290	Planted	Sec. 4, T149N, R99W	Siberian elm	1
Tree Point	T1291	Planted	Sec. 4, T149N, R99W	Siberian elm	1
Tree Point	T1292	Planted	Sec. 4, T149N, R99W	Siberian elm	1
Tree Point	T1293	Planted	Sec. 4, T149N, R99W	Siberian elm	1
Tree Point	T1294	Planted	Sec. 4, T149N, R99W	Siberian elm	1
Tree Point	T1295	Planted	Sec. 4, T149N, R99W	Siberian elm	1
Tree Point	T1296	Planted	Sec. 4, T149N, R99W	Siberian elm	1
Tree Point	T1297	Planted	Sec. 4, T149N, R99W	Siberian elm	1
Tree Point	T1298	Planted	Sec. 4, T149N, R99W	Siberian elm	1
Tree Point	T1299	Planted	Sec. 4, T149N, R99W	Siberian elm	1
Tree Point	T1300	Planted	Sec. 4, T149N, R99W	Siberian elm	1
Tree Point	T1301	Planted	Sec. 4, T149N, R99W	Siberian elm	1
Tree Point	T1302	Planted	Sec. 4, T149N, R99W	Siberian elm	1
Tree Point	T1303	Planted	Sec. 4, T149N, R99W	Siberian elm	1
Tree Point	T1304	Planted	Sec. 4, T149N, R99W	Siberian elm	1
Tree Point	T1305	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1306	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1307	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1308	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1309	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1310	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1311	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1312	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1313	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1314	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1315	Planted	Sec. 19, T150N, R99W	Russian olive	1
Tree Point	T1316	Planted	Sec. 19, T150N, R99W	Russian olive	1
Tree Point	T1317	Planted	Sec. 19, T150N, R99W	Russian olive	1
Tree Point	T1318	Planted	Sec. 19, T150N, R99W	Russian olive	1
Tree Point	T1319	Planted	Sec. 19, T150N, R99W	Ponderosa pine	1
Tree Point	T1320	Planted	Sec. 19, T150N, R99W	Ponderosa pine	1
Tree Point	T1321	Planted	Sec. 19, T150N, R99W	Ponderosa pine	1
Tree Point	T1322	Planted	Sec. 19, T150N, R99W	Ponderosa pine	1
Tree Point	T1323	Planted	Sec. 19, T150N, R99W	Ponderosa pine	1
Tree Point	T1324	Planted	Sec. 19, T150N, R99W	Ponderosa pine	1
Tree Point	T1325	Planted	Sec. 19, T150N, R99W	Russian olive	1
Tree Point	T1326	Planted	Sec. 19, T150N, R99W	Russian olive	1
Tree Point	T1327	Planted	Sec. 19, T150N, R99W	Russian olive	1
Tree Point	T1328	Planted	Sec. 19, T150N, R99W	Russian olive	1
Tree Point	T1329	Planted	Sec. 19, T150N, R99W	Russian olive	1
Tree Point	T1330	Planted	Sec. 19, T150N, R99W	Russian olive	1

Tree Point	T1331	Planted	Sec. 19, T150N, R99W	Russian olive	1
Tree Point	T1332	Planted	Sec. 19, T150N, R99W	Crabapple	1
Tree Point	T1333	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1334	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1335	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1336	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1337	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1338	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1339	Planted	Sec. 19, T150N, R99W	Russian olive	1
Tree Point	T1340	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1341	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1342	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1343	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1344	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1345	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1346	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1347	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1348	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1349	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1350	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1351	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1352	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1353	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1354	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1355	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1356	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1357	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1358	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1359	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1360	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1361	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1362	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1363	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1364	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1365	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1366	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1367	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1368	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1369	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1370	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1371	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1372	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1373	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1374	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1375	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1376	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1377	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1378	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1379	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1380	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1381	Planted	Sec. 19, T150N, R99W	Siberian elm	1

Tree Point	T1382	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1383	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1384	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1385	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1386	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1387	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1388	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1389	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1390	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1391	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1392	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1393	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1394	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1395	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1396	Planted	Sec. 19, T150N, R99W	Siberian elm	1
Tree Point	T1397	Natural growth	Sec. 19, T150N, R99W	Russian olive	1
Tree Point	T1398	Natural growth	Sec. 19, T150N, R99W	Russian olive	1
Tree Point	T1399	Natural growth	Sec. 19, T150N, R99W	Russian olive	1
Tree Point	T1400	Natural growth	Sec. 19, T150N, R99W	Russian olive	1
Tree Point	T1401	Natural growth	Sec. 20, T150N, R99W	Russian olive	1
Tree Point	T1402	Natural growth	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1403	Natural growth	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1404	Natural growth	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1405	Natural growth	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1406	Natural growth	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1407	Natural growth	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1408	Natural growth	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1409	Natural growth	Sec. 12, T151N, R101W	Siberian elm	1
Tree Point	T1410	Natural growth	Sec. 12, T151N, R101W	Green ash	1
Tree Point	T1411	Natural growth	Sec. 12, T151N, R101W	Siberian elm	1
Tree Point	T1412	Natural growth	Sec. 12, T151N, R101W	Peachleaf willow	1
Tree Point	T1413	Planted	Sec. 12, T151N, R101W	Russian olive	1
Tree Point	T1416	Natural	Sec. 18, T151N, R100W	Green ash	1
Tree Point	T1417	Natural	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1418	Natural	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1419	Natural	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1420	Natural	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1421	Natural	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1422	Natural	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1423	Natural	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1424	Natural	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1425	Natural	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1426	Natural	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1427	Natural	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1428	Natural	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1429	Natural	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1430	Natural	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1431	Natural	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1432	Natural	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1433	Natural	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1434	Natural	Sec. 21, T150N, R99W	Siberian elm	1

Tree Point	T1435	Natural	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1436	Natural	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1437	Natural	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1438	Natural	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1439	Natural	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1440	Natural	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1441	Natural	Sec. 21, T150N, R99W	Siberian elm	1
Tree Point	T1442	Natural	Sec. 21, T150N, R99W	Siberian elm	1
				Total	**1026**

Attributes of the shrub points.

Feature	Name	Classification	Location	Species 1	Count
Shrub Point	S0	Natural growth	Sec. 12, T151N, R101W	Silver buffaloberry	3
Shrub Point	S1	Natural growth	Sec. 12, T151N, R101W	Silver buffaloberry	1
Shrub Point	S2	Natural growth	Sec. 12, T151N, R101W	Silverberry	1
Shrub Point	S3	Planted	Sec. 34, T151N, R100W	Silverberry	2
Shrub Point	S4	Planted	Sec. 34, T151N, R100W	Silverberry	1
Shrub Point	S5	Planted	Sec. 34, T151N, R100W	Silverberry	1
Shrub Point	S6	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S7	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S8	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S9	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S10	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S11	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S12	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S13	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S14	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S15	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S16	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S17	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S18	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S19	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S20	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S21	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S22	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S23	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S24	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S25	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S26	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S27	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S28	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S29	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S30	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S31	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S32	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S33	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S34	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S35	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S36	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S37	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S38	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S39	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S40	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S41	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S42	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S43	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S44	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S45	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S46	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1

Shrub Point	S47	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S48	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S49	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S50	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S51	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S52	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S53	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S54	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S55	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S56	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S57	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S58	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S59	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S60	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S61	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S62	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S63	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S64	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S65	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S66	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S67	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S68	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S69	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S70	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S71	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S72	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S73	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S74	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S75	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S76	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S77	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S78	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S79	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S80	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S81	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S82	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S83	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S84	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S85	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S86	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S87	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S88	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S89	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S90	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S91	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S92	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S93	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S94	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S95	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S96	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S97	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1

Shrub Point	S98	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S99	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S100	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S101	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S102	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S103	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S104	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S105	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S106	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S107	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S108	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S109	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S110	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S111	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S112	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S113	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S114	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S115	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S116	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S117	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S118	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S119	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S120	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S121	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S122	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S123	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S124	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S125	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S126	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S127	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S128	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S129	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S130	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S131	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S132	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S133	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S134	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S135	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S136	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S137	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S138	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S139	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S140	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S141	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S142	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S143	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S144	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S145	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S146	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S147	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S148	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1

Shrub Point	S149	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S150	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S151	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S152	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S153	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S154	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S155	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S156	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S157	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S158	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S159	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S160	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S161	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S162	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S163	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S164	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S165	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S166	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S167	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S168	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S169	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S170	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S171	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S172	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S173	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S174	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S175	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S176	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S177	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S178	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S179	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S180	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S181	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S182	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S183	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S184	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S185	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S186	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S187	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S188	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S189	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S190	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S191	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S192	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S193	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S194	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S196	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S197	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S198	Natural growth	Sec. 1, T150N, R100W	Silver buffaloberry	1
Shrub Point	S199	Natural growth	Sec. 2, T150N, R100W	Silverberry	1
Shrub Point	S200	Natural growth	Sec. 1, T150N, R100W	Silver buffaloberry	1

Shrub Point	S201	Natural growth	Sec. 1, T150N, R100W	Silver buffaloberry	1
Shrub Point	S202	Planted	Sec. 19, T150N, R99W	Siberian peashrub	1
Shrub Point	S203	Planted	Sec. 19, T150N, R99W	Siberian peashrub	1
Shrub Point	S204	Planted	Sec. 19, T150N, R99W	Siberian peashrub	1
Shrub Point	S205	Planted	Sec. 19, T150N, R99W	Siberian peashrub	1
Shrub Point	S206	Planted	Sec. 19, T150N, R99W	Siberian peashrub	1
Shrub Point	S207	Natural growth	Sec. 12, T151N, R101W	Silver buffaloberry	3
Shrub Point	S208	Natural growth	Sec. 12, T151N, R101W	Silver buffaloberry	1
Shrub Point	S209	Natural growth	Sec. 12, T151N, R101W	Silverberry	1
Shrub Point	S210	Planted	Sec. 34, T151N, R100W	Silverberry	2
Shrub Point	S211	Planted	Sec. 34, T151N, R100W	Silverberry	1
Shrub Point	S212	Planted	Sec. 34, T151N, R100W	Silver berry	1
Shrub Point	S213	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S214	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S215	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S216	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S217	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S218	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S219	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S220	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S221	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S222	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S223	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S224	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S225	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S226	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S227	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S228	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S229	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S230	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S231	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S232	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S233	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S234	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S235	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S236	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S237	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S238	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S239	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S240	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S241	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S242	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S243	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S244	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S245	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S246	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S247	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S248	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S249	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S250	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S251	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1

Shrub Point	S252	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S253	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S254	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S255	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S256	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S257	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S258	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S259	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S260	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S261	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S262	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S263	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S264	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S265	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S266	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S267	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S268	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S269	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S270	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S271	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S272	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S273	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S274	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S275	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S276	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S277	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S278	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S279	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S280	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S281	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S282	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S283	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S284	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S285	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S286	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S287	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S288	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S289	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S290	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S291	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S292	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S293	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S294	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S295	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S296	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S297	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S298	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S299	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S300	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S301	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S302	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1

Shrub Point	S303	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S304	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S305	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S306	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S307	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S308	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S309	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S310	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S311	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S312	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S313	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S314	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S315	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S316	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S317	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S318	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S319	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S320	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S321	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S322	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S323	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S324	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S325	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S326	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S327	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S328	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S329	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S330	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S331	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S332	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S333	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S334	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S335	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S336	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S337	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S338	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S339	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S340	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S341	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S342	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S343	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S344	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S345	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S346	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S347	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S348	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S349	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S350	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S351	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S352	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S353	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1

Shrub Point	S354	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S355	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S356	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S357	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S358	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S359	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S360	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S361	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S362	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S363	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S364	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S365	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S366	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S367	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S368	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S369	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S370	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S371	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S372	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S373	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S374	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S375	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S376	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S377	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S378	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S379	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S380	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S381	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S382	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S383	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S384	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S385	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S386	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S387	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S388	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S389	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S390	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S391	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S392	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S393	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S394	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S395	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S396	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S397	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S398	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S399	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S400	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S401	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S403	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S404	Planted	Sec. 31, T150N, R100W	Siberian peashrub	1
Shrub Point	S405	Natural growth	Sec. 1, T150N, R100W	Silver buffaloberry	1

Shrub Point	S406	Natural growth	Sec. 2, T150N, R100W	Silverberry	1
Shrub Point	S407	Natural growth	Sec. 1, T150N, R100W	Silver buffaloberry	1
Shrub Point	S408	Natural growth	Sec. 1, T150N, R100W	Silver buffaloberry	1
Shrub Point	S409	Planted	Sec. 19, T150N, R99W	Siberian peashrub	1
Shrub Point	S410	Planted	Sec. 19, T150N, R99W	Siberian peashrub	1
Shrub Point	S411	Planted	Sec. 19, T150N, R99W	Siberian peashrub	1
Shrub Point	S412	Planted	Sec. 19, T150N, R99W	Siberian peashrub	1
Shrub Point	S413	Planted	Sec. 19, T150N, R99W	Siberian peashrub	1
Shrub Point	S1414	Natural growth	Sec. 12, T151N, R101W	Chokecherry	1
Shrub Point	S1415	Natural growth	Sec. 12, T151N, R101W	Chokecherry	1
Shrub Point	S667	Planted	Sec. 31, T150N, R100W	Chokecherry	1
				Total	**421**

Attributes of the tree and shrub polygons.

Name	Classification	Location	Acres	Species 1	Count 1	Species 2	Count 2	Species 3	Count 3	Species 4	Count 4	Species 5	Count 5
Shrub Area 1	Natural growth	Sec. 1, T151N, R101W	0.04	Silver buffaloberry	25	Chokecherry	10						
Shrub Area 2	Natural growth	Sec. 12, T151N, R101W	0.32	Silver buffaloberry	48								
Shrub Area 3	Natural growth	Sec. 12, T151N, R101W	0.01	Silver buffaloberry	15	Silverberry	3						
Shrub Area 4	Natural growth	Sec. 12, T151N, R101W	0.04	Silver buffaloberry	20	Silverberry	2						
Shrub Area 6	Natural growth	Sec. 12, T151N, R101W	0.01	Silver buffaloberry	15								
Shrub Area 5	Natural growth	Sec. 12, T151N, R101W	0.10	Silver buffaloberry	160								
Shrub Area 7	Natural growth	Sec. 12, T151N, R101W	0.30	Silver buffaloberry	360	Chokecherry	20	Tatarian honeysuckle	90				
Shrub Area 8	Natural growth	Sec. 12, T151N, R101W	0.00	Chokecherry	3	Fragrant sumac	1	Woods wild rose	2				
Shrub Area 9	Natural growth	Sec. 12, T151N, R101W	0.07	Chokecherry	35	Tatarian honeysuckle	1						
Shrub Area 10	Natural growth	Sec. 12, T151N, R101W	0.98	Siberian peashrub	148	Chokecherry	4						
Shrub Area 11	Natural growth	Sec. 17, T151N, R100W	0.01	Chokecherry	15								
Shrub Area 12	Natural growth	Sec. 17, T151N, R100W	0.02	Chokecherry	63								
Shrub Area 13	Natural growth	Sec. 28, T151N, R100W	0.20	Silver buffaloberry	213								
Shrub Area 14	Natural growth	Sec. 28, T151N, R100W	0.00	Chokecherry	30								
Shrub Area 15	Natural growth	Sec. 28, T151N, R100W	0.05	Choke cherry	25								
Shrub Area 16	Natural growth	Sec. 28, T151N, R100W	0.11	Silver buffaloberry	100								
Shrub Area 17	Natural growth	Sec. 28, T151N, R100W	0.03	Silver buffaloberry	60								
Shrub Area 18	Natural growth	Sec. 28, T151N, R100W	0.00	Silver buffaloberry	25								
Shrub Area 19	Natural growth	Sec. 28, T151N, R100W	0.01	Silver buffaloberry	17								
Shrub Area 20	Natural growth	Sec. 19, T150N, R99W	0.01	Silver buffaloberry	6	Woods wild rose	2						
Shrub Area 21	Natural growth	Sec. 20, T150N, R99W	0.04	Silver buffaloberry	50								
Shrub Area 22	Natural growth	Sec. 20, T150N, R99W	0.06	Silver buffaloberry	40								
Shrub Area 23	Natural growth	Sec. 20, T150N, R99W	0.02	Silver buffaloberry	30								
Shrub Area 25	Natural growth	Sec. 24, T149N, R99W	0.05	Chokecherry	40	Silver Buffaloberry	20						
Tree Area 2	Natural growth	Sec. 12, T151N, R101W	0.32	Russian olive	18								
Tree Area 7	Natural growth	Sec. 12, T151N, R101W	0.30	Russian olive	1								
Tree Area 10	Natural growth	Sec. 12, T151N, R101W	0.98	Siberian Elm	84	Green ash	37	Russian olive	2				

Name	Classification	Location	Acres	Species 1	Count 1	Species 2	Count 2	Species 3	Count 3	Species 4	Count 4	Species 5	Count 5
Tree Area 24	Natural growth	Sec. 21, T150N, R99W	0.11	Siberian elm	66								
				Totals	**1156**		**484**		**24**		**238**		**4**

Exhibit D

Agency Consultations

Agency Consultation Letters and Responses

merjent

p 612.746.3660 ▪ f 612.746.3679 ▪ www.merjent.com

1 Main Street SE ▪ Suite 300 ▪ Minneapolis, Minnesota ▪ 55414

<Insert Date>, 2024

<Agency>
<Address>
<Address >

Re: Hiland Express
Hiland Express Spine Project
Project Notification Letter and Review Request

To whom it may concern,

Hiland Express (Hiland), a wholly owned subsidiary of Kinder Morgan, Inc., proposes to construct and operate the Hiland Express Spine Project (Project), which consists of approximately 27.9-miles of 10-inch steel natural gas liquids pipeline in McKenzie County near and to the west of Watford City, North Dakota. The purpose of the Project is to transport natural gas liquids (NGLs), as part of the larger Hiland Express Project, to customers downstream of the Hiland NGL production facilities.

The Project has been designed to avoid sensitive social, cultural, and environmental resources as much as possible to minimize community and natural resource impacts. The pipeline route has been located on private land that is primarily in agricultural use and much of the pipeline right-of-way (ROW) has been located in or adjacent to other linear facility ROWs. Construction is proposed to start in Spring 2025 with an anticipated duration of six months.

The purpose of this letter is to provide notification of the Project per North Dakota Administrative Code Section 69-06-01-05. Hiland plans to submit an application for a Certificate of Site Compatibility and Route Permit for the Project to the North Dakota Public Service Commission.

We are soliciting input from your agency or entity regarding any sensitive resources, current or planned development, or property interests your agency or entity may have in or around the Project that should be considered as it moves forward with development. In addition, we ask that you provide information regarding any applicable permits that may be required from your office. Hiland respectfully requests your response within 30 days of receipt of this letter. Copies of all correspondence received in response to this letter will be included with the North Dakota Public Service Commission applications. Hiland requests your consideration of the Project Study Area as shown on the attached Project Location map.

Hiland has contracted with Merjent, Inc. on this Project to provide environmental consulting support. If you have any questions regarding this request or require additional information to complete your review, please do not hesitate to contact me at 952-239-5920, or by email at John.Cannon@merjent.com at your convenience.

Sincerely,

John Cannon, Senior Project Manager
Merjent, Inc.

Enclosure: Project Location Map

cc: Hiland Project Files

merjent

p 612.746.3660 ▪ f 612.746.3679 ▪ www.merjent.com

1 Main Street SE ▪ Suite 300 ▪ Minneapolis, Minnesota ▪ 55414

October 14, 2024

North Dakota Game and Fish Department
100 N. Bismarck Expressway
Bismarck, ND 58501-5095

Re: Hiland Express
Hiland Express Spine Project
Project Notification Letter and Review Request

To whom it may concern,

Hiland Express (Hiland), a wholly owned subsidiary of Kinder Morgan, Inc., proposes to construct and operate the Hiland Express Spine Project (Project), which consists of approximately 27.9-miles of 10-inch steel natural gas liquids pipeline in McKenzie County near and to the west of Watford City, North Dakota. The purpose of the Project is to transport natural gas liquids (NGLs), as part of the larger Hiland Express Project, to customers downstream of the Hiland NGL production facilities.

The Project has been designed to avoid sensitive social, cultural, and environmental resources as much as possible to minimize community and natural resource impacts. The pipeline route has been located on private land that is primarily in agricultural use, and much of the pipeline right-of-way (ROW) has been located in or adjacent to other linear facility ROWs. Construction is proposed to start in spring 2025 with an anticipated duration of six months.

The purpose of this letter is to provide notification of the Project per North Dakota Administrative Code Section 69-06-01-05. Hiland plans to submit an application for a Certificate of Site Compatibility and Route Permit for the Project to the North Dakota Public Service Commission.

We are soliciting input from your agency or entity regarding any sensitive resources, current or planned development, or property interests that your agency or entity may have in or around the Project that should be considered as it moves forward with development. In addition, we ask that you provide information regarding any applicable permits that may be required from your office. Hiland respectfully requests your response within 30 days of receipt of this letter. Copies of all correspondence received in response to this letter will be included with the North Dakota Public Service Commission applications. Hiland requests your consideration of the Project Study Area as shown on the attached Project Location map.

On October 2, 2024, Merjent, Inc. queried the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) system. Results of the IPaC query indicated that the following federally listed, proposed, and candidate species under the Endangered Species Act may occur within the Project Study Area.

Federally Listed, Proposed, and Candidate Species Based on the Proposed Project Study Area [1]		
Scientific Name	**Species Name**	**Status**
Myotis septentrionalis	Northern Long-eared Bat	Endangered
Charadrius melodus	Piping Plover	Threatened
Calidris canutus rufa	Rufa Red Knot	Threatened
Grus americana	Whooping Crane	Endangered
Hesperia dacotae	Dakota Skipper	Threatened
Speyeria idalia	Western Regal Fritillary	Proposed Threatened
Danaus plexippus	Monarch Butterfly	Candidate

[1] Information for Planning and Consultation (IPaC). Available at https://ecos.fws.gov/ipac/.

Hiland conducted surveys in September and October 2024 for habitat of Northern Long-eared Bat, Piping Plover, and Dakota Skipper with the objective of avoiding and minimizing impacts. Hiland also conducted line-of-sight surveys in September and October 2024 for Bald Eagle and Golden Eagle nests; none were observed. Hiland will coordinate with the USFWS regarding the above species and other USFWS-managed resources.

Hiland has contracted with Merjent, Inc. on this Project to provide environmental consulting support. If you have any questions regarding this request or require additional information to complete your review, please do not hesitate to contact me at 952-239-5920, or by email at John.Cannon@merjent.com at your convenience.

Sincerely,

John Cannon, Senior Project Manager
Merjent, Inc.

Enclosure: Project Location Map

cc: Hiland Project Files

merjent

p 612.746.3660 ▪ f 612.746.3679 ▪ www.merjent.com

1 Main Street SE ▪ Suite 300 ▪ Minneapolis, Minnesota ▪ 55414

October 14, 2024

United States Fish and Wildlife Service
North Dakota Field Office
3425 Miriam Avenue
Bismarck, ND 58501-7926

Re: Hiland Express
Hiland Express Spine Project
Project Notification Letter and Review Request

To whom it may concern,

Hiland Express (Hiland), a wholly owned subsidiary of Kinder Morgan, Inc., proposes to construct and operate the Hiland Express Spine Project (Project), which consists of approximately 27.9-miles of 10-inch steel natural gas liquids pipeline in McKenzie County near and to the west of Watford City, North Dakota. The purpose of the Project is to transport natural gas liquids (NGLs), as part of the larger Hiland Express Project, to customers downstream of the Hiland NGL production facilities.

The Project has been designed to avoid sensitive social, cultural, and environmental resources as much as possible to minimize community and natural resource impacts. The pipeline route has been located on private land that is primarily in agricultural use, and much of the pipeline right-of-way (ROW) has been located in or adjacent to other linear facility ROWs. Construction is proposed to start in spring 2025 with an anticipated duration of six months.

The purpose of this letter is to provide notification of the Project per North Dakota Administrative Code Section 69-06-01-05. Hiland plans to submit an application for a Certificate of Site Compatibility and Route Permit for the Project to the North Dakota Public Service Commission.

We are soliciting input from your agency or entity regarding any sensitive resources, current or planned development, or property interests that your agency or entity may have in or around the Project that should be considered as it moves forward with development. In addition, we ask that you provide information regarding any applicable permits that may be required from your office. Hiland respectfully requests your response within 30 days of receipt of this letter. Copies of all correspondence received in response to this letter will be included with the North Dakota Public Service Commission applications. Hiland requests your consideration of the Project Study Area as shown on the attached Project Location map.

Endangered Species Act

On October 2, 2024, Merjent, Inc. queried the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) system. Results of the IPaC query indicated that the following species may occur within the Project Study Area.

Federally Listed, Proposed, and Candidate Species Based on the Proposed Project Study Area [1]		
Scientific Name	**Species Name**	**Status**
Myotis septentrionalis	Northern Long-eared Bat	Endangered
Charadrius melodus	Piping Plover	Threatened
Calidris canutus rufa	Rufa Red Knot	Threatened
Grus americana	Whooping Crane	Endangered
Hesperia dacotae	Dakota Skipper	Threatened
Speyeria idalia	Western Regal Fritillary	Proposed Threatened
Danaus plexippus	Monarch Butterfly	Candidate

[1] Information for Planning and Consultation (IPaC). Available at https://ecos.fws.gov/ipac/.

Hiland conducted surveys in September and October 2024 for habitat of federally listed and proposed species with the objective of avoiding and minimizing impacts. Hiland anticipates that this Project will have a federal nexus with the U.S. Army Corps of Engineers and plans to coordinate with that agency under Section 7 of the Endangered Species Act.

USFWS-Managed Lands

Waterfowl production areas and wetland and grassland easements represent an important tool used by the USFWS to identify and manage high-quality wildlife habitat. A review of public records did not identify these USFWS-managed lands in the Project Study Area. Hiland requests that USFWS notify Hiland of any USFWS-managed lands located within the Project Study Area.

Migratory Bird Treaty Act

Hiland understands that, unlike the Endangered Species Act, the Migratory Bird Treaty Act has no provision for the allowance of incidental take. Therefore, compliance may best be achieved by avoiding or minimizing the potential to interact with migratory species.

Bald and Golden Eagle Protection Act (BGEPA)

Bald Eagles (*Haliaeetus leucocephalus*) and Golden Eagles (*Aquila chrysaetos*) are protected under the Bald and Golden Eagle Protection Act (BGEPA). BGEPA protects Bald Eagles and Golden Eagles throughout their range in the United States. Hiland conducted line-of-sight surveys for Bald Eagle and Golden Eagle nests in September and October 2024, and none were observed. Thus, Hiland does not anticipate impacts on Bald Eagles and Golden Eagles under BGEPA due to Project construction.

Hiland has contracted with Merjent, Inc. on this Project to provide environmental consulting support. If you have any questions regarding this request or require additional information to complete your review, please do not hesitate to contact me at 952-239-5920, or by email at John.Cannon@merjent.com at your convenience.

Sincerely,



John Cannon, Senior Project Manager
Merjent, Inc.

Enclosure: Project Location Map

cc: Hiland Project Files

From:	John Cannon
To:	McKenzie, Chelsie J
Subject:	RE: [EXTERNAL] RE: EXTERNAL: Hiland Express Spine Project
Date:	Friday, September 20, 2024 8:43:00 AM
Attachments:	Hiland_Express_10in_Spine_Pipeline_20240906.zip image001.png

Here is the centerline shapefile. If you have any questions, let me know.

John Cannon, MS
612.746.1614 direct
952.239.5920 mobile
john.cannon@merjent.com

1 Main Street SE, Suite 300
Minneapolis, MN 55414
612.746.3660
www.merjent.com

From: McKenzie, Chelsie J <cmckenzie@blm.gov>
Sent: Thursday, September 19, 2024 3:38 PM
To: John Cannon <john.cannon@merjent.com>
Subject: Re: [EXTERNAL] RE: EXTERNAL: Hiland Express Spine Project

That would be great, thank you! I didn't think it did cross any BLM lands, but still need to verify. Thank you again.

Chelsie McKenzie
Realty Specialist
Bureau of Land Management
North Dakota Field Office
99 23rd Avenue West, Suite A
Dickinson, ND 58601
Office: 701-227-7702
Cell: 701-502-1271

From: John Cannon <john.cannon@merjent.com>
Sent: Thursday, September 19, 2024 1:40 PM
To: McKenzie, Chelsie J <cmckenzie@blm.gov>
Subject: [EXTERNAL] RE: EXTERNAL: Hiland Express Spine Project

This email has been received from outside of DOI - Use caution before clicking on

links, opening attachments, or responding.

Hi Chelsie. The route currently does not intersect BLM lands. Let me get a centerline shapefile to forward on to you.

John Cannon, MS
612.746.1614 direct
952.239.5920 mobile
john.cannon@merjent.com

1 Main Street SE, Suite 300
Minneapolis, MN 55414
612.746.3660
www.merjent.com

From: McKenzie, Chelsie J <cmckenzie@blm.gov>
Sent: Thursday, September 19, 2024 2:17 PM
To: John Cannon <john.cannon@merjent.com>
Subject: EXTERNAL: Hiland Express Spine Project

CAUTION: This email originated from outside of Merjent.

John,

I had just received a letter regarding the Hiland Express Project. Would you be able to provide me with either a shapefile or legal land description of the pipeline route, so I can verify if there are any BLM lands in the project area.

Thank you

Chelsie McKenzie
Realty Specialist
Bureau of Land Management
North Dakota Field Office
99 23rd Avenue West, Suite A
Dickinson, ND 58601
Office: 701-227-7702
Cell: 701-502-1271

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message in error, please forward it to the sender and delete it completely from your computer system.

NORTH Dakota | Parks & Recreation
Be Legendary.™

October 11, 2024

Merjent
1 SE Main St. Unit 300
Minneapolis, MN 55414

Re: Hiland Express Spine Project – McKenzie County

Dear John,

The North Dakota Parks and Recreation Department (NDPRD) has reviewed the above-referenced proposed project to construct and operate the Hiland Express Spine Project, which consists of steel natural gas liquids pipeline in McKenzie County, North Dakota.

NDPRD's scope of authority and expertise covers properties that NDPRD owns, leases, or manages; properties protected under Section 6(f) of the Land and Water Conservation Fund (LWCF); rare plants; and ecological communities established through the Natural Heritage Program.

The project does not appear to affect properties NDPRD owns, leases, or manages.
The project does not appear to affect properties protected under Section 6(f) of the LWCF.

A North Dakota Natural Heritage biological conservation database query determines if any current or historical plant or animal species of concern or other significant ecological communities are known to occur within an approximate one-mile radius of the project area. Based on this review, no plant, animal species of concern, or significant ecological communities were documented within or immediately adjacent to the project site.

We appreciate your commitment to rare plant, animal, and ecological community conservation, management, and inter-agency cooperation. For additional information, please contact me at 701-328-5370, 701-220-3377 (cell), or kgduttenhefner@nd.gov.

Thank you for the opportunity to comment on the proposed project.

Sincerely,

Kathy Duttenhefner

Kathy Duttenhefner, Chief
Natural Resources Division

604 E Boulevard Ave Dept. 750 | Bismarck, ND 58505
PHONE: 701-328-5357 | FAX: 701-328-5363 | EMAIL: parkrec@nd.gov | WEBSITE: www.parkrec.nd.gov

September 17, 2024

John Cannon
Merjent, Inc.
1 Main St SE, Ste 300
Minneapolis, MN 55414
John.cannon@merjent.com

SHSND Ref.: 24-9114 Hiland Express Spine Project in McKenzie County, North Dakota

Dear John,

We reviewed SHSND Ref.: 24-9114 Hiland Express Spine Project in McKenzie County, North Dakota. We recommend a Class III (pedestrian survey) of cultural resources in the project area. The survey must follow "North Dakota SHPO Guidelines Manual for Cultural Resource Inventory Projects," which is available at https://www.history.nd.gov/hp/hpforms.html.

Thank you for the opportunity to review this project to date. We look forward to review of the Class III survey for archaeological resources. If you have any questions please contact Lorna Meidinger, Lead Historic Preservation Specialist at (701) 328-2089 or lbmeidinger@nd.gov.

Sincerely,

for William D. Peterson, PhD
Director, State Historical Society of North Dakota

24-9114

From: Vigesaa, Claire
To: John Cannon
Subject: EXTERNAL: Hiland Express Spine Project
Date: Wednesday, September 25, 2024 10:36:45 AM

CAUTION: This email originated from outside of Merjent.

Mr. Cannon,

We received your Hiland Express Spine Project notification letter and review request. There are no permit requirements or concerns from our agency, the ND Transmission Authority.

Sincerely,

Claire

Claire Vigesaa, Executive Director
North Dakota Transmission Authority
406-489-3881

October 8, 2024

John Cannon
Senior Project Manager
Merjent, Inc.
1 Main Street SE, Suite 300
Minneapolis, ND 55414

Re: Hiland Express Spine Project in McKenzie County

Dear Mr. Cannon:

The North Dakota Department of Environmental Quality (Department) has reviewed the information concerning the above-referenced project received at the Department on September 16, 2024, with respect to possible environmental impacts.

1. Necessary measures should be taken to minimize fugitive dust emissions created during construction activities. Any complaints that may arise should be dealt with in an efficient and effective manner.

2. Care is to be taken during construction activity near any water of the state to minimize adverse effects on a water body. This includes minimal disturbance of stream beds and banks to prevent excess siltation, and the replacement and revegetation of any disturbed area as soon as possible after work has been completed. Caution must also be taken to prevent spills of oil and grease that may reach the receiving water from equipment maintenance and/or the handling of fuels on the site. Guidelines for minimizing degradation to waterways during construction are attached.

3. Projects disturbing one or more acres are required to have a permit to discharge stormwater runoff until the site is stabilized by the re-establishment of vegetation or other permanent cover. Further information on the stormwater permit may be obtained from the Department's website or by calling the Division of Water Quality at 701-328-5210. Also, cities may impose additional requirements and/or specific best management practices for construction affecting their storm drainage system. Check with the local officials to be sure any local stormwater management considerations are addressed. If water is going to be used for hydrostatic testing and looking to be discharged to the environment, you will need coverage under the temporary discharge permit NDG07-0000.

4. The construction project overlies the Tobacco Garden aquifer. Care should be taken to avoid spills of any materials that may have an adverse effect on groundwater quality. All spills must be immediately reported to this Department and appropriate remedial actions performed.

5. All solid waste materials must be managed and transported in accordance with the state's solid and hazardous waste rules. Appropriate efforts to reduce, reuse and/or recycle waste materials are strongly encouraged. As appropriate, segregation of inert waste from non-inert waste can generally reduce the cost of waste management. Further information on waste management and recycling is available from the Department's Division of Waste Management at 701-328-5166.

6. Projects that involve construction of pipelines should select locations that minimize the potential for impacts to human health and the environment during and after construction by avoiding, when possible, source water protection areas and sensitive surface and groundwater environments. Additionally, when possible, pipeline routes should select areas with natural barriers to both surface and ground waters. Human health and the environment should be further protected by developing a spill response plan that emphasizes rapid deployment of prepositioned assets necessary to contain spills and subsequent cleanup. Proper surveillance and monitoring for early detection of leaks should be required.

These comments are based on the information provided about the project in the above-referenced submittal. The U.S. Army Corps of Engineers may require a water quality certification from this Department for the project if the project is subject to their Section 404 permitting process. Any additional information which may be required by the U.S. Army Corps of Engineers under the process will be considered by this Department in our determination regarding the issuance of such a certification.

The Department owns no land in or adjacent to the proposed improvements, nor does it have any projects scheduled in the area. In addition, we believe the proposed activities are consistent with the State Implementation Plan for the Control of Air Pollution for the State of North Dakota.

If you have any questions regarding our comments, please feel free to contact this office.

Sincerely,

L. David Glatt, P.E., Director
North Dakota Department of Environmental Quality

LDG:ll
Attach.

Construction and Environmental Disturbance Requirements

The following are the minimum requirements of the North Dakota Department of Environmental Quality (Department) for projects that involve construction and environmental disturbance in or near waters of the State of North Dakota. They ensure that minimal environmental degradation occurs as a result of construction or related work which has the potential to affect waters of the state. All projects must be constructed to minimize the loss of soil, vegetative cover, and pollutants (chemical or biological) from a site.

Soils

Prevent the erosion and sediment loss using erosion and sediment controls. Fragile and sensitive areas such as wetlands, riparian zones, delicate flora, and land resources must be prohibited against compaction, vegetation loss and unnecessary damage.

Surface Waters

All construction must be managed to minimize impacts to aquatic systems. Follow safe storage and handling procedures to prevent the contamination of water from fuel spills, lubricants, and chemicals. Stream bank and stream bed disturbances must be contained to minimize silt movement, nutrient upsurges, plant dislocations, and any physical chemicals, or biological disruption. The use of pesticides or herbicides in or near surface waters is allowed under the Department's pesticide application permit with notification to the Department.

Fill Material

Any fill material placed below the ordinary high-water mark must be free of topsoil, decomposable materials, and persistent synthetic organic compounds, including, but not limited to, asphalt, tires, treated lumber, and construction debris. The Department may require testing of fill material. All temporary fills must be removed. Debris and solid waste must be properly disposed or recycled. Impacted areas must be restored to near original condition.

NORTH Dakota | Game and Fish

Be Legendary.™

November 5, 2024

John Cannon
Senior Project Manager
Merjent, Inc.
1 Main Street SE – Suite 300
Minneapolis, MN 55414

Dear Mr. Cannon:

RE: Hiland Express Spine Project
McKenzie County, North Dakota

Hiland Express is proposing to construct and operate approximately 27.9-miles of 10-inch steel natural gas liquids pipeline in McKenzie County, North Dakota. The North Dakota Game and Fish Department (NDGF) has reviewed this project for wildlife concerns.

A primary concern with pipeline projects is the possible disturbance of native prairie and wooded draws associated with construction of the pipeline and access roads. Avoidance of native prairie areas reduces impacts to several grassland species including many species of conservation priority. We ask that work within these areas be avoided to the extent possible, every effort be made to prevent destruction of woody vegetation, and disturbed areas be reclaimed to pre-project conditions.

The National Wetland Inventory indicates a variety of wetlands within the proposed project corridor. Steps should be taken to protect any wetlands that cannot be avoided, no alterations should be made to existing drainage patterns, and above-ground appurtenances should not be placed in wetland areas. Unavoidable destruction or degradation of wetland acres should be mitigated in kind.

We recommend that aerial surveys be conducted for raptor nests before construction begins, and a ½-mile construction buffer be implemented around active eagle nest sites (known occupied within the past 5 years). Ms. Sandra Johnson, Conservation Biologist, may be contacted at 701-328-6327 for additional information on eagle nest sites in the state.

We do not believe this project will have significant adverse effects on wildlife or wildlife habitat provided these recommendations are implemented where appropriate during project construction.

Sincerely,

(for)

Greg Link
Chief
Conservation & Communications Division

Governor Doug Burgum | Director Jeb Williams | Deputy Director Scott A. Peterson

100 North Bismarck Expressway | Bismarck ND, 58504-5095 | (701) 328-6300 | Fax: (701) 328-6352

From: Anderson, Fred J.
To: John Cannon
Subject: EXTERNAL: NDGS: Review of the Hiland Express Spine Project Comments
Date: Tuesday, September 24, 2024 11:35:40 AM
Attachments: image001.png

CAUTION: This email originated from outside of Merjent.

Mr. Cannon-

Thank you for the opportunity to review and provide comment on your proposed energy infrastructure project.

We reviewed the route of the proposed natural gas liquids pipeline against our landslide maps and recent aerial imagery and did not note any areas of concern with the proposed route at this time.

Please contact us if you have any questions or comments regarding this review.

Regards,

Fred J. Anderson
Geologist
North Dakota Geological Survey

701.328.8000 (O) . fjanderson@nd.gov . www.dmr.nd.gov

Text□ □ Description automatically generated

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
NORTH DAKOTA REGULATORY OFFICE
3319 UNIVERSITY DRIVE
BISMARCK, NORTH DAKOTA 58504-7565

September 26, 2024

NWO-2024-01560-BIS

Merjent, Inc.
Attn: Mr. John Cannon
1 Main Street SE, Suite 300
Minneapolis, Minnesota 55414

Dear Mr. Cannon:

This is in response to your solicitation letter dated September 16, 2024 requesting Department of the Army (DA), United States Army Corps of Engineers (Corps) comments on the proposed Hiland Express Spine Project, 27.9 mile natural gas liquids pipeline construction. The project site is located throughout McKenzie County, North Dakota as follows:

Township	Range	Sections
149 North	98 West	19, 30
149 North	99 West	2, 3, 4, 9, 10, 11, 13, 14, 24
150 North	99 West	19, 20, 21, 28, 29, 33
150 North	100 West	1, 2, 3, 12, 13, 24
151 North	100 West	7, 17, 18, 20, 21, 28, 29, 33, 34
151 North	101 West	11, 12

Corps Regulatory Offices administers Section 404 of the Clean Water Act. Section 404 of the Clean Water Act regulates the discharge of dredge or fill material (temporarily or permanently) in waters of the United States. Waters of the United States may include, but are not limited to, rivers, streams, ditches, coulees, lakes, ponds, and their adjacent wetlands. Fill material includes, but is not limited to, rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mines or other excavation activities and materials used to create any structure or infrastructure in waters of the United States.

Enclosed for your information is the fact sheet for Nationwide Permit 12, Oil and Natural Gas Pipeline Activities. Oil and natural gas pipelines are already authorized by Nationwide Permit 12 provided the pipeline can be placed without any change to pre-construction contours and all other proposed construction activities and facilities are in compliance with the Nationwide's permit conditions and 401 Water Quality Certification. On Tribal Lands, Water Quality Certification is denied for all Nationwide Permits. Applicants must work with EPA to obtain individual water quality certification. Please note the pre-construction notification requirements on page 2 of the fact sheet. If a

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project involves any one of the notification requirements, the project proponent must submit a DA application. Furthermore, a project must also be in compliance with the "Regional Conditions for Nationwide Permits within the State of North Dakota", found on pages 23 thru 30 of the fact sheet.

In the event your project(s) requires approval from the U.S. Army Corps of Engineers and cannot be authorized by Nationwide Permit(s), a Standard or Individual Permit will be required. A project that requires a Standard or Individual Permit is intensely reviewed and will require the issuance of a public notice. A Standard or Individual Permit generally requires a minimum of 120 days for processing but based on the project impacts and comments received through the public notice may extend well beyond 120 days.

This correspondence letter does not approve the proposed construction work or does not verify the proposed project complies with the Nationwide Permit(s).

If this project requires a Section 404 permit, please complete and submit the enclosed Department of the Army permit application (ENG Form 6082) to the U.S. Army Corps of Engineers, North Dakota Regulatory Office, 3319 University Drive, Bismarck, North Dakota 58504 or to the email address below. If you are unsure if a permit is required, you may submit an application; include a project location map, description of work, and construction methodology.

The North Dakota Regulatory office can accept (and prefers) electronic submissions to the following email: CENWO-OD-RND@usace.army.mil.

Please refer to identification number NWO-2024-01560-BIS in any correspondence concerning this project. If you have any questions, please contact Jeremy Nygard at U.S. Army Corps of Engineers, North Dakota Regulatory Office, 3319 University Drive, Bismarck, North Dakota 58504-7565, by email at Jeremy.S.Nygard@usace.army.mil, or telephone at 701-989-6425.

Sincerely,

Benjamin N. Soiseth
Chief, North Dakota Section

Enclosure

US Army Corps of Engineers
Omaha District

Nationwide Permit 12: Oil and Natural Gas Pipeline Activities (2021)

Activities required for the construction, maintenance, repair, and removal of oil and natural gas pipelines and associated facilities in waters of the United States, provided the activity does not result in the loss of greater than 1/2-acre of waters of the United States for each single and complete project.

Oil or natural gas pipelines: This NWP authorizes discharges of dredged or fill material into waters of the United States and structures or work in navigable waters for crossings of those waters associated with the construction, maintenance, or repair of oil and natural gas pipelines. There must be no change in pre-construction contours of waters of the United States. An "oil or natural gas pipeline" is defined as any pipe or pipeline for the transportation of any form of oil or natural gas, including products derived from oil or natural gas, such as gasoline, jet fuel, diesel fuel. heating oil, petrochemical feedstocks, waxes, lubricating oils, and asphalt.

Material resulting from trench excavation may be temporarily sidecast into waters of the United States for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States (*e.g.,* backfilling with extensive gravel layers, creating a french drain effect). Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody.

Oil or natural gas pipeline substations: This NWP authorizes the construction, maintenance, or expansion of substation facilities (*e.g.,* oil or natural gas or gaseous fuel custody transfer stations, boosting stations, compression stations, metering stations, pressure regulating stations) associated with an oil or natural gas pipeline in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2-acre of waters of the United States. This NWP does not authorize discharges of dredged or fill material into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities.

Foundations for above-ground oil or natural gas pipelines: This NWP authorizes the construction or maintenance of foundations for above-ground oil or natural gas pipelines in all waters of the United States, provided the foundations are the minimum size necessary.

Access roads: This NWP authorizes the construction of access roads for the construction and maintenance of oil or natural gas pipelines, in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not cause the loss of greater than 1/2-acre of

non-tidal waters of the United States. This NWP does not authorize discharges of dredged or fill material into non-tidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States and must be as near as possible to pre-construction contours and elevations (*e.g.,* at grade corduroy roads or geotextile/gravel roads). Access roads constructed above pre-construction contours and elevations in waters of the United States must be properly bridged or culverted to maintain surface flows.

This NWP may authorize oil or natural gas pipelines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (see 33 CFR part 322). Oil or natural gas pipelines routed in, over, or under section 10 waters without a discharge of dredged or fill material may require a section 10 permit.

This NWP authorizes, to the extent that Department of the Army authorization is required, temporary structures, fills, and work necessary for the remediation of inadvertent returns of drilling fluids to waters of the United States through sub-soil fissures or fractures that might occur during horizontal directional drilling activities conducted for the purpose of installing or replacing oil or natural gas pipelines. These remediation activities must be done as soon as practicable, to restore the affected waterbody. District engineers may add special conditions to this NWP to require a remediation plan for addressing inadvertent returns of drilling fluids to waters of the United States during horizontal directional drilling activities conducted for the purpose of installing or replacing oil or natural gas pipelines.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the oil or natural gas pipeline activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges of dredged or fill material, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. After construction, temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) A section 10 permit is required; (2) the discharge will result in the loss of greater than 1/10-acre of waters of the United States; or (3) the proposed oil or natural gas pipeline activity is associated with an overall project that is greater than 250 miles in length and the project purpose is to install new pipeline (vs. conduct repair or maintenance activities) along the majority of the distance of the overall project length. If the proposed oil or gas pipeline is greater than 250 miles in length, the pre-construction notification must include the locations and proposed impacts (in acres or other appropriate unit of measure) for all crossings of waters of the United States that require DA authorization, including those crossings authorized by an

NWP would not otherwise require pre-construction notification. (See general condition 32.) (Authorities: Sections 10 and 404)

Note 1: Where the oil or natural gas pipeline is constructed, installed, or maintained in navigable waters of the United States (*i.e.,* section 10 waters) within the coastal United States, the Great Lakes, and United States territories, a copy of the NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), for charting the oil or natural gas pipeline to protect navigation.

Note 2: For oil or natural gas pipeline activities crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. Oil or natural gas pipeline activities must comply with 33 CFR 330.6(d).

Note 3: Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP. Access roads used solely for construction of the oil or natural gas pipeline must be removed upon completion of the work, in accordance with the requirements for temporary fills.

Note 4: Pipes or pipelines used to transport gaseous, liquid, liquescent, or slurry substances over navigable waters of the United States are considered to be bridges and may require a permit from the U.S. Coast Guard pursuant to the General Bridge Act of 1946. However, any discharges of dredged or fill material into waters of the United States associated with such oil or natural gas pipelines will require a section 404 permit (see NWP 15).

Note 5: This NWP authorizes oil or natural gas pipeline maintenance and repair activities that do not qualify for the Clean Water Act section 404(f) exemption for maintenance of currently serviceable fills or fill structures.

Note 6: For NWP 12 activities that require pre-construction notification, the PCN must include any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings that require Department of the Army authorization but do not require pre-construction notification (see paragraph (b)(4) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, “District Engineer's Decision.” The district engineer may require mitigation to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).

General Conditions

1. Navigation.

(a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his or her authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements.

No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.

3. Spawning Areas.

Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (*e.g.,* through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas.

Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds.

No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material.

No activity may use unsuitable material (*e.g.,* trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

7. Water Supply Intakes.

No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments.

If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows.

To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (*e.g.,* stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains.

The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment.

Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls.

Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. Removal of Temporary Structures and Fills.

Temporary structures must be removed, to the maximum extent practicable, after their use has been discontinued. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance.

Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project.

The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers.

(a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. Permittees shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (*e.g.,* National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: *http://www.rivers.gov/*.

17. Tribal Rights.

No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. Endangered Species.

(a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify designated critical habitat or critical habitat proposed for such designation. No activity is authorized under any NWP which “may affect” a listed species or critical habitat, unless ESA section 7 consultation addressing the consequences of the proposed activity on listed species or

critical habitat has been completed. See 50 CFR 402.02 for the definition of “effects of the action” for the purposes of ESA section 7 consultation, as well as 50 CFR 402.17, which provides further explanation under ESA section 7 regarding “activities that are reasonably certain to occur” and “consequences caused by the proposed action.”

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat or critical habitat proposed for such designation, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation), the pre-construction notification must include the name(s) of the endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or that utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. The district engineer will determine whether the proposed activity “may affect” or will have “no effect” to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. For activities where the non-Federal applicant has identified listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have “no effect” on listed species (or species proposed for listing or designated critical habitat (or critical habitat proposed for such designation), or until ESA section 7 consultation or conference has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation or conference with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWPs.

(e) Authorization of an activity by an NWP does not authorize the “take” of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (*e.g.,* an ESA Section 10 Permit, a Biological Opinion with

"incidental take" provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world wide web pages at *http://www.fws.gov/* or *http://www.fws.gov/ipac/* and *http://www.nmfs.noaa.gov/pr/species/esa/* respectively.

19. Migratory Birds and Bald and Golden Eagles.

The permittee is responsible for ensuring that an action authorized by an NWP complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting the appropriate local office of the U.S. Fish and Wildlife Service to determine what measures, if any, are necessary or appropriate to reduce adverse effects to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. Historic Properties.

(a) No activity is authorized under any NWP which may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)(1)). If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts commensurate with potential impacts, which may include background research, consultation, oral history interviews, sample field investigation, and/or field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: No historic properties affected, no adverse effect, or adverse effect.

(d) Where the non-Federal applicant has identified historic properties on which the proposed NWP activity might have the potential to cause effects and has so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed. For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify

the non-Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts.

Permittees that discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by an NWP, they must immediately notify the district engineer of what they have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters.

Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, 52, 57 and 58 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity

proposed by permittees in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after she or he determines that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation.

The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (*i.e.,* on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

(d) Compensatory mitigation at a minimum one-for-one ratio will be required for all losses of stream bed that exceed 3/100-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. This compensatory mitigation requirement may be satisfied through the restoration or enhancement of riparian areas next to streams in accordance with paragraph (e) of this general condition. For losses of stream bed of 3/100-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement,

maintenance, and legal protection (*e.g.,* conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. If restoring riparian areas involves planting vegetation, only native species should be planted. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (*e.g.,* riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f).)

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory

mitigation (see 33 CFR 332.3(k)(3)). If permittee-responsible mitigation is the proposed option, and the proposed compensatory mitigation site is located on land in which another federal agency holds an easement, the district engineer will coordinate with that federal agency to determine if proposed compensatory mitigation project is compatible with the terms of the easement.

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan needs to address only the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)).

(6) Compensatory mitigation requirements (*e.g.,* resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. Safety of Impoundment Structures.

To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with

established state or federal, dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality.

(a) Where the certifying authority (state, authorized tribe, or EPA, as appropriate) has not previously certified compliance of an NWP with CWA section 401, a CWA section 401 water quality certification for the proposed discharge must be obtained or waived (see 33 CFR 330.4(c)). If the permittee cannot comply with all of the conditions of a water quality certification previously issued by certifying authority for the issuance of the NWP, then the permittee must obtain a water quality certification or waiver for the proposed discharge in order for the activity to be authorized by an NWP.

(b) If the NWP activity requires pre-construction notification and the certifying authority has not previously certified compliance of an NWP with CWA section 401, the proposed discharge is not authorized by an NWP until water quality certification is obtained or waived. If the certifying authority issues a water quality certification for the proposed discharge, the permittee must submit a copy of the certification to the district engineer. The discharge is not authorized by an NWP until the district engineer has notified the permittee that the water quality certification requirement has been satisfied by the issuance of a water quality certification or a waiver.

(c) The district engineer or certifying authority may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management.

In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). If the permittee cannot comply with all of the conditions of a coastal zone management consistency concurrence previously issued by the state, then the permittee must obtain an individual coastal zone management consistency concurrence or presumption of concurrence in order for the activity to be authorized by an NWP. The district engineer or a state may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions.

The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its CWA section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits.

The use of more than one NWP for a single and complete project is authorized, subject to the following restrictions:

(a) If only one of the NWPs used to authorize the single and complete project has a specified acreage limit, the acreage loss of waters of the United States cannot exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

(b) If one or more of the NWPs used to authorize the single and complete project has specified acreage limits, the acreage loss of waters of the United States authorized by those NWPs cannot exceed their respective specified acreage limits. For example, if a commercial development is constructed under NWP 39, and the single and complete project includes the filling of an upland ditch authorized by NWP 46, the maximum acreage loss of waters of the United States for the commercial development under NWP 39 cannot exceed 1/2-acre, and the total acreage loss of waters of United States due to the NWP 39 and 46 activities cannot exceed 1 acre.

29. Transfer of Nationwide Permit Verifications.

If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

“When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.”

(Transferee)

(Date)

30. Compliance Certification.

Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the activity and mitigation.

The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. Activities Affecting Structures or Works Built by the United States.

If an NWP activity also requires review by, or permission from, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a “USACE project”), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission and/or review is not authorized by an NWP until the appropriate Corps office issues the section 408 permission or completes its review to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. Pre-Construction Notification.

(a) *Timing.* Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is “no effect” on listed species or “no potential to cause effects” on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) *Contents of Pre-Construction Notification:* The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

(4) (i) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures.

(ii) For linear projects where one or more single and complete crossings require pre-construction notification, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete

crossing of those wetlands, other special aquatic sites, and other waters (including those single and complete crossings authorized by an NWP but do not require PCNs). This information will be used by the district engineer to evaluate the cumulative adverse environmental effects of the proposed linear project, and does not change those non-PCN NWP activities into NWP PCNs.

(iii) Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (*e.g.,* a conceptual plan), but do not need to be detailed engineering plans);

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial and intermittent streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45-day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-federal permittees, if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat (or critical habitat proposed for such designation), the PCN must include the name(s) of those endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;

(8) For non-federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide

documentation demonstrating compliance with section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the “study river” (see general condition 16); and

(10) For an NWP activity that requires permission from, or review by, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from, or review by, the Corps office having jurisdiction over that USACE project.

(c) *Form of Pre-Construction Notification:* The nationwide permit pre-construction notification form (Form ENG 6082) should be used for NWP PCNs. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) *Agency Coordination:* (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) All NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iii) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (*e.g.,* via email, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or email that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms

and conditions of the NWPs, including the need for mitigation to ensure that the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the single and complete crossings of waters of the United States that require PCNs to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings of waters of the United States authorized by an NWP. If an applicant requests a waiver of an applicable limit, as provided for in NWPs 13, 36, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects.

2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by an NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that

will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (*e.g.,* partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (*e.g.,* watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters. The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure that the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) That the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's

submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

Further Information

1. District engineers have authority to determine if an activity complies with the terms and conditions of an NWP.

2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.

3. NWPs do not grant any property rights or exclusive privileges.

4. NWPs do not authorize any injury to the property or rights of others.

5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

US Army Corps of Engineers
Omaha District

Regional Conditions
Omaha District
State of North Dakota

The following Nationwide permit (NWP) regional conditions will be used in the State of North Dakota for NWP 12, 21, 29, 39, 40, 42, 43, 44, 48, 50, 51, 52, 55, 56, 57, and 58. Regional conditions are placed on NWPs to ensure projects result in no more than minimal adverse impacts to the aquatic environment to address local resources concerns.

A. PRECONSTRUCTION NOTIFICATION REQUIREMENTS APPLICABLE TO ALL NWPS FOR LIMITED REVOCATION OF NWPS

For all NWPs, permittees must notify the Corps in accordance with General Condition 32 Preconstruction Notification (PCN) requirements for regulated activities located within or comprised of the following:

1. **Wetlands Classified as Peatlands:**
   For purposes of this condition, peatlands are permanently or seasonally waterlogged areas with a surface accumulation of peat (organic matter) 30 centimeters (12-inches) or more thick. Under cool, anaerobic, and acidic conditions, the rate of organic matter accumulation exceeds organic decay. Any peat-covered areas, including fens, bogs, and muskegs, are all peatlands.

   a. Reserved
   b. All NWPs listed above are revoked for use in peatlands.

2. **Waters Adjacent to Natural Springs:**
   PCN required for any regulated activity located within 100 feet of the water source in natural spring areas. For purposes of this condition, a spring source is defined as any location where there is flow emanating from a distinct point at any time during the growing season. Springs do not include seeps and other groundwater discharge areas where there is no distinct point source. Springs do not include drain tile outlets.

3. **Bank Stabilization Activities:**
   PCN required for any regulated activity that involves bank stabilization impacting an area greater than 1/10 of an acre below the Ordinary High Water Mark or includes features that extend out from the existing bank line greater than 25% of the bankfull channel width.

4. **Specific Waterways:**
   PCN required for any regulated activity occurring in or under the Missouri River, including Lake Sakakawea and Lake Oahe. In addition, a PCN is required for any activity occurring in an off channel area (e.g. marinas and bays) of any of these waterways.

B. PRECONSTRUCTION NOTIFICATION REQUIREMENTS APPLICABLE TO SPECIFIC NWP.

5. Reserved

C. BEST MANAGEMENT PRACTICES

Best Management Practices

In addition to Regional Conditions 1 through 5, additional required best management practices apply to NWPs within the Omaha District. These follow and are available at: https://www.nwo.usace.army.mil/Missions/Regulatory-Program/Nation-Wide-Permit-Information/

US Army Corps of Engineers
Omaha District

2021 Nationwide Permits
Regional Conditions
Omaha District
Required Best Management Practices

The following Nationwide Permit (NWP) regional condition best management practices are required for Montana, Nebraska, North Dakota, South Dakota, and Wyoming in the Omaha District for NWP 12, 21, 29, 39, 40, 42, 43, 44, 48, 50, 51, 52, 55, 56, 57, and 58. Regional conditions are placed on Nationwide Permits to ensure projects result in no more than minimal adverse impacts to the aquatic environment and to address local resources concerns.

A. REQUIRED BEST MANAGEMENT PRACTICE APPLICABLE TO MONTANA, NEBRASKA, NORTH DAKOTA, SOUTH DAKOTA, AND WYOMING

1. **Suitable Material**
   Permittees are reminded of General Condition No. 6 which prohibits use of unsuitable material. A list of materials prohibited or restricted as fill material in waters of the United States can be found at:
   http://www.nwo.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/2034/Article/12320/prohibited-restricted-materials.aspx

B. NORTH DAKOTA REQUIRED BEST MANAGEMENT PRACTICES

2. **Minimum Culvert Width:**
   For all NWPs in jurisdictional streams, the culvert opening width of a stream crossing shall not be less than the mean bank to bank width as measured from the Ordinary High Water Mark in the affected stream reach. In stabile stream channels, the Ordinary High Water Mark is often found at the point where over-bank flow begins during a flood event. In incised stream channels that do not frequently access a floodplain or upper terrace, the Ordinary High Water Mark is generally located within the entrenched channel. The Ordinary High Water Mark may be identified by observing indicators such as a distinct change in slope, a change in vegetation characteristics, or a change in sediment characteristics, see 33 CFR 328.3(e).

3. **Culvert Countersink Depth:**
   For all NWPs in jurisdictional streams and a stable stream bed, culvert stream crossings shall be installed with the culvert invert set below the natural stream channel flow line according to the table below. This regional condition does not apply in instances where lowing of the culvert invert would allow a headcut to migrate upstream of the project into an unaffected stream reach or the result in lowering the elevation of the stream reach.

Culvert Type	Drainage Area	Minimum Distance Culvert Invert Shall Be Lowered Below Stream Flow Line
All culvert types	<100 acres	Not required
Pipe diameter <8.0 ft	100 to 640 acres	0.5 ft
Pipe diameter <8.0 ft	>640 acres	1.0 ft
Pipe diameter >8.0 ft	All drainage sizes	20% of pipe diameter
Box culvert	All drainage sizes	1.0 ft

a. The stream flow line shall be defined as the longitudinal average of the low flow stream channel.

b. The slope of the culvert should be parallel to the slope of the stream flow line.

c. The culvert invert depression depth shall be measured at the culvert for culverts installed at a slope less than the slope of the stream flow line.

4. Spawning Areas:

Spawning areas and seasons can be accessed on the North Dakota Game and Fish Department's website at: http://gf.nd.gov/gnf/conservation/docs/spawning-restriction-exclusions.pdf

5. Intake Structures:

a. Intake screens with a maximum mesh opening of ¼-inch must be provided, inspected annually, and maintained. Wire, Johnson-like, screens must have a maximum distance between wires of 1/8-inch. Water velocity at the intake screen shall not exceed ½-fot per second.

b. Pumping plant sound levels will not exceed 75 dB at 50 feet.

c. Intakes located in Lake Sakakawea, above river mile 1519, and on the Yellowstone River, are subject to the following conditions:

i. The intakes shall be floating.

ii. At the beginning of the pumping season, the intake shall be placed over water with a minimum depth of 20 feet.

iii. If the 20-foot depth is not attainable, then the intake shall be located over the deepest water available.

iv. If the water depth falls below six feet, the intake shall be moved to deeper water or the maximum intake velocity shall be limited to ¼-foot per second.

d. Intakes located in Lake Sakakawea, below river mile 1519, and the Missouri River below Garrison Dam are subject to the following conditions:

i. The intakes shall be submerged.

ii. At the beginning of the pumping season, the intake will be placed at least 20 vertical feet below the existing water level.

iii. The intake shall be elevated 2 to 4 feet off the bottom of the river or reservoir bed.

iv. If the 20-foot depth is not attainable, then the intake velocity shall be limited to ¼-foot per second with intake placed at the maximum practicable attainable depth.

e. Intakes and associated Utility lines that are proposed to cross sandbars in areas designated as piping plover critical habitat are prohibited.

f. Any temporary open trench associated with utility lines are to be closed within 30 days of excavation. This time limit may be extended by notifying the North Dakota Regulatory Office and receiving a written response that the extension is acceptable.

6. <u>Boat Docks:</u>

To ensure that the work or structure shall not cause unreasonable obstruction to the free navigation of the navigable waters, the following conditions are required:

a. No boat dock shall be located on a sandbar or barren sand feature. The farthest point riverward of a dock shall not exceed a total length of 30 feet from the Ordinary High Water Mark. Information Note: Issuance of this permit does not supersede authorization required by the North Dakota State Engineer's Office.

b. Any boat dock shall be anchored to the top of the high bank.

c. Any boat dock located within an excavated bay or marina that is off the main river channel may be anchored to the bay or marina bottom with spuds.

d. Section 10 Waters located in the State of North Dakota area:

i. Bois de Sioux River

ii. James River Missouri River

iii. Red River of the North

iv. Upper Des Lacs Lake

v. Yellowstone River

US Army Corps of Engineers
Omaha District

2021 Nationwide Permits
Regional Conditions
State of North Dakota
Section 401 Water Quality Certification

The following Nationwide permit (NWP) regional conditions pertaining to Section 401 Water Quality Certification (WQC) will be used in the State of North Dakota for NWP 12, 21, 29, 39, 40, 42, 43, 44, 48, 50, 51, 52, 55, 56, 57, and 58.

The Environmental Protection Agency is responsible for providing WQC for activities that occur on Indian Lands in the State of North Dakota.

The North Dakota Department of Environmental Quality is responsible for providing WQC for Section 404 activities that occur in the State of North Dakota, excluding Indian Lands.

WQC by NWP follows:

- **NWP 12 – Oil or Natural Gas Pipeline Activities**
  -EPA denied for all activities.
  -NDDEQ denied for activities affecting Class I, IA, II and III rivers and streams, and classified lakes listed in Appendixes I and II of the State Water Quality Standards and certified for activities affecting all other waters in the State.

- **NWP 21 – Surface Coal Mining Activities**
  -EPA denied for all activities.
  -NDDEQ certified for all activities.

- **NWP 29 – Residential Developments**
  -EPA denied for all activities.
  -NDDEQ certified with the condition that the project will not result in a stream bank loss exceeding 300 linear feet in Class I, IA, II and III rivers and streams. Projects that cannot meet the condition will require an individual certification.

- **NWP 39 – Commercial and Institutional Developments**
  -EPA denied WQC for all activities.
  -NDDEQ certified with the condition that the project will not result in a stream bank loss or relocation of 150 linear feet of any river or stream. Projects that cannot meet the condition will require an individual certification.

- **NWP 40 – Agricultural Activities**
  -EPA denied WQC for all activities.
  -NDDEQ certified with the condition that the project will not result in a stream bank loss or relocation of 150 linear feet of any river or stream. Projects that cannot meet the condition will require an individual certification.

- **NWP 42 – Recreational Facilities**
  -EPA denied WQC for all activities.

-NDDEQ certified with the condition that the project will not result in a stream bank loss or relocation of 150 linear feet of any river or stream. Projects that cannot meet the condition will require an individual certification.

- **NWP 43 – Stormwater Management Facilities**
  -EPA denied WQC for all activities.
  -NDDEQ certified for all activities.

- **NWP 44 – Mining Activities**
  -EPA denied WQC for all activities.
  -NDDEQ certified for all activities.

- **NWP 48 – Commercial Shellfish Mariculture Activities**
  -EPA waived WQC for all activities.
  -NDDEQ certified for all activities.

- **NWP 50 – Underground Coal Mining Activities**
  -EPA denied WQC for all activities.
  -NDDEQ certified for all activities.

- **NWP 51 – Land-Based Renewable Energy Generation Facilities**
  -EPA denied for all activities.
  -NDDEQ certified for all activities.

- **NWP 52 – Water-Based Renewable Energy Generation Pilot Projects**
  -EPA denied WQC for all activities.
  -NDDEQ certified with the condition that a copy of the PCN is provided to NDDEQ for projects in, over or under Class I, IA, II and III rivers and streams, and classified lakes for compliance purposes.

- **NWP 55 – Seaweed Mariculture Activities**
  -EPA denied WQC for all activities.
  -NDDEQ N/A

- **NWP 56 – Finfish Mariculture Activities**
  -EPA denied WQC for all activities.
  -NDDEQ N/A

- **NWP 57 – Electric Utility Line and Telecommunications Activities**
  -EPA denied for all activities.
  -NDDEQ certified for all activities.

- **NWP 58 – Utility Line Activities for Water and Other Substances**
  -EPA denied WQC for all activities.
  -NDDEQ certified with the condition that the lines do not carry oil and gas production water, produced water, or brine water. Pipelines that carry oil or gas production water,

produced water, or brine water, collectively called saltwater pipelines, in, over or under Class I, IA, II and III rivers and streams, and classified lakes require individual certification with conditions based on the specific waterbody, location on the water, type of construction, and safety controls applied prior, during, or after construction.

From:	John Cannon
To:	Leslie TeWinkel
Cc:	Teagan Loew; Matt Long
Subject:	FW: EXTERNAL: FW: Attached Image
Date:	Thursday, October 24, 2024 8:43:51 AM
Attachments:	4029_001.pdf image001.png

Leslie – Here is FWS response to the Spine letter.

John Cannon, MS
612.746.1614 direct
952.239.5920 mobile
john.cannon@merjent.com

merjent.
1 Main Street SE, Suite 300
Minneapolis, MN 55414
612.746.3660
www.merjent.com

From: Johnson, Jessica N <jessica_n_johnson@fws.gov>
Sent: Thursday, October 24, 2024 8:40 AM
To: John Cannon <john.cannon@merjent.com>
Subject: EXTERNAL: FW: Attached Image

CAUTION: This email originated from outside of Merjent.

Hello John,
We received your letter and plan to coordinate as you go through the Section 7 process with the U.S. ACE.
Thank you,
Jessica

Jessica Johnson
Environmental Contaminants Specialist
U.S. Fish and Wildlife Service
3425 Miriam Avenue
Bismarck, ND 58501
Phone: 701-355-8507
Cell: 720-626-5250

From: Toso, Luke B <luke_toso@fws.gov>
Sent: Wednesday, October 16, 2024 10:32 AM
To: Johnson, Jessica N <jessica_n_johnson@fws.gov>
Subject: Fw: Attached Image

Jessica - Would you please review?

Luke

From: FW6Scan2Email@fws.gov <FW6Scan2Email@fws.gov>
Sent: Wednesday, October 16, 2024 9:13 AM
To: Toso, Luke B <luke_toso@fws.gov>
Subject: Attached Image

Exhibit E

Landowner Waivers

Setback Waiver

Hiland Crude, LLC, d/b/a Hiland Express Pipeline ("Hiland") is planning to install a natural gas liquid pipeline within five hundred (500) feet of an existing residence located on the following described property:

McKenzie County, North Dakota:

Township 150 North, Range 99 West of the 5th P.M.
Section 19: Lot 3 less a tract of land more fully described in Document #454124

Under North Dakota law (North Dakota Century Code § 49-22.1-03 and North Dakota Administrative Code § 69-06-08-02), certain geographical areas, including areas within five hundred (500) feet of an inhabited residence, are designated as "avoidance areas" and shall not be considered in the routing of a transmission facility unless there is no reasonable alternative. However, these provisions of North Dakota law may be waived by the owner of the residence.

By signing this Setback Waiver, you, as owner of the currently inhabited residence on the above-described property, agree that you waive the avoidance area criteria set forth in North Dakota Century Code § 49-22.1-03 and North Dakota Administrative Code § 69-06-08-02, and do not object to the placement of Hiland's pipeline within five hundred (500) feet but no closer than three hundred (300) feet of said currently inhabited residence.

[redacted]

Dated this 14th day of February, 2025.

Badlands Power Fuels, LLC

X _____

Name: _____

Title: EVP & CFO

Hiland Express
7290.0.759

Setback Waiver

Hiland Crude, LLC, d/b/a Hiland Express Pipeline ("Hiland") is planning to install a natural gas liquid pipeline within five hundred (500) feet of an inhabited residence located on the following described property:

McKenzie County, North Dakota:

Township 149 North, Range 99 West of the 5th P.M.
Section 24: I.T. #3185 and the E½ of I.T. #3186

Under North Dakota law (North Dakota Century Code § 49-22.1-03 and North Dakota Administrative Code § 69-06-08-02), certain geographical areas, including areas within five hundred (500) feet of an inhabited residence, are designated as "avoidance areas" and shall not be considered in the routing of a transmission facility unless there is no reasonable alternative. However, these provisions of North Dakota law may be waived by the owner of the residence.

By signing this Setback Waiver, you, as owner of the inhabited residence on the above-described property, agree that you waive the avoidance area criteria set forth in North Dakota Century Code § 49-22.1-03 and North Dakota Administrative Code § 69-06-08-02, and do not object to the placement of Hiland's pipeline within five hundred (500) feet of said inhabited residence.

[redacted]

Dated this 5 day of Jan, 2025 ~~2024~~.

Rowdy Lund

Miranda Lund

Setback Waiver

Hiland Crude, LLC, d/b/a Hiland Express Pipeline ("Hiland") is planning to install a natural gas liquid pipeline within five hundred (500) feet of an inhabited residence located on the following described property:

McKenzie County, North Dakota:

Township 150 North, Range 100 West of the 5th P.M.
Section 2: I.T. #2146 located in the S½SE¼

Under North Dakota law (North Dakota Century Code § 49-22.1-03 and North Dakota Administrative Code § 69-06-08-02), certain geographical areas, including areas within five hundred (500) feet of an inhabited residence, are designated as "avoidance areas" and shall not be considered in the routing of a transmission facility unless there is no reasonable alternative. However, these provisions of North Dakota law may be waived by the owner of the residence.

By signing this Setback Waiver, you, as owner of the inhabited residence on the above-described property, agree that you waive the avoidance area criteria set forth in North Dakota Century Code § 49-22.1-03 and North Dakota Administrative Code § 69-06-08-02, and do not object to the placement of Hiland's pipeline within five hundred (500) feet of said inhabited residence.

[redacted]

Dated this 7th day of Dec., 2024.

Roughrider Well Service, LLP

X _____

Name: Mark Maki

Title: Manager / Managing Partner

7462.0.759

Setback Waiver

Hiland Crude, LLC, d/b/a Hiland Express Pipeline ("Hiland") is planning to install a natural gas liquid pipeline within five hundred (500) feet of an inhabited residence located on the following described property:

McKenzie County, North Dakota:

Township 149 North, Range 99 West of the 5th P.M.
Section 13: I.T. #3134 located in the SW¼NW¼

Under North Dakota law (North Dakota Century Code § 49-22.1-03 and North Dakota Administrative Code § 69-06-08-02), certain geographical areas, including areas within five hundred (500) feet of an inhabited residence, are designated as "avoidance areas" and shall not be considered in the routing of a transmission facility unless there is no reasonable alternative. However, these provisions of North Dakota law may be waived by the owner of the residence.

By signing this Setback Waiver, you, as owner of the inhabited residence on the above-described property, agree that you waive the avoidance area criteria set forth in North Dakota Century Code § 49-22.1-03 and North Dakota Administrative Code § 69-06-08-02, and do not object to the placement of Hiland's pipeline within five hundred (500) feet of said inhabited residence.

[redacted]

Dated this 7th day of December, 2024.

Kevin Sanford

7463.0.759

Setback Waiver

Hiland Crude, LLC, d/b/a Hiland Express Pipeline ("Hiland") is planning to install a natural gas liquid pipeline within five hundred (500) feet of an inhabited residence located on the following described property:

McKenzie County, North Dakota:

Township 150 North, Range 100 West of the 5th P.M.
Section 2: Lots 1, 2, 3, and 4

Under North Dakota law (North Dakota Century Code § 49-22.1-03 and North Dakota Administrative Code § 69-06-08-02), certain geographical areas, including areas within five hundred (500) feet of an inhabited residence, are designated as "avoidance areas" and shall not be considered in the routing of a transmission facility unless there is no reasonable alternative. However, these provisions of North Dakota law may be waived by the owner of the residence.

By signing this Setback Waiver, you, as owner of the inhabited residence on the above-described property, agree that you waive the avoidance area criteria set forth in North Dakota Century Code § 49-22.1-03 and North Dakota Administrative Code § 69-06-08-02, and do not object to the placement of Hiland's pipeline within five hundred (500) feet of said inhabited residence.

[redacted]

Dated this 11th day of February, 2025.

Alan Bruins

Alan Bruins

Sheri Bruins

Sheri Bruins

COPY - DO NOT RECORD

Setback Waiver

Hiland Crude, LLC, d/b/a Hiland Express Pipeline ("Hiland,,) is planning to install a natural gas liquid pipeline within five hundred (500) feet of an inhabited residence located on the following described property:

McKenzie County, North Dakota:

Township 150 North, Range 100 West of the 5th P.M.
Section 1: Lot 4, SW¼NW¼, S½

Under North Dakota law (North Dakota Century Code § 49-22.1-03 and North Dakota Administrative Code § 69-06-08-02), certain geographical areas, including areas within five hundred (500) feet of an inhabited residence, are designated as "avoidance areas,, and shall not be considered in the routing of a transmission facility unless there is no reasonable alternative. However, these provisions of North Dakota law may be waived by the owner of the residence.

By signing this Setback Waiver, you, as owner of the inhabited residence on the above-described property, agree that you waive the avoidance area criteria set forth in North Dakota Century Code § 49-22.1-03 and North Dakota Administrative Code § 69-06-08-02, and do not object to the placement of Hiland's pipeline within five hundred (500) feet of said inhabited residence.

[redacted]

Dated this 11 day of Feb, 2025 ~~2024.~~

Lloyd A. Anderson

Lloyd A. Anderson

Exhibit F

Project Construction Plans



Hiland Crude, LLC
dba Hiland Express
a subsidiary of Kinder Morgan, Inc.

Hiland Express Spine Pipeline Project
McKenzie County, North Dakota

Construction Standards
Environmental Requirements
C1260

December 2024

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1. Scope

This document defines the Company standards for Environmental Requirements during construction of all Pipelines, Meter Stations, Compressor Stations and Gas Processing and Treating Facilities. For Projects subject to FERC regulation, additional requirements may apply, and shall supercede the basic requirements contained herein.

2. Permit Compliance

Contractor shall perform all construction work in compliance with applicable permits, authorizations, and clearances. Applicable Federal, State, County, or municipal permits shall supercede the requirements contained in this standard.

The Company shall prepare documentation and submit reports as required for compliance with environmental permits and/or agency requirements.

The Project Manager may designate in the Scope of Work that the Contractor is responsible for obtaining environmental permits or authorizations. Contractor shall provide copies of all permit applications or authorization requests, prior to submitting to agencies, for review by the Environmental, Health and Safety Department (EHS).

3. General Best Management Practices (BMP's)

3.1. All construction activities shall be conducted to minimize adverse environmental impacts. Contractor shall conduct all construction activities in an environmentally-sensitive manner in conformance with this standard and in compliance with applicable Federal, State, or local environmental regulations.

The Contractor shall employ construction methods and preventive measures (in all construction and support areas) to control dust generation, soil erosion, siltation of water bodies and wetlands, and spills of fuels, solvents, or other materials. Contractor shall install, inspect, and maintain said preventative measures required for any construction-related activities. Contractor shall comply with all requirements of this standard, which is the **minimum** performance requirement.

3.2. Contractor shall install control structures at locations along the right-of-way (ROW). Contractor shall select the BMP's that provide compliance with applicable environmental requirements. Typical BMP's include:

- Hay bale berms. Refer to Company Construction Drawings **CST-P-1260-A190.1 – Typical Straw Bale Sediment Barrier Erosion Control** and **CST-P-1260-A190.2 – Typical Straw Bale Sediment Barrier Erosion Control**
- Silt fences. Refer to Company Construction Drawings **CST-P-1260-A180.1 – Typical Silt Fence Sediment Barrier Erosion Control** and **CST-P-1260-A180.2 – Typical Silt Fene Sediment Barrier Erosion Control**
- Temporary slope breakers. Refer to CompanyConstruction Drawings **CST-P-1260-A220.1 – Typical Slope Breaker** and **CST-P-1260-A220.2 – Typical Slope Breaker**.
- Sediment logs/waddles. Refer to Company Drawing (to be developed as needed in future)

3.3. Contractor shall install, inspect, and maintain BMP's in conformance with Manufacturer specifications and in compliance with permits, the Scope of Work, and Construction Drawings. Contractor shall install BMP's immediately after initial soil disturbance, and shall maintain BMP's until restoration is completed or such time as the Company authorizes BMP removal. When identified as necessary (e.g., by an inspection) and until BMP's are replaced or restoration is completed, Contractor shall reinstall or modify BMP's as soon as practicable or as required by conditions of permits.

3.4. Unless determined otherwise by the Company Representative, the following spacing requirements shall apply to temporary and permanent slope and trench breakers as minimum requirements for the ROW:

Slope (%)	Spacing (ft)
5 to 15	300
>15 to 30	200
>30	100

Table C1260 / 3.4 – Right-of-Way Slope %

3.5. Permanent Slope Breakers

Refer to Company Construction Drawings **CST-P-1260-A220.1 – Typical Slope Breaker** and **CST-P-1260-A220.2 – Typical Slope Breaker**.

Unless otherwise directed by the Company Representative, or where an area is residential or normally cultivated, Contractor shall install permanent slope breakers at the same minimum spacing as temporary slope breakers.

3.6. Contractor shall install terraces at the base of all slopes adjacent to water bodies, near boundaries between Company-designated wetlands, and adjacent to disturbed upland areas. Contractor shall also install terraces at locations specified by the Company Representative.

3.7. Temporary Trench Plugs

Temporary trench plugs may consist of unexcavated portions of the trench, compacted subsoil, sandbags, or some functional equivalent. Topsoil shall not be used for trench plugs. Position temporary trench plugs, as necessary, to reduce trenchline erosion and minimize the volume and velocity of trench water flow at the base of slopes.The Company Representative shall determine requirements for, and spacing of, trench plugs. If not specified, Contractor shall leave hard trench plugs (undisturbed soil) on either side of water body crossings and drain tiles, as shown in Company **Construction Drawing CST-P-1150-A275 – Typical Flowing Waterbody Crossing Open Cut Trenced**.

The Company Representative shall determine requirements for, and spacing of, trench plugs. If not specified, Contractor shall leave hard trench plugs (undisturbed soil) on either side of water body crossings and drain tiles as shown in Company **Construction Drawing CST-P-1150-A275 – Typical Flowing Waterbody Crossing Open Cut Trenced**.

3.8. Trench Breakers

Refer to Company **Construction Drawing CST-P-1260-A200 – Typical Trench Breaker**.

The Company Representative shall determine requirements for, and spacing of, trench breakers.

3.8.1. Trench breakers shall be installed at the same spacing as, and upslope of, terraces and/or permanent slope breakers.

3.8.2. In agricultural fields and residential areas where slope breakers are not typically required, trench breakers shall be installed at the same spacing as if permanent slope breakers were required.

3.8.3. Trench breakers shall be installed at the base of slopes greater than 5% where the base of the slope is less than 50 feet from a water body or wetland.

3.8.4. Trench breakers shall be installed where needed to avoid draining a water body or wetland (to prevent sediment flow into wetlands).

3.8.5. Trench breakers shall not be constructed of topsoil.

3.9. Revegetation (Temporary)

Disturbed areas shall be re-seeded in conformance with Scope of Work, Construction drawings, ROW line list, or permit requirements.

3.10. Revegetation (Permanent)

Disturbed areas shall be re-seeded in conformance with Scope of Work, Construction drawings, ROW line list or permit requirements.

3.11. Mulch

Refer to Company **Construction Drawing CST-P-1260-A215 – Typical Straw Mulch Erosion Control**.

Mulch shall be applied on all slopes (except in actively-cultivated cropland) prior to, concurrent with, or immediately after seeding where necessary to stabilize the soil surface and to reduce wind and water erosion. Asphalt or asphalt-and-resin emulsions shall be applied in conformance with Manufacturer's recommendations. Mulch shall be applied in conformance with Scope of Work, Construction drawings, ROW line list, or permit requirements.

3.12. Jute Thatching or Bonded Fiber Blankets

Jute thatching or bonded fiber blankets may be installed on water body banks (to stabilize seeded areas and other critical areas where the use of mulch and anchoring tools is impractical). Fabric shall be anchored with pegs or staples per Manufacturer's specifications.

3.13. Sediment Basins

Sediment basins shall be constructed in conformance with Scope of Work, Construction drawings, ROW line list, or permit conditions.

3.14. Contractor shall prevent litter, construction debris and construction chemicals that could be exposed to storm water from becoming a pollutant source in storm water discharges.

4. Access Roads

4.1. Unless otherwise specified, access to the ROW shall be from existing, commonly used public roads. The Company Representative shall review and approve any Contractor arrangements to use private roads or undeveloped public roadways as ROW access roads.

4.2. Contractor shall maintain safe and accessible conditions at all road crossings and access points during construction. Contractor shall remove (by periodic sweeping and scraping) all sediment tracked onto public roads as a requirement of work.

4.3. ROW access points at public road crossings shall be subject to local permit conditions and restrictions. If required by the Company Representative or local permit, Contractor shall install crushed stone access pads on either side of the public road at ROW crossings and/or other access road entrances. In residential or active agricultural areas, such stone access pads shall be placed on synthetic fabric (to facilitate stone removal). Refer to Company **Construction Drawing CST-P-1000-A145 – Typical Temporary Paved Road Access Pad**.

4.4. Temporary access roads and final disposition shall be identified in the Scope of Work, Construction drawings, or ROW line list.

5. Upland Construction Activities

5.1. The nominal construction ROW width shall be limited by ROW agreements with landowners, regulatory certificates, and permit or agency requirements. No access or activities are permitted outside ROW limits, Company-approved access roads, or pre-approved staging and work areas.

5.2. The Company Representative shall approve use of any additional areas that are not identified in the Scope of Work, Construction drawings, ROW line list, or permit conditions.

5.3. Topsoil Segregation

Refer to Company Construction Drawings **CST-P-1260-A250 – Typical Full Topsoil Separation Side Hill Construction**, **CST-P-1260-A255 – Typical Topsoil Separation Trench & Spoilside Method**, **CST-P-1260-A260**, **CST-P-1260-A265 – Typical Topsoil Separation Trench Plus 4' Method**, and **CST-P-1260-A270 – Typical Full Topsoil Separation Side Hill Construction Spoilside Travel Lane**.

Topsoil shall be segregated for linear facilities construction or for temporary use areas in actively-cultivated or rotated croplands and pastures, residential areas, hayfields, and other areas when requested by landowners or jurisdictional agencies. Soil segregation shall be in conformance with Scope of Work, agency requirements, ROW line list, or conditions of permits. Salvaged topsoil and subsoil shall be maintained separately throughout all construction activities. Segregated topsoil shall not be used for padding the pipe.

6. Trenching

6.1. Tile lines encountered during trenching operations shall be protected and repaired after trenching. Refer to Company **Construction Drawing CST-P-1000-A305 – Typical Undercrossing of Tile Drainlines**.

6.2. Contractor shall cover open ends of cut tile to prevent the entrance of dirt or animals. Contractor shall immediately mark damaged tile locations using lath with colored ribbon flagging, or with alternate methods approved by the Company Representative. Lath markers shall not be removed except when tile repair crews reopen and repair tiles. Where necessary (to maintain drainage during construction), a temporary pipe bridge or temporary soft trench plugs shall be installed on both sides of the tile.

6.3. Qualified personnel shall test and repair drain tiles. After trenching, Contractor shall probe all drainage tile systems within the disturbed area to check for damage to the tile system. If damage is noted, locations of damage shall be marked as in previous paragraph 6.2 (above).

6.4. Contractor shall perform permanent drain tile repair or replacement (to original or better condition) as required by the Company Representative, landowner, and all applicable jurisdictional agencies.

6.5. Contractor shall make every effort to limit the amount of construction equipment traveling over repaired areas, especially in wet conditions.

6.6. For new pipelines in areas where drain tiles exist (or are planned), Contractor shall ensure that the depth of cover (over the pipeline) avoids interference with drain tile systems. For adjacent pipeline loops in agricultural areas, Contractor shall install new pipeline with at least the same depth of cover as the existing pipeline(s).

6.7. Contractor shall install trench plugs at all water body crossings and drainage tiles, unless directed otherwise by the Company Representative.

6.8. Trench dewater shall be filtered to prevent silt-laden water being discharged into any wetland or water body or in conformance with permit requirements. The filtration system shall be installed on the approved/authorized ROW or within areas approved by the Company Representative. Refer to Company **Construction Drawing CST-P-1000-A165 – Typical Geotextile Filter Bag for Dewatering**.

7. Water Body Crossings

7.1. Contractor shall install water body crossings in conformance with the Scope of Work, Construction drawings, or permit conditions. Any changes in work areas require pre-approval by the Company Representative.

7.2. Until equipment bridges are installed, Contractor shall limit the number of water body crossings by heavy equipment to one stream or wetland crossing per piece of equipment. For construction across wetlands or other water bodies, Contractor shall comply with permit conditions.

7.3. Contractor shall limit the use of equipment within streams. Only equipment required to complete water crossings or as specified by permit conditions shall be allowed in-stream.

7.4. General work area requirements:

7.4.1. Contractor shall use equipment bridges to cross waterbodies. Refer to Company Construction Drawings **CST-P-1000-A335 – Typical Water Body Bridge Rockfill & Flume**, **CST-P-1000-A340 – Typical Portable Water Body Bridge**, **CST-P-1000-A345**, **CST-P-1000-A350 – Typical Portable Water Body Bridge with Culvert Support**, and **CST-P-1000-A355 – Typical Flexi-Float Water Body Bridge**.

7.4.2. Contractor shall only use extra work areas (such as staging areas and additional spoil storage areas) identified in the Scope of Work or Construction drawings as permit conditions allow.

7.4.3. Contractor shall limit vegetation clearing between extra work areas and edges of water bodies to the Company-authorized construction ROW.

7.4.4. Contractor shall limit the size of extra work areas to no more than is necessary for construction of water body crossings.

7.4.5. Company Representative shall approve extra work areas prior to use.

7.4.6. For wetland or stream crossings, Contractor shall have on site at least one spill kit with equipment and supplies capable of containing releases of fuel, oil, or other substances. At a minimum, the spill kit shall contain plastic sheeting, sorbent material, and spill booms.

7.5. General crossing procedures and requirements:

7.5.1. Contractor shall comply with Section 404, Nationwide Permit Program Terms and Conditions (33 CFR Part 330) or as directed by the Company Representative.

7.5.2. Contractor shall maintain flow rates to protect aquatic life and prevent interruption of existing downstream water use.

7.5.3. Concrete coating activities, and/or the storage of hazardous materials, chemicals, fuels, or lubricating oils, is not allowed within 100 feet of any water body or within any designated municipal watershed area (except at locations designated for these purposes by a jurisdictional agency).

7.5.4. Except when site conditions prevent access, Contractor shall refuel all construction equipment at least 100 feet from any water body). If refueling of construction equipment is required within 100 feet of a water body, Contractor shall comply with the project-specific Spill Prevention and Response Procedure.

7.5.5. Contractor shall place all spoil from water body crossings and upland spoil from major water body crossings in the construction ROW at least 10 feet from the water's edge or in extra work areas designated by the Company Representative. Contractor shall install sediment barriers to prevent spoil from flowing into any water body.

7.5.6. Contractor shall design, install, and maintain equipment bridges to withstand and pass the highest flow rate that could be expected to occur while the bridge is in service.

Contractor may not use soil to construct or stabilize equipment bridges. Contractor shall construct equipment bridges using one of the following methods as allowed by permit conditions:

- Equipment pads and culvert(s). Refer to Company **Construction Drawing CST-P-1000-A145 – Typical Temporary Paved Road Access Pad**.
- Equipment pads or railroad car bridges without culverts. Refer to Company **Construction Drawing CST-P-1000-A350 – Typical Timber Mat Water Body Bridge**.
- Clean rock fill and culvert(s). Refer to Company **Construction Drawing CST-P-1000-A335 – Typical Water Body Bridge Rockfill and Flume**.
- Flexi-float or portable bridges. Refer to Company Construction Drawings **CST-P-1000-A340 – Typical Portable Water Body Bridge**, **CST-P-1000-A345 – Typical Portable Water Body Bridge with Culver Support**, and **CST-P-1000-A355 – Typical Flexi-Float Water Body Bridge**.
- When pre-approved by the Company Representative, alternate methods/designs (which achieve the performance objectives specified above) may be used.

7.5.7. Contractor shall maintain equipment bridges to prevent soil from entering the water body.

7.5.8. Unless the applicable agency authorizes a bridge as 'permanent', Contractor shall remove equipment bridges as soon as possible after permanent seeding.

7.6. Contractor shall complete water body crossings in conformance with the Scope of Work, associated site-specific drawings or permit conditions. Crossing methods include:

- Dam and pump method. Refer to site-specific Construction drawing. Absent site-specific Construction drawings, refer to **CST-P-1150-A370 – Water Body Crossing Open Cut Dam and Pump**.
- Dry-ditch method. Refer to site-specific Construction drawing. Absent site-specific Construction drawings, refer to **CST-P-1150-A280 – Typical Non-Flowing Water Body Crossing Open Cut Trench**.
- Flume crossing method. Refer to site-specific Construction drawing. Absent site-specific Construction drawings, refer to **CST-P-1150-A375 – Water Body Crossing Open Cut Dry Flume**.
- Horizontal directional drill method. Refer to site-specific Construction drawing. Absent site-specific Construction drawings, refer to **CST-P-1150-A375 – Water Body Crossing Horizontal Directional Drill**.

7.7. Contractor shall install sediment barriers immediately after disturbing the water body (or adjacent upland) to prevent soil erosion or sedimentation from flowing into the wetland or water body. Sediment barriers shall be maintained throughout construction and reinstalled when necessary (such as after backfilling the trench), until they are replaced by permanent erosion controls and/or adjacent upland areas are completely restored.

7.8. Trench dewater shall be filtered to prevent heavily silt-laden water discharge into any wetland or water body. The filtration system shall be installed on the ROW or within areas approved by the Company Representative. Refer to Company Construction Drawings **CST-P-1000-A165 – Typical Geotextile Filter Bag for Dewatering** and **CST-P-1000-B170 – Typical Straw Bale Dewatering Structure Large Volume**.

7.9. Water body crossing restoration activities shall be completed in conformance with the Scope of Work or site-specific permit conditions.

8. Wetland Crossings

8.1. Contractor shall install wetland crossings in conformance with the Scope of Work, Construction drawings or permit conditions. Company Representative must approve any changes in work areas.

8.2. The Contractor shall implement all construction procedures for water body crossings in the event the wetland crossing is located adjacent to or within a wetland.

8.3. General work area requirements:

8.3.1. Contractor shall only use extra work areas (such as staging areas and additional spoil storage areas) identified in the Scope of Work or Construction drawings as permit conditions allow.

8.3.2. Contractor shall limit vegetation clearing between extra work areas and the wetland edge to the Company-authorized construction ROW.

8.3.3. Contractor may use construction ROW for access only when wetland soil is stabilized to a degree that allows equipment passage without creating ruts. Stabilization of ROW may be accomplished with timber riprap, prefabricated equipment mats, or terra mats.

8.3.4. Contractor shall ensure that all construction equipment other than that necessary to install the wetland crossing shall use access roads located in upland areas. Prior to placement of wetland matting, and where access roads in upland areas do not provide reasonable access, Contractor shall limit all other construction equipment to one pass through the wetland using the construction ROW.

8.3.5. Company Representative shall approve extra work areas prior to use.

8.4. General wetland crossing procedures and requirements:

8.4.1. Contractor shall comply with Section 404, Nationwide Permit Program Terms and Conditions (33 CFR Part 330) or as directed by the Company Representative.

8.4.2. Contractor shall assemble pipeline in an upland area unless the wetland is dry enough to support skids and pipe. Where water and other site conditions allow, Contractor shall use 'push-pull' or 'float' techniques to place the pipe in trench. Refer to site-specific drawings or to **CST-P-1260-A390.1 – Typical Push Pull Wetland Crossing** and **CST-P-1260-A390.2 – Typical Push Pull Wetland Crossing**.

8.4.3. Contractor shall minimize the duration of construction-related disturbance within wetlands as allowed by permit.

8.4.4. Contractor shall not store hazardous materials, chemicals, fuels, or lubricating oils in a wetland or within 100 feet of any wetland boundary. Contractor shall not perform concrete coating activities in a wetland or within 100 feet of any wetland boundary.

8.4.5. Except when site conditions prevent access, Contractor shall refuel all construction equipment in upland areas at least 100 feet from a wetland boundary. If refueling of construction equipment is required in a wetland or within 100 feet of any wetland boundary, Contractor shall comply with the project-specific Spill Prevention and Response Procedure.

8.4.6. Contractor shall limit construction equipment operating in wetland areas to that necessary to clear the ROW, dig trench, fabricate and install pipeline, backfill trench and restore ROW. Refer to site-specific drawings or to **CST-P-1260-A380.1 – Typical Wetland Crossing** and **CST-P-1260-A380.2 – Typical Wetland Crossing**. All other construction equipment shall use approved access roads located in upland areas. Where access roads in upland areas do not provide reasonable access, Contractor shall limit all other construction equipment to one pass through the wetland using the ROW.

8.4.7. Contractor shall clear vegetation by cutting it off at the ground level, leaving existing root systems in place. Contractor shall remove cut vegetation from the wetland for disposal.

8.4.8. Contractor shall limit grading activities and removing tree stumps to areas directly over the trench line. Contractor shall not grade or remove stumps or root systems from other wetland areas of the ROW unless the Company Representative determines that

safety-related construction constraints require the removal of tree stumps from the working side of the ROW.

8.4.9. Contractor shall segregate the top foot of topsoil from the area disturbed by trenching. In areas with less than 12-inches of topsoil, Contractor shall segregate the entire topsoil layer disturbed by trenching. Soil separation is not required where standing water or soils are saturated or frozen. Immediately after backfilling is completed, Contractor shall restore segregated topsoil to its original location.

8.4.10. In standing water or saturated soils, Contractor shall use low ground-weight construction equipment or operate normal equipment from timber riprap, prefabricated equipment mats, terra mats, or equivalent (to prevent mixing of topsoil and subsoil).

8.4.11. Contractor shall not cut trees outside the construction ROW to obtain timber riprap or equipment mats. Contractor shall use no more than two layers of timber riprap to stabilize ROW.

8.4.12. Contractor shall remove all timber riprap, prefabricated equipment mats, or other material used to support equipment on the construction ROW when restoring to pre-construction conditions.

8.4.13. Contractor shall remove water from the trench to prevent heavily silt-laden water from flowing into any wetland. Contractor shall remove dewatering structures as soon as possible after dewatering activities are completed. Refer to Company Construction Drawings **CST-P-1000-A165 – Typical Geotextile Filter Bag for Dewatering** and **CST-P-1000-B170 – Typical Straw Bale Dewtering Structure Large Volume**.

8.4.14. Contractor shall install sediment barriers across the entire construction ROW immediately upslope of the wetland boundary at all wetland crossings (to prevent sediment flow into adjacent wetlands).

8.4.15. Contractor shall install sediment barriers along the edge of the construction ROW (to prevent sediment flow into adjacent wetlands and contain spoil and sediment within the ROW).

8.4.16. Contractor shall remove all sediment barriers during ROW cleanup.

8.5. Restoration of wetland crossings shall include:

8.5.1. Contractor shall construct trench breakers and/or seal the trench bottom (to maintain the original wetland hydrology).

8.5.2. To avoid transporting sediment into wetlands, Contractor shall install:

- Permanent slope breakers across the construction ROW.
- Trench breakers at the base of slopes greater than 5% where the base of the slope is less than 50 feet from the wetland boundary.
- Trench breakers between wetlands and adjacent disturbed upland area, where required.

In areas adjacent to wetlands, earthen berms may be used as sediment barriers when approved by the Company Representative.

8.5.3. Contractor shall comply with the wetland restoration plan as directed by Company Representative. Contractor shall prevent the introduction or spread of undesirable exotic vegetation.

8.5.4. When final revegetation and stabilization of upland areas are accepted (in conformance with applicable standards) by the Environmental Inspector or Company Representative, the Company (or Contractor, if designated) shall remove all remaining temporary sediment barriers.

9. Hydrostatic Testing

9.1. Contractor shall use water sources and at locations only as permitted in the Scope of Work or as approved by the Company Representative.

9.2. Contractor shall discharge hydrotest water at locations only as permitted in the Scope of Work or as approved by the Company Representative.

9.3. Contractor shall keep the Company Representative informed of testing schedules, so that required notifications to agencies or landowners are completed in compliance with permit conditions.

9.4. Contractor shall notify Company Representative immediately upon a hydrotest failure, so that required notifications to agencies or landowners are completed in compliance with permit or other statutory requirements.

9.5. Contractor shall pre-clean facilities, dispose of waste, and dry facilities in conformance with the Scope of Work , the approved Waste Management Plan and all applicable waste regulations. See Waste Management Section for additional Waste Management requirements.

9.6. The following general requirements shall be met for all hydrotesting projects:

9.6.1. Contractor shall perform radiographic inspection in compliance with **Construction Standard C1070 - Non-Destructive Examination Requirements** before installation under water bodies or wetlands.

9.6.2. If pumps used for hydrostatic testing are located within 100 feet of any water body or wetland, Contractor shall operate and refuel pumps in compliance with the project's Spill Prevention and Response Procedure.

9.6.3. Contractor shall screen the intake hose to prevent entraining fish.

9.6.4. Contractor shall maintain flow rates to protect aquatic life, provide for all water body uses, and provide for downstream water withdrawals by existing users.

9.6.5. Contractor shall locate hydrostatic test manifolds outside wetlands and riparian areas to the maximum extent practicable.

9.7. Contractor shall regulate discharge rates, use energy dissipation devices, and install sediment barriers as necessary to prevent erosion, streambed scour, sediment suspension, or excessive stream flow in compliance with permit conditions. Refer to Company Construction Drawings **CST-P-1260-A180.1 – Typical Silt Fence Sediment Barrier Erosion Control**, **CST-P-1260-A180.2 – Typical Silt Fence Sediment Barrier Erosion Control**, **CST-P-1260-A190.1 – Typical Straw Bale Sediment Barrier Erosion Control** and **CST-P-1260-A190.2 – Typical Straw Bale Sediment Barrier Erosion Control**.

10. Cleanup Procedures

10.1. Contractor shall commence cleanup operations immediately following backfill operations.

10.2. Unless otherwise approved by the Company Representative, Contractor shall complete final cleanup and install permanent erosion control structures within 14 days (10 days in residential areas) after trench is backfilled or construction on surface facilities is completed.

10.2.1. If seasonal or other weather conditions prevent compliance with Cleanup deadlines, all temporary erosion-control structures shall be maintained as originally installed until conditions allow cleanup completion as approved by the Company Representative.

10.3. Contractor shall backfill and regrade to restore final grade (pre-construction contours) and leave soil in condition for planting.

10.4. In agricultural fields and residential areas where slope breakers are not typically required, Contractor shall install trench breakers at the same spacing as if permanent slope breakers were required. If the Company determines that additional trench breakers are required, Contractor shall install breakers as directed.

10.5. Rock excavated from the trench may be used to backfill the trench only to the top of the existing bedrock profile. Rock that is not returned to the trench shall be considered removable construction debris, unless approved for alternate use by the landowner or land managing agency.

10.6. Segregated topsoil shall not be used to pad the pipeline.

10.7. Contractor shall de-compact subsoil and topsoil as identified in the Scope of Work, Construction drawings, or ROW line list. Contractor shall test for de-compaction in conformance with permit conditions or landowner request.

10.8. Contractor shall remove excess rock from at least the top 12-inches of soil in all actively cultivated or rotated cropland and pastures, hayfields, residential areas, and in other areas at the landowner's request.

10.9. Geomorphic features such as embankments, terraces, and slopes shall be restored. BMP's shall be used to stabilize streambeds and banks, natural drainage ways, and steep grades in conformance with permit requirements.

10.10. Contractor shall construct and maintain permanent slope breakers in all areas except cultivated areas and lawns using the spacing recommendations in Table C1260 / 3.4 – Right-of-Way Slope %.

10.10.1. If a local soil conservation authority or land-managing agency requires additional slope breakers, Contractor shall install additional slope breakers as directed.

10.11. Contractor shall mulch all slopes adjacent to wetlands and waterbodies with 3 tons per acre of weed-free hay or straw for a minimum of 10 feet on either side of the wetland or water body.

10.12. Contractor shall leave a travel lane open along the ROW to allow construction traffic access. The travel lane shall be restored when access to the ROW is no longer required for construction or revegetation.

10.13. Contractor shall collect all trash, litter, and foreign debris for disposal as directed by Company Representative and in conformance with the approved Waste Management Plan and all applicable waste regulations. Trash, litter, and construction material debris shall **not** be discarded in the trench or along the ROW.

10.14. Contractor shall repair all structures, fences, hedges, buildings, and/or other property damaged during construction as required by the landowner and/or Company Representative. Contractor shall **immediately** repair all damage incurred during construction when such repair is too urgent to be relegated to a cleanup crew.

10.15. Contractor shall install permanent slope breakers (terraces) along the ROW where requested by the Company Representative, specified in this Section, or in conformance with the Scope of Work. Concentrations of surface flow shall be diverted to stabilized outlets using slope breakers with a 2% to 8% outslope directed toward energy-dissipating devices located off the ROW. Refer to Company Construction Drawings **CST-P-1260-A220.1 – Typical Slope Breaker** and **CST-P-1260-A220.2 – Typical Slope Breaker**.

11. Revegetation

11.1. Contractor shall perform revegetation activities in conformance with the Scope of Work, Construction drawings, ROW line list, or permit conditions, including:

- Fertilize and amend areas
- Prepare seedbed

- Seed with specified seed mixtures
- Install mulch or temporary cover
- Remove temporary erosion control structures where revegetation is accepted by the Company Representative

11.2. Contractor shall perform seeding in all areas except actively-cultivated croplands and surface facilities as directed by the Company Representative.

11.3. Contractor shall continue using temporary erosion-control measures, if seeding cannot be done within recommended seeding dates as directed by Company Representative.

11.4. Contractor shall mulch all slopes (except in actively-cultivated cropland) concurrently or immediately after seeding (where necessary to stabilize the soil surface and to reduce wind and water erosion).

11.4.1. Contractor shall mulch before seeding if:

- Final grading and installation of permanent erosion-control measures will not be completed within 14 days after the trench in that area is backfilled (10 days in residential areas)
- Construction or restoration activity is interrupted for extended periods (e.g. when seeding cannot be completed due to seeding period restrictions)

11.4.2. Jute thatching or bonded fiber blankets shall be accepted as alternatives to straw mulch. Biodegradable erosion control fabric shall be used on water body banks to stabilize seeded areas and other sensitive areas (where using mulch and anchoring tools is impractical).

11.5. Contractor shall install and maintain vehicle control measures as directed by the Company Representative. These measures may include, but are not limited to:

- Signs
- Fences with locking gates
- Slash and timber barriers, pipe barriers, or line of boulders across the ROW
- Conifers or other specified trees or shrubs planted across the ROW

12. Spill Prevention, Control and Countermeasures

12.1. The Contractor shall prepare a Spill Prevention, Control, and Countermeasures (SPCC) plan when required by applicable federal, state, or local regulations for storing oil to support construction activities. A copy of the Contractor's SPCC plan must be submitted to the Company.

12.1.1. For projects occurring at existing Company facilities, Contractor shall coordinate with Company Representative and EHS to ensure that project related oil storage is in compliance with the facility SPCC Plan.

12.2. Company shall prepare or update facility SPCC plan as applicable. For facilities (new or existing) with SPCC requirements, facility designs shall be reviewed with EHS prior to start of construction to ensure that all regulatory requirements, such as secondary containment and tank requirements, are fulfilled.

12.2.1. For new SPCC facilities (including existing facilities that were previously below oil storage threshold for SPCC applicability) per EPA regulations, the SPCC plan must be completed and certified before Contractor can bring oil on site. This is also means that all spill control and containment provisions have been completed per the SPCC plan.

13. Waste Management

13.1. Contractor shall manage all wastes in accordance with all applicable federal, state and local laws and regulations. Additionally, the Contractor shall manage all waste in accordance with the Company provided Waste Management Plan, including utilization of Company approved disposal facilities.

13.1.1. Contractor shall notify Company of any waste streams will be generated that are not shown on the approved Waste Management Plan, prior to generating the waste.

13.1.2. Contractor shall make efforts to minimize the amount of waste generated during a project by reducing waste generation at the source whenever possible.

13.1.3. If Contractor would like to deviate from the approved Waste Management Plan, alternatives must be presented to Company for review with EHS prior to sending waste to an un-approved facility.

13.2. Prior to generating waste that is likely to be classified as a hazardous waste, Contractor shall consult with Company to ensure that proper procedures are followed

13.2.1. For Projects that will generate volumes of hazardous wastes triggering Small Quantity or Large Quantity Generator status, Contractor shall coordinate with Company Representative before the start of the project to ensure that all regulatory requirements are satisfied, including, but not limited to creation of contingency plans, hazardous waste storage requirements, and transportation requirements.

Hiland Crude, LLC
dba Hiland Express
a subsidiary of
Kinder Morgan, Inc.

HDD INADVERTENT RETURN MITIGATION PLAN

1. OBJECTIVE

The objective of this plan is to minimize the impact of a potential inadvertent return of drilling muds during horizontal directional drilling (HDD) operations by planning, early detection, and adequate containment of the HDD mud.

2. PLANNING AND PREVENTION

Before commencement of operations, the proposed HDD plan shall be reviewed in the event of an inadvertent return. Before any HDD occurs, a safety meeting will take place to discuss the HDD operation and Inadvertent Return (IR) Plan, including mitigation. Erosion and sediment controls will be installed at the HDD entrance/exit pits, as needed. Spill cleanup materials will be kept on-site at a designated location.

During operation of an HDD, pipeline construction personnel will monitor the pipeline drill path throughout the process. Field crews are to be briefed on what to watch for and will be made aware of the importance of timely detection and response to any IR throughout the drill. If the HDD operator observes a major change in fluid pressure or loss of circulation, the operator will notify the field crews of the approximate position of the drill head. A spotter will monitor the immediate area to scout for a potential surface discharge.

The HDD Operations On-Site Foreman will have the responsibility and authority for executing the Inadvertent Return Mitigation Plan (IRMP). The On-Site Foreman shall be competent in all aspects of the HDD drilling activity and the IRMP. The IRMP will be retained on-site. Prior to the start of drilling operations, the On-Site Supervisor will ensure that workers are properly trained and familiar with the necessary procedures for response to an inadvertent return. In the event of an inadvertent return, timely notification will be made to the Construction and Environmental Inspectors to ensure prompt response and assembly of containment structures.

The first action required when an inadvertent return is detected is to minimize the volume of drill fluid that is released. This will be done by immediately halting pumping of drill fluid downhole. Pumping will not resume until the situation is assessed and, if possible, the fluid release is contained and controlled. As it is probable that the inadvertent return will resume as soon as fluid pumping starts again, containment and control measures will have to be able to contend with a further release of fluid. Normally, the inadvertent return stops of its own accord when the drilling assembly progresses a short distance ahead of the release point.

The risk of failure of the HDD installation increases dramatically as the duration over which pumping is halted increases. Hence, actions will be taken quickly in order that pumping may resume as quickly as possible.

In the event of an inadvertent return:

1. Locate the inadvertent return to determine what containment structure would best contain the inadvertent return with minimal impact to the property.
2. Promptly notify the On-Site Supervisor and the Environmental Inspector.

3. Kinder Morgan Environmental Staff will promptly notify applicable regulatory agencies, which may include the North Dakota Department of Environmental Quality.
4. Install the appropriate containment measures, as needed, to contain and recover the drilling mud (i.e., dam and pump, or silt fence and hay bales).
5. If the inadvertent return cannot be controlled, initiate immediate suspension of drilling operations until appropriate containment is in place.
6. If an inadvertent return occurs at or near a river /creek:

    a. Promptly notify the appropriate river authority.
    b. All vehicle operation, fueling, and maintenance shall be restricted to above the bank of the river/creek, unless consent is received from the appropriate river authority.
    c. Barrier Mitigation Prevention (BMP) shall be in place to contain any spills of drilling mud or fuel.
    d. Remove all debris, smooth, and revegetate any disturbed areas.

The following items will be available at all times to the HDD drilling crews for containment, response, and clean-up

- Hay bales
- Silt fence
- Sand bags
- Plastic sheeting
- Shovels, brooms, and appropriate hand tools
- Generator, pump, and hose
- Frac tank or mud pit large enough for excess mud
- Vacuum truck
- MSDS for the drilling mud and additives
- Silt curtain/absorbant booms (in-water work)
- Light towers for work at night
- Heavy equipment, such as backhoe or dozer, for containment and cleanup of drilling mud
- Boat for major waterbody crossings to allow for monitoring of releases to water

McKENZIE COUNTY

Sir/Madame,
After review of your noxious weed containment plan, I have found that it meets all North Dakota and McKenzie County Weed Law requirements.

PLEASE PRINT AND ATTACH THIS EMAIL TO YOUR C.U.P. TO SHOW YOU HAVE COMPLIED WITH STATE AND COUNTY WEED LAW FOR ERADICATION AND CONTAINMENT OF McKenzie COUNTY NOXIOUS WEEDS.

Also, remember that your property will be periodically and randomly inspected for compliance with your proposed form of weed control – so please be diligent in your efforts to help us with this problem.

Thank you for helping in our continuing efforts to keep McKenzie County noxious weed free.

Sincerely,

Amber Higgins

McKenzie County Weed Officer
Office 701-842-4131
Fax 701-842-4731

McKenzie County
Weed Management Plan

Purpose: This is a simplified weed management template that is specifically designed for small properties/areas. It is designed to assist in controlling noxious weeds by documenting areas at risk whether it be currently infested or could possibly become infected in the future. This weed management template is also to assist in coordinating efforts between McKenzie County Weed Control and landowners/operators/developers to accomplish noxious weed control goals in McKenzie County. A copy of this weed management plan will be kept on file with McKenzie County Weed Control as well as with all parties involved in the ownership and/or management of the property.

Date: 2/7/25

Circle or Check One: PRIVATE ☐ **COMMERCIAL** ☑

Name of Landowner: Several landowners

Name of Party Responsible for Weed Control if Different than Landowner: Hiland Express (Hiland), Eric Jensen

Address of Responsible Party: 8811 S Yale Ave, Suite 200, Tulsa, OK 74137

Phone Number: 918-588-5060 **Email Address:** Eric_Jensen@kindermorgan.com

Approximate Size of Property: 28.1 miles in length

Legal Description of Property:

Quarter Section Select **Section** Select **Township** Select **Range** Select

See attached map.

Purpose of Property: Construction of a 28.1 mile Natural Gas Liquid (NGL) pipeline to increase NGL export capacity from the Bakken.

Surface Movement for Commercial Construction Purposes: Circle or check one

Scoria ☐ **Manure** ☐ **Dirt** ☐ **Sand** ☐ **Gravel** ☐

Construction ☑ **Other** ☐

1.0 Management Goals:

Management goals describe the purpose/use of the property and what you are trying to achieve. Having clear management goals is key to developing a weed management plan. (The minimum amount required by North Dakota and McKenzie County Weed Law is to mow noxious weeds to prevent them from going to seed. Another management goal may be to restore an area with native vegetation. Management goals might also include preventing contamination and/or spread of noxious weeds due to mining or storage of construction materials by a yearly or bi-yearly application of herbicide.)

Please list your management goals as they apply to this property:

The attached Noxious Weed Management Plan outlines Hiland's management goals for the project.

2.0 Weed Control Objectives:

Knowing which weed species occur on your property and where they are located is very important in developing control priorities. Weed species vary considerably in the threat that they pose to the resource values of the property. In addition, weed species vary greatly in their susceptibility to control measures. Thus, weed species that pose the greatest threat to achieving the management goals for the property and which can be most easily controlled are the highest priority for management. To create weed control objectives for your weed management plan, first search your property for weeds (if you have not already done so).

3.0 Weed Control Objectives – 3-year plan

1st Year Weed Control Objective: Hiland has identified where noxious weeds occur within its proposed ROW. Year 1 will entail implementation of preventative measures and general treatment methods during construction. Refer to attached Noxious Weed Management Plan.

2nd Year Weed Control Objective: Years 2 and 3 will entail monitoring of noxious weeds during restoration and re-vegetation to control spread of weeds and apply treatments, as needed. Refer to attached Noxious Weed Management Plan.

3rd Year Weed Control Objective: See above.

4.0 Evaluating Weed Control:

After you have created weed control objectives and have began to control the priority weed species on your property, you should evaluate the results of your control methods. This requires follow-up visits to the areas where weeds were controlled and a re-assessment of the size and density of an infestation. (For example, compare the size of the infestation after a growing season has elapsed to the size before control actions were initiated.) In most cases, the elimination of an infestation will take several years with multiple treatments per year to kill the plants and eliminate the bank of weed seeds in the soil.

ND Law 4.1-47. Control of noxious weeds.

Each Person shall do all things necessary and proper to control the spread of noxious weeds.

In signing this document, I understand that I will be responsible for noxious weed control on the property listed above.

Responsible Party Signature: Eric Jensen Digitally signed by Eric Jensen Date: 2025.02.10 10:06:20 -06'00' Date 2/10/2025

McKenzie County
Weed Board Approval: Amber Higgins Date 2-11-2025

Please allow 48 hours for review of this plan prior to receiving confirmation of approval.

February 2025

Hiland Express
a subsidiary of Kinder Morgan

Spine Pipeline Project
McKenzie County, North Dakota

Noxious Weed Management Plan

Prepared by:

merjent

February 2025

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ABBREVIATIONS AND ACRONYMS

APHIS	Animal and Plant Health Inspection Service
CFR	Code of Federal Regulations
EI	Environmental Inspector
EO	Executive Order
EPA	U.S. Environmental Protection Agency
FERC	Federal Energy Regulatory Commission
NDDA	North Dakota Department of Agriculture
NGL	Natural Gas Liquid
NRCS	Natural Resources Conservation Service
Project	Hiland Express Spine Pipeline Project
ROW	right-of-way
SPCC Plan	Spill Prevention, Control, and Countermeasure Plan
TWS	Temporary Workspace
USDA	U.S. Department of Agriculture

1 INTRODUCTION

1.1 Project Description

Hiland Express (Hiland), a subsidiary of Kinder Morgan, Inc., is currently planning construction of the Hiland Express Spine Pipeline Project (Project), located in Mackenzie County, North Dakota. This pipeline section is part of the larger Hiland Express Project, the conversion of Hiland's Double-H crude pipeline to Natural Gas Liquid (NGL) pipeline, to increase NGL export capacity from the Bakken. As part of the Project, Hiland is proposing to construct and operate approximately 28.1 miles of 10-inch steel NGL pipeline near and to the west of Watford City.

1.2 Plan Overview

The goal of the Noxious Weed Management Plan is to prevent the spread of existing noxious weeds identified in Project areas by implementing prevention and control mitigation measures where applicable and appropriate. The Noxious Weed Management Plan is specifically for areas of ground disturbance that are within existing noxious weed infestations or areas of known noxious weed occurrence. Monitoring during construction and operation of the Project would include inspection of existing weed populations and identification of new weed populations on or immediately adjacent to Project areas. Monitoring activities would evaluate the level of success and efficiency of the control measures implemented.

Hiland environmental staff, the Environmental Inspector (EI), and construction contractors would be responsible for carrying out the practices described in this Noxious Weed Management Plan, which is applicable to both the construction and operation phases of the Project.

Noxious weed control practices for the Project described in this Noxious Weed Management Plan have been developed utilizing information from the following sources:

- Federal Noxious Weed Program (U.S. Department of Agriculture [USDA] 2023)
- Natural Resources Conservation Service (NRCS) (USDA NRCS 2022)
- North Dakota Department of Agriculture (NDDA) Noxious Weed and Invasive Species List (NDDA 2021)
- Observations made during field surveys

2 NOXIOUS WEED REGULATION AND MANAGEMENT

This section provides a brief overview of federal and state legislation and regulatory compliance applicable to noxious weeds in the Project area. Hiland will conduct Project activities in accordance with all local, state, and federal regulations regarding the control and management of noxious weeds.

2.1 FEDERAL REGULATIONS

The U.S. Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) is a federal noxious weed program designed to prevent the introduction of nonindigenous invasive plants into the U.S. APHIS noxious weed activities include exclusion and permitting in cooperation with other federal agencies and state agencies, and integrated management of introduced weeds, including biological control.

2.2 STATE REGULATIONS

The Project is located in McKenzie County in North Dakota. At the state and county levels, the Agricultural Commissioner and County Weed Officers are responsible for organizing a noxious weed control or eradication program with all political subdivisions within North Dakota that own, control, or have jurisdiction over land (North Dakota Century Code [NDCC], 2024).

NDCC Chapter 4.1-47 defines a noxious weed as a plant propagated by either seed or vegetative parts, and determined to be injurious to public health, crops, livestock, land, or other property. Additionally, this chapter states that each person must do all things necessary and proper to control the spread of noxious weeds; makes it illegal for any person to distribute, sell, or offer for sale a noxious weed within the state; and defines the duties of the Agriculture Commissioner, including maintaining the State Noxious Weed List (NDCC, 2024).

Per NDCC Chapter 4.1-47-30:

- a person may not willfully transport any material that contains noxious weed seeds or propagating parts on a public road, in a manner that allows for the dissemination of noxious weeds;
- a person may not willfully drive or transport any equipment on a public road, in a manner that allows for the dissemination of noxious weeds; and
- a person may not willfully dispose of any material that contains noxious weed seeds or propagating parts in a manner that allows for the dissemination of noxious weeds.

2.3 STATE AND COUNTY LISTED NOXIOUS WEEDS

The control of thirteen declared state noxious weeds is enforced by all cities and counties within North Dakota. Cities and counties have the option to add additional weeds for control enforcement only in their jurisdiction. Table 3.3-1 provides a list of the declared noxious weeds enforced within the counties and cities crossed by the Project according to the State Noxious Weeds List (North Dakota Department of Agriculture [NDDA], 2023a) and the County and City Noxious Weeds List (NDDA, 2023b). In addition to the NDDA noxious weed and invasive species list, localized weed boards within each county manage noxious weeds and invasive species and may develop a list of additional weeds for enforcement within their jurisdiction. McKenzie County has designated four additional species as noxious weeds. The Project is not located within the jurisdiction of any city.

Table 3.3-1 includes a list of the statewide noxious and regulated weeds enforced within the counties crossed by the Project.

TABLE 3.3-1

State and County Enforced Noxious Weeds

Common Name/ Species Category	Scientific Name	Habitat	Enforcement Area
Absinth wormwood	*Artemisia absinthium L.*	Terrestrial	All cities and counties in North Dakota [a]
Baby's breath	*Gypsophila paniculata L.*	Terrestrial	McKenzie County [b]
Black henbane	*Hyoscyamus albus*	Terrestrial	McKenzie County [b]
Canada thistle	*Cirsium arvense*	Terrestrial	All cities and counties in North Dakota
Common burdock	*Arctium minus*	Terrestrial	McKenzie County [b]
Dalmatian toadflax	*Linaria dalmatica*	Terrestrial	All cities and counties in North Dakota
Diffuse knapweed	*Centaurea diffusa*	Terrestrial	All cities and counties in North Dakota
Halogeton	*Halogeton glomeratus*	Terrestrial	McKenzie County [b]
Houndstongue	*Cynoglossum officinale*	Terrestrial	All cities and counties in North Dakota
Leafy spurge	*Euphorbia esula*	Terrestrial	All cities and counties in North Dakota
Musk thistle	*Carduus nutans L.*	Terrestrial	All cities and counties in North Dakota
Palmer amaranth	*Amaranthus palmeri*	Terrestrial	All cities and counties in North Dakota
Purple loosestrife	*Lythrum salicaria*	Aquatic	All cities and counties in North Dakota
Russian knapweed	*Acroptilon repens, Rhaponticum repens*	Terrestrial	All cities and counties in North Dakota
Saltcedar	*Tamarix spp.*	Terrestrial	All cities and counties in North Dakota
Spotted knapweed	*Centaurea stoebe, C. maculosa*	Terrestrial	All cities and counties in North Dakota
Yellow toadflax	*Linaria vulgaris*	Terrestrial	All cities and counties in North Dakota

[a] Source: https://www.ndda.nd.gov/divisions/plant-industries/noxious-weeds (2023a).
[b] Source: https://www.ndda.nd.gov/sites/www/files/documents/files.pdf (2023b).

3 NOXIOUS WEED INVENTORY

Project biologists surveyed the Project area for noxious weeds concurrently with wetland, waterbody, and threatened and endangered species surveys in September-November 2024. The survey occurred along the proposed 28.1-mile right-of-way (ROW) corridor and along access roads. Project biologists identified 19 areas of noxious weed within the planned Project Corridor.

4 NOXIOUS WEED MANAGEMENT

This Noxious Weed Management Plan outlines the approach to identifying problem areas and identifies preventive measures that would be implemented within Project sites if noxious weeds are present. The primary goals of the mitigation measures are to prevent the spread of noxious weeds, should they be encountered, and avoid the introduction of new noxious weeds. This plan also describes herbicide treatment that should be carried out if target species are observed within the Project area and how risk to adjacent native species can be avoided or mitigated. If herbicides are warranted, Hiland will adhere to U.S. Environmental Protection Agency (EPA) and NDDA herbicide requirements. It should be noted that repeated control measures are not always considered successful for certain weed species that are already well established and abundant. For example, most land management agencies recognize that the widespread distribution of some non-native species, such as cheatgrass (*Bromus tectorum*) and some other grasses,

precludes the reasonable possibility of eradication. For this reason, widespread invasive species that are not legally considered noxious would not be treated.

Vegetation surveys and monitoring will be conducted as part of post-construction restoration and revegetation activities and will identify areas, if any, where noxious weed species would need to be treated. Project weed-control contractors would treat noxious weed populations as identified through monitoring.

5 IDENTIFICATION OF PROBLEM AREAS

Prior to construction, contractors should be provided with information and training regarding noxious weed identification, noxious weed management/containment, and the potential impacts of noxious weeds on agriculture, livestock, and wildlife. Contractors should be informed of the importance of preventing the spread of noxious weeds to uncontaminated areas and of controlling the proliferation of weeds already present.

The fall 2024 field surveys of the Project area identified 19 areas of noxious weeds. Prior to construction, weed management procedures will be implemented and consist of the following:

- Identifying noxious weed infestation areas of concern before vegetation and soil disturbance activities begin.
- Marking noxious weed areas with signage placed by construction personnel or the EI on the ROW (or on the edge of the ROW after clearing and grading) to alert construction personnel to the location and nature of each weed infestation.

6 PREVENTIVE MEASURES

Hiland will comply with agency preventive requirements and implement weed control measures in Project areas identified to be of special concern. This section describes general preventive measures to be implemented to minimize the spread of noxious weeds if infestations are observed prior to construction.

6.1 General Preventive Measures

During pre-construction environmental training, noxious weed-specific topics should be discussed and implemented before surface disturbance activities begin. Project personnel should be trained on the identification of weed species that could potentially occur within the Project area and Project-approved weed prevention and control methods. Other general preventative measures include the following:

- Within Project ROW or temporary workspace (TWS) boundaries where high-density (26 percent and higher ground cover) noxious weed populations are identified in the field, the contractor should stockpile cleared vegetation and salvaged topsoil adjacent to the area from which they were stripped in order to prevent the transport of soil-borne noxious weed seeds, roots, or rhizomes to other areas. If this process is carried out

correctly, subsequent equipment would be able to pass through the site with little risk of becoming contaminated with seeds or other weed propagules.

- Weed-infested stockpiles should be marked with clearly visible signage until the restoration phase. During restoration, the contractor should return topsoil and vegetative material from infestation sites to the areas from which they were stripped and should not move soil and/or vegetative matter outside of the identified and marked noxious weed infestation areas.
- The contractor should ensure that straw or hay bales used for sediment barrier installations or mulch distribution, where appropriate, are certified weed-free and obtained from state-cleared sources. If certified weed-free bales are unavailable, alternative weed-free sediment barrier installations would be utilized.

6.2 Equipment Cleaning

Equipment-cleaning procedures to prevent the transportation of weed seed, roots, or other propagules at the Project site will be implemented. Equipment-cleaning procedures will consist of the following guidelines:

- Contractor vehicles and equipment, including mats, arriving on-site for the first time should be cleaned prior to accessing the Project site.
- Cleaning efforts should be concentrated on tracks, feet, tires, and on the undercarriage, with special emphasis on axles, frames, cross members, motor mounts, the underside of running boards, and front bumper/brush guard assemblies. If the weather conditions and ROW conditions are dry and vehicles are relatively mud-free, compressed air can be used. If wet or muddy conditions exist, vehicles and equipment should be cleaned with high-pressure water.
- Equipment and vehicles used to move vegetation and topsoil during Project clearing and restoration phases should be cleaned of seeds, roots, and rhizomes prior to being moved off site.
- In off-ROW Project areas, such as storage yards, the Project EI should ensure that prescribed vehicle cleaning measures would be undertaken to prevent the transportation of noxious and invasive weed propagules from these areas onto the ROW.
- Vehicle cabs should initially be swept out, and refuse should be disposed of in waste receptacles. The contractor, with oversight from the Project EI, should ensure that vehicles and equipment are free of soil and debris capable of transporting noxious weed seeds, roots, or rhizomes before the vehicles and equipment are allowed to use Project access roads or enter the ROW.

7 TREATMENT METHODS

If necessary, noxious weed control measures will be implemented in accordance with existing regulations and jurisdictional agency or landowner agreements. Hiland should focus control

efforts on areas with designated noxious weed species unless other agreements are made with jurisdictional agencies or landowners. Special attention should be given to weed species that are considered to be higher priority for control. Hiland will coordinate with appropriate agencies/entities to determine which of the species would require treatment and to determine appropriate treatment schedules. Hiland will adhere to EPA and NDDA herbicide requirements.

Hiland will consult with appropriate agencies/entities in situations where herbicide treatment may not be an effective control treatment and would obtain concurrence before deciding to forego herbicide treatment of widespread noxious weed species. At a minimum, the treatment measures outlined below would be implemented to minimize the spread of noxious weeds.

7.1 General Treatment Methods

Within approved Project areas, noxious weed control during construction phases should be carried out primarily by using herbicide treatment methods. Herbicide treatment should consist of spot application or broad area application, as appropriate, to identified noxious weed infestations along the Project ROW and associated workspaces. Although herbicide application would be the primary method of weed control during the Project construction phase, other methods could also be implemented, as appropriate. Hiland may utilize one or more of the following treatment methods:

- Mechanical methods – Equipment could be used to mow or disk weed populations. Mowing or disking of weeds would occur prior to seed head development. Subsequent seeding with a suitable restoration seed mixture would be conducted as soon as possible following soil disturbance to re-establish a stabilizing suitable vegetation cover and to slow the potential reinvasion of the site by noxious weeds.
- Herbicide application – Herbicide application could be used to remove, reduce, or contain noxious weed populations. Applications would be controlled to minimize or avoid impacts on surrounding native vegetation. In areas of dense infestation where native species make up a very low percentage of total presence, or in areas where impacts on native species would be very difficult to avoid even with spot applications, a broader application method may be used and a follow-up seeding program implemented. Supplemental seeding would be based on criteria from NRCS coordination.
- Manual methods – If mechanical or herbicide methods are not applicable based on site size or conditions, then weeds, including root structures, will be pulled by hand.

Treatment methods would be species-specific and based on area-specific conditions (e.g., proximity to waterbodies, time of year, etc.).

Only herbicides approved by the relevant agencies (federal, state, and local) or landowners would be used. Herbicides would be applied and stored according to the manufacturer's label with regard to weather and other environmental factors. If weeds targeted for herbicide treatment are found in the vicinity of sensitive biological resources, proper buffers would be used to prevent the spread of herbicides to these areas.

7.2 Treatment Schedule

Foliar-applied, translocated herbicides work best when sprayed on weeds that are actively growing, are not water stressed, and are not growing slowly due to cold temperatures or stressed due to extreme temperatures. A rain-free period of six hours is needed after application to avoid washing herbicides off treated leaves.

Most perennial and biennial species are best controlled by applying herbicide treatments twice per year: once in the fall (mid- to late-September in North Dakota) and again in early spring (early- to late-May in North Dakota). Fall treatments need to be timed so that green/living leaf and stem growth is still present but after hot summer temperatures have passed.

For noxious weeds identified along the Project ROW and TWS areas, initial herbicide spraying would occur prior to construction-related ground disturbance, followed by additional applications later in the season, as needed. Following restoration and revegetation activities, post-construction treatments would occur up to twice a year: once in spring and once in the fall. Actual frequency of treatments would be based on need, as determined through restoration monitoring and agency input.

7.3 Treatment Approach during Restoration and Revegetation

A successful restoration and revegetation program is a vital component of the Project's overall weed control program. Mechanical, manual, and revegetation methods should be given greater consideration than the application of herbicides during the restoration and revegetation processes. While herbicide application may be successful at controlling noxious weeds, broad application and even spot application may hamper the re-establishment of native species during restoration efforts. For this reason, restoration and revegetation (through clearing, preparing seedbeds, and seeding native species) of areas containing broadly occurring weed species is the preferred post-construction method of weed control; however, should weather or scheduling constraints prevent timely restoration of disturbed areas, undesirable vegetation that has become established would be eradicated before re-seeding with native species.

The success of the revegetation effort would be enhanced by the selection/development of suitable seed mixtures based on site-specific conditions. Hiland should obtain approval for seed mixtures from the appropriate agencies or landowners before their use. Once established, native vegetation has the potential to out-compete some noxious weed species. The Project will follow restoration and revegetation measures from NRCS coordination.

Herbicide application may still be utilized as a weed control tool after reseeding with native plant species and other restoration activities have occurred. In most cases, Hiland would wait until after seedings in restoration areas have become established or until restoration plantings have been in place for one full growing season to apply broad herbicide treatments to weed-infested areas.

8 POST-CONSTRUCTION MONITORING

Noxious weed monitoring should be conducted during restoration and revegetation monitoring, beginning during the first growing season following the completion of construction and continuing for approximately 2 years concurrently with other annual monitoring efforts. Noxious weed monitoring ensures that existing weed populations are not spreading to new areas and that restored areas are progressing toward the long-term goal of appropriate vegetative cover and diversity. While the primary goal should be to eradicate noxious weed populations within Project areas, a secondary, and likely more realistic, goal is to prevent the introduction of new weed populations and the spread of existing populations (i.e., containment).

The following types of sites would undergo post-construction noxious weed monitoring:

- high-density noxious weed sites identified during the construction period,
- new high-density noxious weed populations detected through opportunistic sightings during the post-construction period, and
- equipment cleaning station locations established during Project construction.

Monitoring data can be used to assess post-construction treatments of noxious weed populations. Qualitative data should be collected during monitoring, and qualitative criteria should be analyzed when determining the success or failure of the Project weed management program at individual sites. If weed management success criteria (no re-establishment of noxious weeds in the Project area excluding activities not related to the project) have not been met at individual sites within 2 years, the program would be extended, as needed. In this case, the Project would seek further guidance from appropriate agencies in analyzing the Project weed management program and exploring feasible treatment options.

If significant new or reoccurring infestations are noted during the post-construction phase of the Project, treatment would be implemented, and the frequency of monitoring may be increased.

9 HERBICIDE APPLICATION, HANDLING, SPILLS, AND CLEANUP

9.1 Herbicide Application and Handling

Herbicide application would be conducted according to EPA standards and information gathered from the appropriate agencies with jurisdiction along the proposed Project route. Prior to applying herbicides, Project weed management contractors would obtain required federal, state, or local permits. Only licensed contractors would perform the herbicide applications, and then only in accordance with applicable laws and regulations. No treatment would occur without prior coordination with, and concurrence of, jurisdictional agencies or landowners.

Herbicide applications would follow EPA label instructions. Occupational Safety and Health Administration requirements would be followed when applying herbicides. Application of herbicides would be suspended if the following conditions occur:

- wind velocities exceed six miles per hour during application of liquids or 15 miles per hour during application of granular herbicides,
- snow or ice covers the foliage of noxious weeds, or
- precipitation is occurring or is imminent.

Vehicle-mounted sprayers (e.g., handgun, boom, and injector) would be used primarily in open areas that are readily accessible by vehicle. Hand-application methods (e.g., backpack spraying) that target individual plants would be used to treat small or scattered weed populations in rough terrain. Equipment would be calibrated at the beginning of spraying and periodically thereafter to ensure that proper application rates were achieved.

Herbicides would be transported to the Project site daily with the following provisions:

- Only the quantity needed for that day's work would be transported.
- Herbicide concentrate would be transported only in approved containers (as instructed by the manufacturer) in a manner that would prevent tipping or spilling, and in a compartment isolated from food, clothing, and safety equipment.
- Mixing would be done off site and at a distance greater than 500 feet from open or flowing water or other sensitive resources.
- No herbicides would be applied to open or flowing water or other sensitive resources unless authorized by appropriate regulatory agencies.
- Herbicide equipment and containers would be inspected for leaks daily.

9.2 Herbicide Spills and Cleanup

Reasonable precautions would be taken to avoid herbicide spills. In the event of a spill, cleanup would occur immediately. Contractors will be provided with a list of local approved disposal sites for use during response to herbicide spills and the Project-specific Spill Prevention, Control, and Countermeasure Plan (SPCC Plan). Herbicide contractors would obtain and have readily available copies of the appropriate Material Safety Data Sheets for the herbicides used. Herbicide spills would be reported in accordance with applicable laws and requirements. Contractors would keep spill kits in their vehicles and in herbicide storage areas to allow for quick and effective response to spills. Items to be included in the spill kit include the following:

- Protective clothing, eyewear, and gloves
- Adsorptive clay or other commercial adsorbent
- Plastic bags and bucket
- Shovel
- Fiber brush and screw-in handle
- Dust pan
- Caution tape

- Highway flares (use on established roads only)
- Detergent

Response to an herbicide spill would vary with the size and location of the spill, but general procedures would include the following:

- Controlling traffic
- Dressing the clean-up team in protective clothing
- Stopping the leaks
- Containing the spilled material
- Cleaning up and removing the spilled herbicide and contaminated adsorptive material and soil
- Transporting the spilled pesticide and contaminated material to an authorized disposal site

10 REFERENCES

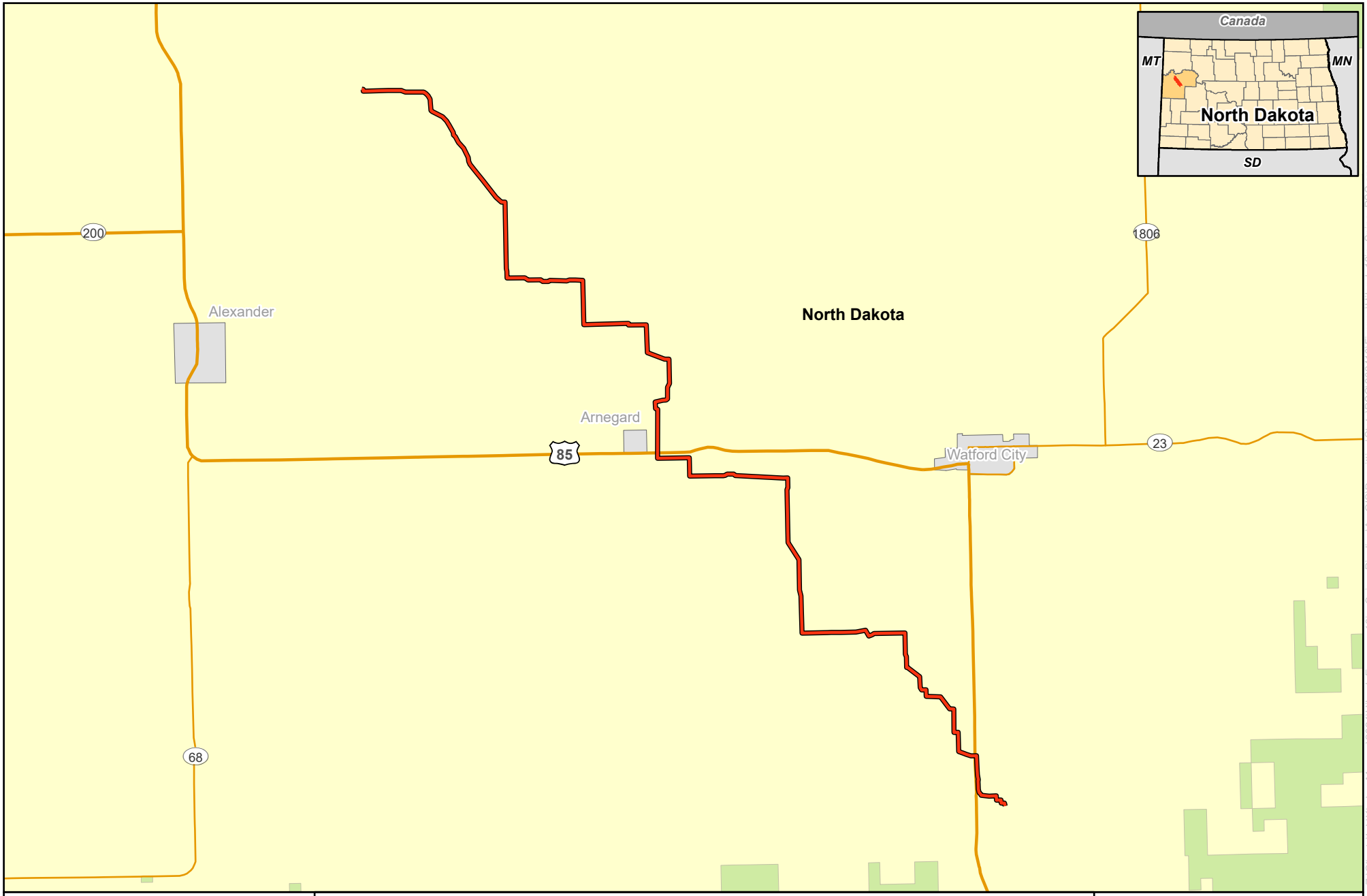
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For Environmental Review Purposes Only

Exhibit B.1

Hiland Express, LLC

Hiland Express Spine Pipeline Project

Project Overview

Proposed Pipeline

Forest Service Land (USFS)

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Date: (2/3/2025)

Hiland Crude, LLC, dba Hiland Express
a subsidiary of Kinder Morgan

Hiland Express Spine Pipeline Project
McKenzie County, North Dakota

Spill Prevention, Control, and Countermeasure Plan

December 2024

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1.1 Project Overview 1
1.2 Plan Overview 1

2 Prevention Measures 2

3 Spill Response 2

4 Reporting Procedures 3

ABBREVIATIONS AND ACRONYMS

C.F.R.	Code of Federal Regulations
EIT	Environmental Inspection Team
Hiland	Hiland Crude, LLC
FERC	Federal Energy Regulatory Commission
MAOP	Maximum Allowable Operating Pressure
MSDS	Material Safety Data Sheets
O.D.	outside diameter
Project	Hiland Express Spine Project
PST	petroleum storage tank
ROW	right-of-way
RQ	Reportable Quantity
SPCC	Spill Prevention, Control, and Countermeasure Plan

1 INTRODUCTION

1.1 Project Overview

Hiland Crude, LLC dba Hiland Express (Hiland), a subsidiary of Kinder Morgan owns and operates liquid natural gas well and pipeline facilities in the state of North Dakota. Hiland is proposing to construct and operate the Hiland Express Spine Project (Project) approximately 28.1 miles of 10-inch steel Natural Gas Liquid (NGL) pipeline in McKenzie County near and to the south and west of Watford City. Apart from pipeline valves, no above ground appurtenances are planned. This pipeline section is part of the larger Hiland Express Project, the conversion of Hiland's Double H crude pipeline to NGLs, to increase NGL export capacity from the Bakken.

Location and Description of Facilities

The proposed Project activities analyzed within this plan specifically include the following:

- Installation of approximately 28.1 miles of 10-inch steel NGL pipeline
- Installation of two mainline valves
- Installation of two inspection tool (pig) launcher/receiver
- Wetlands or waterbodies will be open cut or Horizontally Directionally Drilled (HDD)
- The pipeline will be hydrotested
- Trench dewatering may be necessary
- Tree/brush clearing along new ROW pipeline system, laydown/storage areas, and access roads may be necessary and Hiland will replant according to the North Dakota Public Service Commission (PSC) requirements.

Hiland has designed the scope of work for this Project in a manner that minimizes impacts on landowners and the environment. To the extent possible, Hiland has collocated the proposed Project facilities with existing Hiland facilities and other infrastructure. Hiland proposes to begin construction of the Project facilities in summer 2025, after receipt of all required federal, state, and local permits and authorizations in order to place the facilities in service by February 2026.

1.2 Plan Overview

This Spill Prevention, Control, and Countermeasure (SPCC) Plan describes measures that the Project contractor(s) would implement to prevent, control, and minimize impacts from a spill of fuels or other hazardous substances during construction of the Project. The goal of the SPCC Plan is to minimize the potential for a spill of these substances, to contain any spills to the smallest area possible, and to protect the environment, including areas considered environmentally sensitive. The SPCC Plan specifies spill prevention measures, spill response activities, and spill reporting and notification procedures.

All Project construction work will implement the SPCC Plan measures and procedures. This SPCC Plan does not certify the contractor or other individuals to become licensed waste haulers.

2 PREVENTION MEASURES

The contractor(s) will ensure that all practicable measures are taken to minimize the potential for and consequences of a spill during construction of the Project. The contractor(s) is responsible for complying with applicable environmental and safety laws and regulations, for training construction personnel, and for providing equipment designed to prevent pollution.

The proper use of materials and equipment greatly reduces the potential of contamination. The following is a list of general preventive practices to be implemented during construction of the Project.

- The contractor(s) must supply each construction crew with spill kits containing a sufficient quantity of absorbent and barrier materials to adequately contain and recover potential spills of fuels or lubricating oils. These kits may include, but are not limited to, drip pans, buckets, absorbent pads, straw bales, absorbent clay, sawdust, floor-drying agents, spill containment barriers, heavy plastic sheeting, plastic bags, shovels, and sealable containers. These materials must be readily accessible during all construction activities.
- The contractor(s) will train all personnel who handle fuels and other regulated substances to follow spill prevention procedures and to quickly and effectively contain and clean up spills.
- Fuels and lubricating oils for vehicles or heavy equipment will not be stored within 100 feet of dry washes/ephemeral streams.
- Refueling of construction equipment will not occur within 100 feet of dry washes/ephemeral streams.
- Authorized personnel shall only dispense fuels during daylight hours. Fuel dispensing operations may not be left unattended.
- On-site vehicles will be monitored for leaks and will receive regular maintenance to reduce the chance of leaks. Vehicle maintenance wastes, including used oils and other fluids, will be handled and managed by personnel trained in the procedures outlined in this plan.
- Storage containers will display labels that identify the contents of the container and whether the contents are hazardous. The contractor shall maintain and provide, on demand, copies of all Material Safety Data Sheets (MSDS).
- Site foremen and construction personnel who will be working with hazardous or regulated substances will be trained in the requirements of this plan prior to participation in site work.

3 SPILL RESPONSE

Immediately upon learning of the spill of any fuel, oil, hazardous substance, or other regulated substance, the contractor(s) will undertake the following activities.

- Identify the source of a spill and take all necessary measures to prevent further material from being spilled.
- Remove all potential ignition sources if the spilled material is combustible or flammable if it is safe to do so.
- Notify the contractor's spill coordinator. The contractor's spill coordinator will notify the Project Environmental Inspection Team (EIT).
- Assess the situation and determine subsequent clean-up activities and responsibilities.
- If the spill is beyond the response ability of on-site equipment and personnel, immediately notify the Project EIT that an emergency response contractor is needed.

For spills that occur on land, earthen berms will be constructed with available equipment to physically contain spills, if appropriate. Absorbent materials will also be applied to soak up spilled material, and traffic will be minimized on contaminated soils.

In the unlikely event that spills occur near or into a stream, wetland, or other waterbody, regardless of size, the following conditions shall apply in addition to the measures described above.

- For spills in standing water, floating booms, skimmer pumps, and holding tanks will be used as appropriate to recover and contain released materials on the surface of the water.
- For a spill threatening a waterbody, berms and/or trenches will be constructed to contain the spill prior to its entry into the waterbody. Deployment of booms, skimmers, and sorbent may be necessary if the spill reaches the water.
- Spilled material will be immediately and completely contained and cleaned up if it is safe to do so. The material manufacturer's methods for spill cleanup will be followed as described on the material MSDS.

All contaminated soils, vegetation, absorbent materials, and other contaminated wastes shall be handled, contained, and disposed of by the contractor(s) in accordance with applicable local, state, and federal regulations.

4 REPORTING PROCEDURES

The contractor(s) is required to report all spills of hazardous substances, regardless of size or location to the Project EIT. The contractor(s) is also required to notify the Project EIT of any of the following hazardous conditions.

- "Hazardous substance" means any substance or mixture that presents a danger to the public health or safety, including but not limited to a substance that is: toxic, corrosive, or flammable; that is an irritant; or that, in confinement, generates pressure through decomposition, heat, or other means. The following are examples of substances that, in sufficient quantity, may be hazardous: acids; explosive; fertilizers; heavy metals such as chromium, arsenic, mercury, lead, or cadmium; industrial chemicals; paint thinners; paints; pesticides; petroleum products; poisons; radioactive materials; sludges; and organic solvents.

- "Hazardous condition" means any situation involving the actual, imminent, or probable spill, leak, or release of a hazardous substance onto the land or into the atmosphere that, because of its quantity, strength, or toxicity, its mobility in the environment, or its persistence, creates an immediate or potential danger to the public health or safety or to the environment.

Depending on the material spilled and the quantity and location of the spill, notification of appropriate federal and/or state emergency response entities may be required. Hiland's Environmental Project Manager or EIT shall report any hazardous substance spill or hazardous condition to the National Response Center, which is the sole federal point of contact for reporting oil and chemical spills and the North Dakota Department of Emergency Services if:

- A hazardous substance has the potential to leave the property by flowing over the surface or through sewers, tile lines, culverts, drains, utility lines, or other conduit.
- A hazardous substance has the potential to reach any surface water or groundwater.
- Any hazardous substance has spilled directly into a water of the state.
- A hazardous substance is detected in the air at the boundaries of the construction activities by the senses (sight and smell) or by monitoring equipment.
- There is a hazardous condition that poses a potential threat to the public health and safety.

No thresholds have been established for reportable spills.

The appropriate federal and state contacts for the Project are as follows:

Federal Contact	Federal Contact National Response Center (Washington, D.C.) Phone: (800) 424-8802 (24 Hours)
North Dakota Contacts	North Dakota Department of Emergency Services Phone: 1-833-99SPILL
	North Dakota Department of Environmental Quality
	Phone: (701) 328-5210
	North Dakota Oil and Gas Division
	Phone: (710) 328-8020

Hiland Crude, LLC, dba Hiland Express

a subsidiary of Kinder Morgan

Hiland Express Spine Pipeline

Project

McKenzie County, North Dakota

Unanticipated Discoveries Plan

February 2025

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SECTION 1: INTRODUCTION

This Unanticipated Discovery and Monitoring Plan (Plan) presents procedures to be implemented in the event potential cultural resources are discovered during construction of the Hiland Express (Hiland) Spine Project (Project) that is located in McKenzie County, North Dakota

Significant historical or archaeological artifacts or sites under the jurisdiction of the State of North Dakota or its political subdivisions are protected under Section 55-02-07 of the North Dakota Century Code (NDCC). Furthermore, NDCC Section 23-06-27 and North Dakota Administrative Code (NDAC) Section 40-02-03 provide special protection of human burial sites, human remains and burial goods. This Plan presents procedures for addressing potential cultural resource discoveries identified during the construction of the Project, including procedures for the initial treatment of discoveries, the evaluation and treatment of discoveries, and the treatment of human remains.

SECTION 2: TRAINING

Training is necessary in order for construction personnel to recognize potential archaeological resources. All construction personnel will meet with Hiland representatives for basic training prior to participating in construction. This training will provide orientation regarding recognition of cultural resources as well as a general overview of the culture history of the region, so construction personnel are familiar with the types of archaeological resources that may be encountered during construction. The training will also outline the steps to be followed in the event of a potentially significant archaeological discovery during construction (e.g., the discovery of human remains). The following items will be reviewed within the program:

- Definition of a discovery and examples of discoveries;
- Steps towards discovery protection until such time as they can be properly evaluated by a qualified archaeologist;
- Proper notification of the appropriate Hiland personnel;
- Necessity of reporting discoveries in a timely manner and complying with the other stipulations provided in this plan;
- Need to treat any human skeletal remains that are encountered with dignity and respect; and
- Penalties for failure to report discoveries or to comply with the procedures outlined in this Plan.

SECTION 3: UNANTICIPATED CULTURAL RESOURCE DISCOVERY PROCEDURE

3.1 Definition of an Unanticipated Cultural Resources Discovery

Cultural resource discoveries consist of evidence of human activity, more than 50 years old, with potential to yield data pertinent to regional history and prehistory. Prehistoric discoveries include, but are not limited to, features (small hearth features, housepit features, storage features, etc.), artifact concentrations (points), and activity areas. Historic discoveries include, but are not limited to, features (historic hearths, foundations, structures, old canals, roads, etc.), artifact concentrations (glass or pottery shards, trash deposits, abandoned equipment) and activity areas. Isolated historic artifacts or small concentrations of non-human bone will not be considered discoveries.

3.2 Procedure for Addressing Discoveries Identified by Construction Personnel

The following procedures will be initiated in the event unanticipated potential cultural resources are discovered.

- Construction activity that resulted in the exposure of the discovery will be **immediately** halted.
- The Construction Manager will be notified.
- A buffered area will be set up around the discovery. A minimum 50-foot (15 m) perimeter is recommended. Visual barriers such as temporary fencing are recommended. No ground disturbing activities, including vehicle traffic, are allowed within the area until the proper cultural resource evaluation has been completed.
- Hiland will notify and consult a professional archaeologist to review the discovery.
- During the review phase, suspension of all work and vehicle traffic in the buffered area is required. If the archaeologist determines that the discovery is non-cultural, Hiland will be notified and the halted construction activity can resume.
- If the discovery is deemed cultural and a field visit is required, no ground disturbing activities are allowed within the buffered discovery area until the field visit by the archaeologist occurs. During the field visit, the archaeologist will determine whether the discovery is potentially significant.

3.3 Procedure for Treatment of Discoveries by Professional Archaeologist

An archaeologist will review and fully record a discovery according to approved standards. The initial treatment of any discovery will consist of recording the location of the discovery; recording summary data concerning the feature(s) and/or other remains

(including dimensions, qualitative characteristics, and associated remains); photographing the discovery and the overall context of the exposed material; and profiling trench walls containing cultural features or strata (where safe and prudent). The feature(s) will then be excavated and a sample will be collected for laboratory analysis as appropriate. Feature plans and profiles will be drawn. Features will be photographed. Uncollected feature fill will be screened using 0.25-inch mesh. If necessary, additional horizontal exposure of sediments/deposits around the feature may be investigated to evaluate the feature context.

When appropriate, the location around the discovered cultural material will be tested to determine the extent of the cultural material. Testing can include, but is not limited to, excavation of controlled units over and around the feature area or placement of test units and/or auger probes. Testing will be designed to identify the nature and extent of the discovery and any associated activity area(s) or other features, if present.

3.4 Special Procedures for Discoveries of Human Remains

Should human remains be encountered during construction of the Project, per the protocol outlined above, all work will be immediately halted at the general location of the discovery. The location will be immediately secured, including a buffer zone of 100 feet (30 m) surrounding the discovery. Construction personnel and vehicles will promptly vacate the buffer zone. Vehicle traffic within the buffer zone will be limited to that necessary to remove other vehicles and equipment from the buffer zone. Care will be taken to prevent any disturbance of the potential human remains during removal of vehicles and equipment. Until appropriate consultation has occurred, the discovery shall remain protected from any disturbance, such that no remains or associated artifacts are touched, moved or collected.

Following notification of the Construction Manager and the Hiland Project Manager, Hiland will immediately notify local law enforcement and the county coroner (see Table 1).

Table 1: Project and Agency Contact Information

CONTACT	NAME	PHONE NUMBER
Hiland Construction Manager	Fred Silva	M: 903-219-0665
Hiland Project Manager	Eric Jensen	O: 918-588-5060 M: 918-998-8881
Environmental Representative (on-site)	TBD	M:
McKenzie County Sherriff	Gary Schwartzenberger	701-444-3654
McKenzie County Coroner	McKenzie County Medical Examiner & Coroner	701-770-4522
North Dakota State Historic Preservation Office	Paul Picha (Chief Archaeologist)	701-328-3574

SECTION 4: STATE HISTORICAL SOCIETY COORDINATION AND REPORTING

If the discovery is deemed potentially significant, Hiland and the archaeologist will consult and coordinate with the State Historical Society to propose procedures for further treatment of the discovery, while minimizing impacts to the construction schedule to the extent possible. Suspended construction activities in the discovery area may not proceed until approval has been obtained from the State Historical Society and other involved agencies and parties.

A report detailing all cultural resources identified, recorded, tested and/or excavated during the construction phase of the Project, regardless of significance, will be prepared by the archaeologist and submitted to the State Historical Society for review within six months of project completion.