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North Dakota Public Service Commission Consolidated Application

Certificate of Corridor Compatibility and Route Permit

ETP Pipeline Project

Prepared for:
Hess North Dakota Export Logistics LLC

Prepared by:
E3 Environmental, LLC

May 2016

HESS

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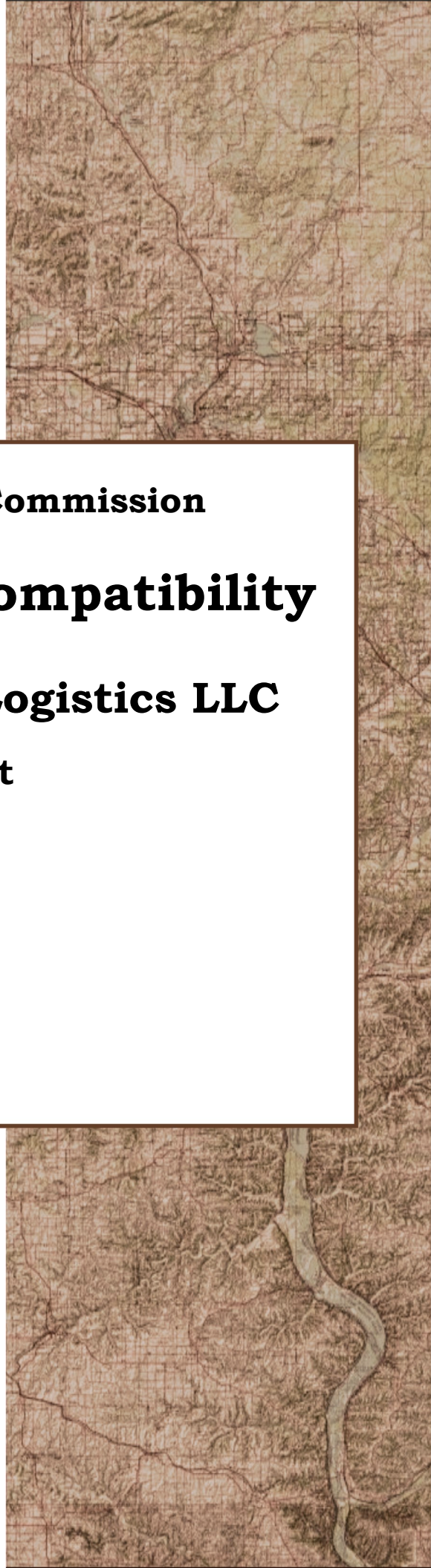

North Dakota Public Service Commission

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INTRODUCTION

Hess North Dakota Export Logistics (Hess), a Delaware limited liability company, owns the Ramberg Truck Facility (RTF) and other terminal assets that support Hess Corporation's production operations in the Bakken, North Dakota. Hess Corporation operates the RTF through a series of service agreements with Hess Infrastructure Partners LP (HIP), its midstream energy joint venture. Hess is proposing the new Energy Transfer Partners (ETP) Pipeline Project (Project), which would be located in Williams County, North Dakota. The Project will connect the RTF to the ETP Facility. The mainline would originate at the existing RTF and extend northeast to terminate at the ETP, which is located approximately 7 miles south of Tioga, ND. The Project scope includes a new 12-inch diameter crude oil pipeline totaling approximately 1.1 miles in length. Refer to the maps in Appendix B for an overview map of the Project. Hess submits to the North Dakota Public Service Commission (PSC or Commission) a single consolidated application for a Certificate of Corridor Compatibility and Route Permit for the Project.

The application provides the requisite information as stipulated by:

- North Dakota Century Code, Energy Conversion and Transmission Facility Siting Act, Section 49-22-08; and,
- North Dakota Administrative Code, Chapter 69-06-05, Transmission Facility Permit.

SECTION 1: DESCRIPTION

1.1 TYPE AND SIZE OF FACILITY

1.1.1 TYPE

The Project will result in a new crude oil transmission pipeline. The steel pipeline will meet U.S. Department of Transportation (DOT) regulations, specifically the design criteria outlined in 49 C.F.R. part 195 subpart C. The Project will be constructed per 49 C.F.R. part 195 subpart D, and operated and maintained per 49 C.F.R. part 195 subpart F.

1.1.2 SIZE

The Project pipeline specifications are the following:

- 12-inch diameter steel pipe
- 0.375-inch line pipe wall thickness, 0.500-inch bore pipe wall thickness
- Normal Operating Pressure: 100 pounds per square inch gauge (psig)
- Maximum Operating Pressure: 1,184 psig
- Normal Throughput: approximately 50,000 barrels per day (bpd)
- Maximum Throughput: approximately 70,000 bpd
- Maximum Operating Temperature: 100 degrees Fahrenheit

1.1.3 LENGTH

The Project is approximately 1.1 miles in length.

1.2 PURPOSE OF FACILITY

The purpose of the Project is to transport crude oil from the RTF to the ETP facility. From the ETP facility, the product will be transported via interconnecting pipelines for distribution to refineries across the United States.

1.3 LOCATION

The Project will be located in Williams County, North Dakota, will result in a transmission pipeline originating at the RTF and will extend to the northeast to terminate at the ETP facility, located approximately seven (7) miles south of Tioga, ND. Refer to the Project maps provided in Appendix B.

1.4 ABOVEGROUND FACILITIES

Aboveground structures outside of existing fenced facilities are not anticipated.

1.5 PROJECT SCHEDULE

1.5.1 CERTIFICATE OF CORRIDOR COMPATIBILITY

Hess seeks a Certificate of Corridor Compatibility on or before August 5, 2016.

1.5.2 ROUTE PERMIT

Hess seeks a Route Permit on or before August 5, 2016.

1.5.3 RIGHT-OF-WAY ACQUISITION

Hess has acquired 100% of the Project right-of-way (ROW).

1.5.4 CONSTRUCTION SCHEDULE

Hess has scheduled construction activities to commence during the third quarter of 2016. The construction activities will take approximately three (3) months to complete. Commissioning and restoration activities will commence immediately after construction is complete.

1.5.5 ADDITIONAL PROJECT PERMITS OR AUTHORIZATIONS

The Project will be constructed in compliance with applicable federal, state and local laws, regulations or plans. Hess will obtain necessary permits or approvals for the construction and operation of the Project.

SECTION 2: STUDIES

2.1 CORRIDOR

Hess selected the proposed corridor based upon several criteria designed to conform to the PSC's siting requirements and to avoid and minimize socioeconomic and environmental impacts, while maximizing the benefits to local resource developers in the Williston Basin. The location of existing assets was also considered during the selection process. Hess' process of selecting a corridor to site a pipeline between two (2) fixed assets was influenced by the opportunity to parallel with other utility corridors.

The proposed corridor is a one-mile wide area centered upon a proposed alignment which was selected utilizing web-based mapping tools (*i.e.*, one-half mile on either side of the proposed alignment) (Corridor). The Corridor is illustrated on the maps in Appendix B.

A comprehensive desktop analysis of the Corridor included consultations with the federal and state agencies identified below. These consultations were conducted for the purpose of environmental resource assessment as stipulated by the PSC's siting requirements for a Transmission Facility Corridor. Consultation letters were distributed on March 31, 2016 and April 1, 2016. The results of the environmental analysis are summarized in Section 2.2 of this document. Records of the agency consultations are provided in Appendix C.

- U.S. Fish and Wildlife Service (USFWS)
- North Dakota Game and Fish Department (NDGFD)
- North Dakota Parks and Recreation – Natural Heritage Program (NDPRD)
- North Dakota Department of Trust Lands (NDDTL)
- North Dakota State Water Commission (NDSWC)
- North Dakota State Historic Preservation Office (NDSHPO)
- Western Area Water Supply Authority (WAWSA)
- Williams County Water Resource Board (WCWRB)
- Williams County Weed Control Board (WCWCB)

2.2 ENVIRONMENTAL DESKTOP ANALYSIS

2.2.1 WILDLIFE INVENTORY

Approximately 160 wildlife species are residents or seasonal visitors to the greater Missouri River ecosystem, and hundreds of native fish species live in the mainstream and its tributaries. Some of these animal species include fur-bearing mammals (*e.g.*, beaver, muskrat, moose, eastern cottontail, elk, moose and mule deer), birds and waterfowl species (*e.g.*, mallard, Canada goose, sharp-tailed grouse and golden and bald eagles). Species classified as threatened or endangered by the Endangered Species Act (ESA) may occur within the Project county.

Hess engaged federal and state agencies in consultations to identify potential occurrences of sensitive species or their critical habitats. Refer to Appendix C for a complete record of agency consultations.

2.2.2 WETLAND AND WATERBODIES ANALYSIS

To evaluate the location and extent of mapped wetlands and waterbodies within the Corridor, a desktop analysis of aerial photography, National Hydrography Data set (NHD) and National Wetland Inventory (NWI) maps was completed. The desktop analysis identified two (2) waterbodies, four (4) waterways and approximately 40 wetland features within the Corridor. Hess commissioned field studies to augment the desktop analysis. The field study results are discussed in the associated Route Permit Application.

2.2.3 TREE/SHRUB ANALYSIS

A desktop analysis of aerial photography was used to evaluate the location and extent of woody vegetation within the Corridor. The density of the woody cover in this region is generally sparse, and typically associated with significant topographic relief such as defined banks, incised drainage channels or agricultural windrows. The desktop analysis was augmented with field surveys. The field survey results are contained in Appendix D and discussed in detail in the Route Permit Application.

2.3 AGENCY CONSULTATIONS

2.3.1 U.S. FISH AND WILDLIFE SERVICE

The USFWS administers several programs designed to identify and protect special status plant and animal species, critical habitats and lands managed by the agency. E3 Environmental, LLC (E3), on behalf of Hess, sent a Project consultation letter with maps of the Corridor on March 31, 2016. A response from the USFWS is pending. Refer to Appendix C for a record of this consultation.

2.3.1.1 FEDERALLY PROTECTED SPECIES REVIEW

The USFWS identifies and maintains a list of species and critical habitats that have been afforded protection by the ESA. The ESA provides a program for the conservation of threatened and endangered plants and animals and their critical habitats.

E3 reviewed USFWS published data and identified the following listed species and/or designated critical habitat with the potential to occur within the Corridor.

- Whooping crane (*Grus americana*) – Endangered
- Least tern (*Sternula antillarum*) – Endangered
- Pallid sturgeon (*Scaphirhynchus albus*) – Endangered
- Gray wolf (*Canis lupus*) – Endangered
- Red Knot (*Calidris canutus rufa*) – Threatened
- Piping plover (*Charadrius melodus*) – Threatened
- Northern long-eared bat (*Myotis septentrionalis*) – Threatened

- Dakota skipper *(Hesperia dacotae)* - Threatened

E3 reviewed available information describing the life history, critical habitats, and conservation measures associated with each species to assess the potential effects of the Project on these resources. The results of the assessment are provided below.

Whooping crane: The Aransas Wood Buffalo Population of Whooping Cranes engages in semi-annual migration through North Dakota. This flock breeds in the Wood Buffalo National Park in Alberta and Northwest Territories, Canada, and winters in the Aransas National Wildlife Refuge in Texas. North Dakota provides migratory habitat for the species, providing roosting and feeding opportunities during migration. During migration, the species is most closely associated with larger wetland complexes for roosting habitat, typically using adjacent uplands to forage. The Project is located within the migratory corridor for the whooping crane and potential foraging habitat exists within the Corridor.

Least tern: Lake Sakakawea and the Missouri River, located approximately nine (9) miles south of the Project, provide suitable breeding and nesting habitat for least terns. The Corridor does not contain the sandbars and riverbanks necessary for nesting, so impacts to the interior least tern are not anticipated.

Pallid sturgeon: The preferred habitat of the pallid sturgeon includes the benthic environment associated with swift waters of large turbid, free-flowing rivers with braided channels, dynamic flow patterns, periodic flooding of terrestrial habitats, and requires extensive micro habitat diversity. The species inhabits the Missouri and Mississippi Rivers from Montana to Louisiana. In North Dakota, reaches of the Missouri River system have been cited as providing suitable habitat for the pallid sturgeon. However, much of the habitat has been compromised from channelization, installation of impoundments, and altered flow regimes. Potential suitable habitat is not present in the Corridor, so impacts to the pallid sturgeon are not anticipated.

Gray wolf: The gray wolf uses a variety of habitats that support a large prey base including montane and low-elevation forests, grasslands and desert scrub. The Corridor generally lacks forested habitat and is a great distance from the known Minnesota and Manitoba populations. This species is not tolerant of human disturbance and will tend to avoid interaction with humans. The activities associated with construction and later operations will likely serve as a deterrent to this species. Therefore, impacts to the gray wolf are not anticipated.

Rufa red knot: North Dakota is a possible migration stopover in spring and autumn for the rufa red knot, particularly within Lake Sakakawea and its major tributaries. The rufa red knot migrates between breeding grounds in Canada and wintering grounds in South America. A significant factor threatening the rufa red knot is the loss or modification of its habitat due to beach erosion and shoreline protection efforts. Migratory behavior and habitat requirements of this species are poorly understood,

particularly for those populations occupying the midcontinent flyways. Inland stopovers include the Mississippi Valley, Great Lakes and Great Plains. Suitable habitat is not present within the Corridor; therefore, impacts to the rufa red knot are not anticipated.

Piping plover: The piping plover is a small shorebird that nests on open, sparsely vegetated sand or gravel beaches adjacent to alkali wetlands and on beaches, sand bars and dredged material islands of major river systems. The shorelines of the Missouri River and Lake Sakakawea provide suitable habitat for breeding and nesting, however, the shoreline of the Missouri River is located approximately nine (9) miles south of the Project. Desktop review of the Corridor did not identify potentially suitable habitat within the Corridor.

Northern long-eared bat: The northern long-eared bat roosts underneath bark, in cavities, or in crevices of both live and dead trees. Populations have also been found in cool environments such as caves and mines and prefer to spend winter hibernating in locations with high humidity and no air currents. Breeding occurs in late summer or early fall in maternity colonies where females give birth around the same time, which may occur anywhere from late May to late July. Most records of northern long-eared bats are from winter hibernacula surveys, and no known hibernacula have been identified in North Dakota. Suitable hibernacula is not likely to occur within the Corridor.

Dakota skipper: The Dakota skipper is a butterfly native to North Dakota that has recently been listed as threatened under the ESA by the USFWS. This species is dependent on intact (e.g.; undisturbed) native prairie and is intolerant of habitat disturbance. The USFWS manages the species and its critical habitat. A review of USFWS published data confirmed that the agency has no confirmed occurrence of this species, and does not manage any designated critical skipper habitat in Williams County, North Dakota.

2.3.1.2 MIGRATORY BIRD TREATY ACT

The USFWS is responsible for the protection of migratory birds. Management of this responsibility has largely focused on protection of the birds while on their breeding grounds during the breeding season. In North Dakota, species protected under the MBTA are present throughout the year. However, it is generally acknowledged that the majority of protected species seasonally present in North Dakota nest from February 1st through July 15th. The proposed Project construction is scheduled to commence in August of 2016 and take approximately three (3) months to reach completion. Due to the Project schedule and phenology of resident birds, MBTA mitigation is not likely to be required, as construction will occur outside of the typical nesting season. Should mitigation be required, Hess will continue to consult with agencies as necessary and will develop MBTA mitigation plans as appropriate.

2.3.1.3 BALD AND GOLDEN EAGLE PROTECTION ACT

The Bald and Golden Eagle Act (BGEA) prohibits anyone without a permit from taking a bald or golden eagle including their parts, nests or eggs. The BGEA defines "take" as to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb. The BGEA also addresses impacts resulting from human-induced alterations occurring around previously used nesting sites. Suitable eagle habitat may occur within the Corridor.

2.3.1.4 U.S. FISH AND WILDLIFE MANAGED LANDS

The USFWS administers National Wildlife Refuges and Waterfowl Production Areas (WPAs) as well as wetland and grassland easements throughout North Dakota. A desktop review of information available in the public domain, including U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle maps, USGS PAD-US dataset, and the USFWS Information, Planning, and Conservation System (IPaC) has been completed for the Corridor. The desktop analysis indicates no USFWS managed lands are located within the Corridor.

2.3.2 NORTH DAKOTA GAME AND FISH DEPARTMENT

The NDGFD has oversight of the State's game species. On March 31, 2016, E3, on behalf of Hess, initiated consultations with the NDGFD requesting information regarding the presence or absence of State Conservation Priority Species within the Corridor. NDGFD response is pending. Refer to Appendix C for a record of this communication.

2.3.3 NORTH DAKOTA PARKS AND RECREATION DEPARTMENT

The NDPRD Natural Resource Division's scope of authority and expertise covers recreation and biological resources (in particular, rare species and ecological communities). The NDPRD also maintains a database comprised of the location and recorded occurrences of plant and animal species of special concern. The NDPRD authority includes management of state park lands and Land and Water Conservation funded recreation projects.

On March 31, 2016, E3, on behalf of Hess, initiated consultations with the NDPRD seeking confirmation regarding the presence or absence of managed lands, ecological resources, rare species or their critical habitats within the Corridor. A written response was received on April 11, 2016. The NDPRD confirmed that the Project would not affect state park lands or Land and Water Conservation Fund recreation projects. Additionally, the NDPRD stated that no documented significant ecological communities or plant and animals species of concerns within the North Dakota Natural Heritage biological conservation database occur within the Corridor. See Appendix C for a record of the correspondence.

2.3.4 NORTH DAKOTA DEPARTMENT OF TRUST LANDS, MINERALS AND SURFACE MANAGEMENT

The NDDTL is in charge of managing surface acres and mineral interests held in trust for various schools and institutions.

On March 31, 2016, E3, on behalf of Hess, initiated consultations with the NDDTL Surface Management Division requesting comments regarding the presence or absence of School Trust Lands within the Corridor. The NDDTL Surface Management Division responded on April 1, 2016 confirming the absence of state School Trust Lands within the Corridor. Refer to Appendix C for a record of this consultation.

Also on March 31 2016, E3, on behalf of Hess, initiated consultations with the NDDTL Minerals Management Division requesting comments regarding the presence or absence of State Mineral Trust lands within the Corridor. The NDDTL Minerals Management Division responded on April 4, 2016 confirming the presence of Mineral Trust land tracts within the Corridor as depicted in the consultation map. Refer to Appendix C for a record of the correspondence.

2.3.5 NORTH DAKOTA STATE WATER COMMISSION

The NDSWC administers water appropriation and sovereign lands permit programs, and may have relevant information regarding rural water supply systems.

On March 31, 2016, E3, on behalf of Hess, initiated consultations with the NDSWC requesting comments regarding the presence of sovereign lands and/or rural water supply systems within the Corridor. A written response was received on 4/11/2016; no floodplains or water resources of interest to the NDSWC were identified within the Corridor. Refer to Appendix C for a copy of this correspondence.

2.3.6 NORTH DAKOTA STATE HISTORICAL PRESERVATION OFFICE

The NDSHPO is responsible for managing the historic and archaeological resources of the state; as such, the NDSHPO maintains records of all previously recorded cultural resources within the state.

A Class I inventory was conducted in March 2016, which identified twenty (20) completed cultural resources surveys (MS#003251, MS#005749, MS#009856, MS#011243, MS#011686 MS#011790, MS#011987, MS#012260, MS#012793, MS#013099, MS#013743, MS#014090, MS#014475, MS#014986, MS#015582, MS#015648, MS#015686, MS#015860, MS#015938, and MS#015999) within the Corridor. One (1) previously recorded cultural resource is located within the Corridor (32WI1141).

To augment the Class I inventory, a Class III field investigation was conducted, with the details of this effort included in the associated Route Permit Application. Refer to Appendix E for the Cultural Resources Report. This report was submitted to the SHPO on April 6, 2016 and concurrence was received on April 8, 2016.

2.3.7 WESTERN AREA WATER SUPPLY AUTHORITY

The Corridor occurs entirely within the WAWSA's five county jurisdiction. These counties include Burke, Divide, McKenzie, Mountrail and Williams. WAWSA utilizes a combination of Missouri River water treated at the Williston Regional Water Treatment and ground water treated by the R&T Water Supply Commerce Authority's Water Treatment Plant in Ray to supply and meet the needs of municipal, rural and industrial water users in five northwestern North Dakota counties including Williams County. On April 7, 2016, E3, on behalf of Hess, initiated consultations with the WAWSA requesting comments regarding the presence of reservoirs or municipal water supplies within the Corridor. A response is pending.

2.3.8 WILLIAMS COUNTY WATER RESOURCE BOARD

The WCWRB is responsible for managing any drains, ditches and/or other drainage systems regulated by the county; as such, the WCWRB has knowledge of the county-regulated drains, ditches and/or other drainage systems.

On March 31, 2016, E3, on behalf of Hess, initiated consultations with the WCWRB requesting comments regarding the presence of county-regulated drains, ditches and/or other drainage systems within the Corridor; a response is pending. Refer to Appendix C for a copy of this correspondence.

2.3.9 WILLIAMS COUNTY WEED CONTROL BOARD

The WCWCB maintain records for the location and species of noxious weeds within the county. On April 1, 2016, E3, on behalf of Hess, initiated consultations with the WCWCB requesting comments regarding the presence of noxious weeds within the Corridor; a response is pending. Refer to Appendix C for a copy of this correspondence.

SECTION 3: NEED FOR FACILITY

3.1 ANALYSIS OF NEED BASED ON PRESENT AND PROJECTED DEMAND INCLUDING SYSTEM STUDIES

The Project will transport product from formations in the Williston Basin. The development of hydrocarbon production in the Williston Basin has increased significantly in recent years due to advancements in deep horizontal directional drilling techniques and subsequent oil extraction in the Bakken and Three Forks Shale formations. The total recoverable amount of Bakken Shale and Three Forks oil reserves are subject to interpretation and speculation. Studies conducted by the North Dakota Department of Mineral Resources and the USGS in 2010 estimated mean undiscovered volumes of 3.65 billion barrels of recoverable crude oil reserves may be available in North Dakota's deep shale formations. Information from the Department of Mineral Resources indicates that oil production has increased dramatically over the past five years. In January of 2011, North Dakota produced 342,923 barrels of oil per day. That figure has increased to 34,785, 094 barrels per day in January of 2016.

A major constraint in transporting hydrocarbons from North Dakota to distribution centers and eventual end users in the United States is the lack of pipeline capacity. To relieve the pipeline constraints, projects have been planned to address the growing volumes of crude oil, natural gas and natural gas liquids. 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.

Construction of the Project will provide firm, reliable transport of an average 50,000 bpd of crude oil between the RTF and the ETP facility. From the ETP facility, the product will be transported via interconnecting pipelines for distribution to refineries in mid-continent and gulf coast area refineries.

SECTION 4: CORRIDOR LOCATION AND CRITERIA EVALUATION

Hess has conducted a thorough inventory of the Corridor and evaluated the resources within it to assess the compatibility of the Project with the PSC's siting criteria. The following sections identify and discuss the presence or absence of siting criteria within the Corridor. Where siting criteria are identified, the location of each is shown on the maps in Appendix B.

4.1 CORRIDOR LOCATION

Hess identified a preferred Corridor, which is a one-mile wide area centered upon the preferred pipeline alignment. The selection of the proposed Corridor was a multi-disciplinary effort, which included socioeconomic, environmental, logistics, engineering, and financial considerations. The Corridor described in this application provides Hess with the opportunity to utilize existing assets, and minimize landowner and environmental impacts.

Hess initiated landowner negotiations, agency consultations, and performed internet-based research and desktop analysis of the Corridor. These efforts were augmented by field studies, including natural and cultural resource field surveys. The results of the field studies are discussed in detail in the associated Route Permit Application.

4.2 FACTORS TO BE CONSIDERED IN EVALUATING APPLICATIONS AND DESIGNATION OF CORRIDORS AND ROUTES (NDCC 49-22-09)

4.2.1 FEASIBLE ALTERNATIVES TO THE PROPOSED CORRIDOR OR ROUTE

The Project objective is to provide firm, reliable transportation of crude oil from the RTF to the ETP facility. Hess identified and evaluated project alternatives; however, none of these alternatives effectively satisfied the Project objective. These alternatives included:

- No Action Alternative; and
- Trucking Alternative.

4.2.1.1 NO ACTION ALTERNATIVE

This alternative would leave the region constrained by limited transport capacity for safe and reliable transmission of crude oil products to markets. A no action alternative could result in the curtailment of crude oil production. For these reasons, Hess rejected a no action alternative.

4.2.1.2 TRUCKING ALTERNATIVE

This alternative was reviewed and eliminated due to the volume of crude oil to be transported. The normal daily throughput of the Project would be 50,000 barrels or 2,100,000 gallons of crude oil. The average load for a truck carrying crude oil is approximately 178 barrels (approximately 7,500 gallons) per truck. Thus, it would require 281 trucks per day, an average of 12 trucks every hour for twenty-four (24) hours a day to transport the volume of product the pipeline would transport to the ETP

facility. This level of truck activity is not logistically feasible as it would cause significant amounts of heavy vehicle traffic for area residents, as well as additional wear and tear on the infrastructure. Disruption in the trucking capacity due to seasonal load restrictions on roads, inclement weather or road repairs would cause a delay in delivering this valuable resource to market. This alternative is not desirable; therefore, Hess rejected a *Trucking Alternative*.

4.2.2 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF NATURAL RESOURCES SHOULD THE PROPOSED CORRIDOR BE DESIGNATED

Hess is not aware of any irreversible or irretrievable commitments of natural resources that will result from the requested approvals.

4.2.3 EXISTING PLANS OF THE STATE, LOCAL GOVERNMENT AND/OR PRIVATE ENTITIES FOR OTHER DEVELOPMENTS AT OR IN THE VICINITY OF THE PROPOSED ROUTE

Hess, to the best of its knowledge, is not aware of existing plans of the state, local government and/or private entities for development at or in the vicinity of the proposed route.

4.2.4 PROBLEMS RAISED BY FEDERAL AGENCIES, OTHER STATE AGENCIES AND LOCAL ENTITIES

Hess has consulted with federal and state agencies to identify possible environmental resources within the Corridor and any related agency concerns. A complete record of these consultations is provided in Appendix C.

4.3 EXCLUSION AREAS (NDAC 69-06-08-02(1))

Exclusion areas are geographical areas that must be excluded from consideration when siting an energy transmission facility. A proposed corridor may contain exclusion areas; however, exclusion areas may not encompass more than 50% of the corridor width at any point, unless there is no reasonable alternative. The following table and subsequent sections identify and discuss exclusion areas identified within the Corridor.

Exclusion Area	Within Corridor	50% or More of Corridor	Section Reference
Federal Resources			**4.3.1**
National Parks or Memorial Parks	No	No	
Historic Sites or Landmarks	No	No	
Natural Landmarks or Monuments	No	No	
Wilderness Areas	No	No	
State			**4.3.2**
Historic Sites, Monuments or Historical Markers	No	No	
Archaeological Sites	No	No	
Parks	No	No	

Exclusion Area	Within Corridor	50% or More of Corridor	Section Reference
Nature Preserves	No	No	
County			**4.3.3**
Parks	No	No	
Recreation Areas	No	No	
Municipal Parks	No	No	
Other			**4.3.4**
Areas Critical to the Life Stages of Threatened and Endangered Animals or Plant Species	No	No	4.3.4.1
Areas where Animal or Plant Species that are Unique or Rare to this State would be Irreversibly Damaged	No	No	4.3.4.2
Areas within 1,200 feet of a geographic center of an intercontinental ballistic missile (ICBM) launch or launch control facility.	No	No	4.3.4.3
Areas within 30 feet on either side of a direct line between (ICBM) launch or launch control facilities to avoid microwave interference.	No	No	4.3.4.4

4.3.1 FEDERAL RESOURCES

Hess has initiated consultations with federal and state agencies and conducted a comprehensive review of published information. Hess concluded no national or memorial parks, natural landmarks or monuments, or wilderness areas will be crossed or affected by the Project.

4.3.2 STATE RESOURCES

Hess has initiated consultations with federal and state agencies and conducted a comprehensive review of published information. Hess confirmed the absence of state parks, monuments, historical markers, archaeological sites or nature preserves within the proposed Corridor.

4.3.3 COUNTY RESOURCES

Hess has confirmed through a combination of agency consultations and review of publicly available information the absence of county parks or recreation areas, municipal parks, or parks owned by other subdivisions of government bodies within the proposed Corridor. Refer to Section 2 of this document for a comprehensive discussion of Hess consultations, and Appendix C for documentation of agency consultations.

4.3.4 OTHER EXCLUSION AREAS

4.3.4.1 AREAS CRITICAL TO THE LIFE STAGES OF THREATENED AND ENDANGERED ANIMALS OR PLANT SPECIES

Hess conducted a comprehensive desktop review of the Corridor; these efforts were augmented with agency consultations and additional field surveys to confirm the presence or absence of critical habitat. Refer to Appendix C for documentation of the agency consultations, and Section 2 of the associated Route Permit Application for details of the field studies.

4.3.4.2 AREAS WHERE ANIMAL OR PLANT SPECIES THAT ARE UNIQUE OR RARE TO THIS STATE WOULD BE IRREVERSIBLY DAMAGED

Hess has engaged in federal and state agency consultations, reviewed published information and conducted a desktop analysis of the Corridor to determine if areas of critical animal or plant habitat may occur. Based on these studies, Hess has confirmed the absence of protected species and/or their critical habitats. Refer to Appendix C for supporting documentation of agency consultations.

4.3.4.3 AREAS WITHIN 1,200 FEET OF THE GEOGRAPHIC CENTER OF AN ICBM LAUNCH OR LAUNCH CONTROL FACILITY

Upon review of tabular location data and aerial imagery, which was compiled by the University of Wyoming, there are no areas within 1,200 feet of the geographic center of an Intercontinental Ballistic Missile (ICBM) launch or launch control facility located within the Corridor.

4.3.4.4 AREAS WITHIN THIRTY (30) FEET ON EITHER SIDE OF A DIRECT LINE BETWEEN ICBM LAUNCH OR LAUNCH CONTROL FACILITIES TO AVOID MICROWAVE INTERFERENCE

A review of data compiled by the University of Wyoming that contained tabular location data and aerial imagery was completed. This review confirmed the absence of areas within thirty (30) feet on either side of a direct line between ICBM launch or launch control facilities within the Corridor.

4.4 AVOIDANCE AREAS (NDAC 69-06-08-02(2))

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 proposed corridor may contain avoidance areas; however, avoidance areas may not encompass more than 50% of the corridor width at any point, unless there is no reasonable alternative. The following table and text identify and discuss avoidance areas within the proposed Corridor.

Avoidance Area	Within Corridor	50% or More of Corridor	Section Reference
Federal			**4.4.1**
Historic Districts	No	No	
Wildlife Areas	No	No	
Wild, Scenic or Recreational Rivers	No	No	
Wildlife Refuges	No	No	
Grasslands			
State			**4.4.2**
Wild, Scenic or Recreational Rivers	No	No	
Game Refuges or Game Management Areas	No	No	
Forests or Forest Management Areas	No	No	
Grasslands	No	No	
Other			**4.4.3**
Historical Resources not specifically designated as Exclusion or Avoidance Areas	No	No	4.4.3.1
Areas of Known Geologic Instability	No	No	4.4.3.2
Areas within 500 Feet of a Residence, School, or Place of Business	Yes	No	4.4.3.3
Reservoirs and Municipal Water Supplies	Yes	No	4.4.3.4
Water Sources for Organized Rural Water Districts	No	No	4.4.3.5
Irrigated Land (not applicable to underground facilities)	NA	NA	4.4.3.6
Areas of Recreational Significance which are not designated as Exclusion Areas	No	No	4.4.3.7

4.4.1 FEDERAL RESOURCES

Hess conducted agency consultations and a comprehensive review of publicly available information. This review indicated the absence of designated or registered historic districts, refuges, grasslands, and wild, scenic or recreational rivers within the Corridor. Refer to Appendix C for documentation of agency consultations.

4.4.2 STATE RESOURCES

Hess conducted a review of publicly available information and initiated project specific agency consultations. Through these efforts, Hess has concluded there are no designated or registered management areas, forests, forest management lands, grasslands or wild, scenic or recreational rivers within the Corridor. Refer to Appendix C for documentation of agency consultations.

4.4.3 OTHER AVOIDANCE AREAS

4.4.3.1 HISTORICAL RESOURCES NOT SPECIFICALLY DESIGNATED AS EXCLUSION OR AVOIDANCE AREAS

Hess conducted a review of publicly available information, initiated project specific agency consultations and augmented the agency review with field studies. Through these efforts, Hess has confirmed the absence of historical resources that are not specifically designated as exclusion or avoidance areas within the Corridor. Refer to Appendix C for documentation of agency consultations and Appendix E for the Cultural Resources Report.

4.4.3.2 AREAS OF KNOWN GEOLOGIC INSTABILITY

Geologic instability generally refers to surface geology and areas where landslides have occurred. The North Dakota Geological Survey (NDGS) landslide mapping data was consulted for information regarding areas of landslides within the Corridor. Review of landslide deposit data from the North Dakota Geological Survey indicated the absence of landslide deposits within the Corridor.

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 a review of PSC abandoned mine data, no abandoned surface mines are located in the Corridor.

4.4.3.3 AREAS WITHIN 500 FEET OF A RESIDENCE, SCHOOL OR PLACE OF BUSINESS

Aerial photography was utilized to identify structures located within the Corridor. Approximately one (1) potentially occupied structure was identified within the Corridor. However, none of the potentially occupied structures re located within 500 feet of the route, as further discussed in the associated Route Permit Application.

4.4.3.4 RESERVOIRS AND MUNICIPAL WATER SUPPLIES

Four (4) wells were identified within the Corridor however; none are used for municipal water. There were no reservoirs or municipal water supplies identified within the Corridor.

4.4.3.5 WATER SOURCES FOR ORGANIZED RURAL WATER DISTRICTS

The Williams County Water Resource Board (WCWRB) has water resources located throughout Williams County, and as such, the Corridor is wholly within the WCWRB. The WCWRB oversees waterlines that occur within the Corridor.

4.4.3.6 IRRIGATED LAND

This criterion does not apply to underground transmission facilities; as such, it is not applicable to this Project.

4.4.3.7 AREAS OF RECREATIONAL SIGNIFICANCE WHICH ARE NOT DESIGNATED AS EXCLUSION AREAS

Hess confirmed the Corridor does not contain any areas of recreational significance.

4.5 SELECTION CRITERIA (NDAC 69-06-08-02(3))

The selection criteria require assessment of the environmental impacts and alterations to land use that may result from the siting of the Project. Through this process, Hess believes the Project will successfully avoid or minimize these effects to the maximum extent practicable.

4.5.1 AGRICULTURAL IMPACT

Agricultural Production: The Corridor contains approximately 1,054 acres of private land. According to land cover data maintained by the USGS, approximately 691 of these acres are categorized as agricultural vegetation. An additional 363 acres are classified as shrub land or grasslands. Refer to Appendix B for maps depicting land cover within the Corridor.

Family Farms and Ranches: The Project will have no permanent impacts to lifestyle or farm/ranch operations once construction has been completed. The Corridor contains approximately 1,054 acres of private land. According to land cover data maintained by the USGS, approximately 691 of these acres are categorized as agricultural vegetation. An additional 363 acres are classified as shrub land or grasslands. Refer to Appendix B for maps depicting land cover within the Corridor.

Lands Suitable for Irrigation: This section is not applicable to buried pipelines (NDAC 69-06-08-02(2)(h)).

Surface Drainage: Standard construction techniques will be employed and significant modifications to surface drainage patterns are not anticipated. 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 reestablished and impacts shall be minimal and temporary. Best management practices will be implemented to prevent erosion and off site travel of sediments.

Ground Water: Well data, recorded by the State Water Commission, has been reviewed for the Project area. Well data indicates groundwater in upland areas is located more than twenty (20) feet below the surface. Typical subsurface excavations associated with the Project will not extend to more than ten (10) feet below the ground surface. At that depth, the Project will not intersect the groundwater table, nor will the Project alter recharge rates or the infiltration, permeability, or percolation of water into the groundwater reservoir. Additionally, construction will not affect the lateral movement or groundwater quality.

4.5.2 THE IMPACTS UPON OTHER RESOURCES

Noise-Sensitive Land Uses: The Project is located in a rural setting, effectively isolating it from the majority of sensitive receptors. Construction of the Project will temporarily affect the local noise environment. The ambient sound level of a region is defined by the total noise generated within the specific environment and is usually comprised of sounds emanating from natural and artificial sources.

Construction of the Project will be conducted during typical working hours and is expected to cause temporary increases in ambient sound within and adjacent to the Corridor. The use of heavy equipment or trucks will be the primary noise source 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.

Visual Effect on Adjacent Areas: Tie-in facilities will be placed within the boundaries of existing operating terminals. As such, impacts to the view shed are not anticipated.

Extractive and Storage Resources: This Project will not affect any extractive or storage resources.

Wetlands, Woodlands and Wooded Areas: A comprehensive desktop review of published data, including aerial photography and NWI data, was conducted to assess the presence or absence of wetlands, woodlands and wooded areas. The review of the proposed Corridor confirmed the presence of these resources. Hess commissioned field surveys to identify and record the locations of these resources along the proposed route. Refer to Section 2 of the Route Permit for a comprehensive discussion of the field studies results.

Radio and Television Reception, and other Communication or Electronic Control Facilities: Hess does not anticipate the Project will affect radio, television, or other electronic control facilities.

Human Health and Safety: Hess' Environmental, Health and Safety Policy meets federal and state laws, rules and regulations, and is enforced equally with respect to both Hess and its contractors. The implementation of this policy promotes a safe and healthy workplace during construction and operation of all Hess' assets. In addition, the operation of the pipeline will be monitored in accordance with DOT regulations.

Animal Health and Safety: The wildlife currently inhabiting the Corridor is common and is generally mobile. The local wildlife inhabitants will not be displaced by the Project and no measurable impact to the viability of these populations will occur. Hess does not anticipate species of special concern to experience direct impacts due to construction or operation of the Project.

Plant Life: There will be no impacts to plant life associated with the construction or operation of the pipeline. No species of special concern will be impacted by the Project.

4.6 POLICY CRITERIA

4.6.1 POLICIES AND COMMITMENTS TO LIMIT ENVIRONMENTAL IMPACT

Hess is committed to conducting its business in compliance with all applicable environmental laws and regulations. These laws, regulations and standards are designed to safeguard the environment, human health, wildlife and natural resources. Hess will conduct its activities with the objectives of providing a healthful and safe workplace for its employees, and preventing accidents and environmental incidents. All persons and firms providing service to Hess are required to conduct their work in compliance with environmental conditions, permit authorizations and applicable regulations.

4.6.2 LOCATION AND DESIGN

The Project will be located in Williams County, North Dakota and will result in a transmission pipeline originating at the RTF and will extend to the northwest to terminate at the ETP facility, located approximately seven (7) miles south of Tioga, ND. Refer to the Project maps provided in Appendix B.

The Project will be approximately 1.1 miles in length constructed of steel, and will be a 12-inch diameter pipe. The pipe installed will have a line pipe wall thickness of 0.375-inches and bore pipe wall thickness of 0.500-inches denoted as the American Petroleum Institute (API) Code 5L specification X52 pipeline pipe. The maximum operating pressure of the pipeline will be 1,184 psig.

The proposed pipeline will meet U.S. DOT regulations, specifically the design criteria outlined in 49 C.F.R. part 195 subpart C, and will be constructed per 49 C.F.R. part 195 subpart D, and operated and maintained per 49 C.F.R. part 195 subpart F.

4.6.3 TRAINING AND UTILIZATION OF AVAILABLE LABOR IN THIS STATE FOR THE GENERAL AND SPECIALIZED SKILLS REQUIRED

Pipeline construction is a specialized niche construction market and the labor force needed to build the Project will be primarily comprised of a specialized workforce. The primary contractor will supply specialized skilled labor. The workforce is anticipated to reach a peak of approximately 150 personnel.

4.6.4 ECONOMIES OF CONSTRUCTION AND OPERATION

Hess will invest approximately $4.5 million in North Dakota to develop this Project, generating additional tax revenues annually. Once constructed and in-service, the continued costs of maintenance and operation of the proposed pipeline are minimal.

4.6.5 USE OF CITIZEN COORDINATING COMMITTEES

Hess has established and maintains a good relationship with the local community officials and the local population. These relationships provide multiple grass roots communication channels to inform local residents regarding the developments associated with the Project.

4.6.6 COMMITMENT OF A PORTION OF THE TRANSMITTED PRODUCT FOR USE IN THIS STATE

The Project will interconnect with existing facilities. The products handled, transferred and shipped at these facilities are currently delivered to markets both in and out of state.

4.6.7 LABOR RELATIONS

Hess maintains positive labor relations with its staff and contract work force and does not anticipate encountering any adverse labor relations on this Project. The labor market in the region is generally supportive of the oil and gas industry.

4.6.8 THE COORDINATION OF FACILITIES

Hess Corporation operates the RTF pursuant to services agreements with HIP; thus, coordination will be seamless and executed from within Hess Corporation's internal management systems.

4.6.9 MONITORING OF IMPACTS

Hess Corporation has established and maintains positive landowner and community relationships throughout the region through its open communication and commitment to corporate citizenship standards that are based on integrity. Hess Corporation will monitor landowner concerns through its Surface Land Team and the Hess Community Connection program, which is Hess Corporation's own ombudsmen program that takes a proactive approach to requests on the 1,200 miles of pipeline it owns and operates. In a similar manner, Hess Corporation will monitor community concerns and will respond to all reasonable concerns brought to its attention by local community leaders. Hess will select a 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.

4.6.10 UTILIZATION OF EXISTING AND PROPOSED RIGHTS-OF-WAY AND CORRIDORS

Hess chose the preferred route in an effort to maximize the use of existing utility corridors. Approximately 59% (0.66 miles) of the Project is co-located with existing utility corridors. Refer to Appendix B for maps depicting portions of the Project that is collocated with other utilities.

4.6.11 OTHER EXISTING OR PROPOSED TRANSMISSION FACILITIES

Appendix F contains Hess' 10-Year Plan, which was filed with the Commission on June 30, 2014 (Case No. PU-14-508). This plan contains details regarding existing and planned Hess assets.

SECTION 5: MITIGATIVE MEASURES

5.1 LOCATION

The selection of the Corridor was a multi-disciplinary effort, which included socioeconomic, environmental, logistics, engineering, and financial considerations. The Corridor described in this application meets the siting criteria, and provides Hess with the opportunity to utilize existing assets, and minimize landowner and environmental impacts.

Landowner considerations also factored into the Corridor selection. The proposed Corridor limits the number of potentially affected landowners while providing potential routing opportunities that will further minimize individual impacts to current land practices. All affected landowners will be compensated for Project impacts through negotiated easement agreements and settlements for seasonal crop losses.

The proposed Corridor selection was also influenced by environmental studies that suggested the area lacked sensitive features such as critical wildlife habitat, major wetlands or waterbodies, or other unique environmental features. The proposed Corridor will allow routing options that will further minimize waterbody crossings and potentially avoid all the wetland crossings entirely. In addition to these routing considerations, compliance with environmental permits procured for the Project will effectively mitigate the impacts of construction along with the final approved route. Standard pipeline construction techniques will involve temporary impacts, but long-term or permanent impacts will be avoided through implementation of modern construction techniques, adherence to permit requirements, and avoidance of sensitive features identified during routing studies.

Hess and its affiliates own and operate other assets in the region. Planning and development of these assets are conducted in a manner that maximizes the benefits to the region's resources. The proposed Corridor and route will allow Hess to draw upon existing pipeline and facility assets in the region.

5.2 CONSTRUCTION

The proposed construction of the Project will be conducted in an orderly sequence designed to complete the Project in the minimum amount of time required to safely prepare the site, install the pipeline and restore the areas disturbed by construction.

Construction is estimated to require a minimum of three (3) months to complete. Construction techniques will be employed that minimize the area of ground disturbance, off-site deposition of sediments, and long-term impacts to agricultural productivity. Construction activities shall conform to all applicable permit stipulations; these requirements are mandated by the agency and implemented by the project sponsor for minimizing impacts to the environment.

Restoration will immediately follow pipeline construction. Final grading will restore the original contours of the land. Disturbed areas will be prepared for re-seeding and restoration will be coordinated to meet landowner specifications.

5.3 OPERATION

Once put into service, the Project will operate continuously, delivering crude oil from the RTF to the ETP facility. Normal pipeline operations are imperceptible to the public, as they are silent, buried and therefore not visible, and require only minimal aboveground activity. Standard operating procedures will conform to applicable DOT requirements, which include regular pipeline monitoring and periodic inspection. Additionally, routine maintenance of the ROW will likely be required to remain in compliance.

SECTION 6: LIST OF PREPARERS

William McCarthy, C.W.B.
Senior Environmental Compliance Analyst
E3 Environmental, LLC, 871 West Jefferson Avenue, St. Paul, MN 55102

M.S. Wildlife Biology, University of Minnesota – Twin Cities; and B.S. Wildlife Biology, Michigan State University. Mr. McCarthy is an environmental compliance analyst with 20 years of environmental consulting experience working with various energy assets and regulatory agencies. As a compliance analyst, he has managed the environmental requirements for facility siting, pipeline routing, federal licensing and various federal, state and local permits. Mr. McCarthy is a certified wildlife biologist, and in this role conducts and coordinates field studies, agency consultations, mitigation and avoidance plans.

Katie Schmidt, EIT
Environmental Engineer and Senior Consultant
E3 Environmental, LLC, 871 West Jefferson Avenue, St. Paul, MN 55102

B.S. Civil Engineering with an emphasis in Environmental Engineering-Iowa State University. Ms. Schmidt is a Senior Environmental Consultant with ten years of experience working with various energy assets and regulatory agencies. As a consultant, she has managed multiple pipeline projects supporting clients through the construction permitting and siting processes, which included coordination with various federal, state and local agencies.

Jon Knudsen
Wildlife Biologist
E3 Environmental, LLC, 871 Jefferson Avenue, St. Paul, MN 55102

M.S. Biology, Idaho State University – Pocatello, ID; and B.S. Zoology, University of Wisconsin – Madison, WI. Mr. Knudsen has 10 years of environmental consulting and biological monitoring experience, which includes horizontal project management of oil, gas, wind, and mining projects in Colorado, Wyoming, Montana, and North Dakota. His expertise includes surveying sensitive species, writing technical reports, and consulting with regulatory agencies to ensure clients are in compliance with associated rules and regulations. In addition, Mr. Knudsen specializes in training energy development companies on wildlife-related issues, including the Endangered Species Act and Migratory Bird Treaty Act.

Garrett Knudsen, RPA
Senior Cultural Resource Specialist
E3 Environmental, LLC, 871 Jefferson Avenue, St. Paul, MN 55102

Ph. D. (candidate), Faculty of Archaeology and Anthropology, University of Cambridge, M.A. Anthropology, Idaho State University – Pocatello, ID; and B.S. Anthropology and Zoology, University of Wisconsin – Madison, WI. Mr. Knudsen is a Secretary of Interior qualified archaeologist with over 15 years of experience in cultural resource management, heritage preservation and environmental compliance for private and public clients in the transportation, energy and mining industries. Mr. Knudsen's regions of expertise include greater western North America; Midwest, Great Plains, Southwest, California, Texas, Great Basin, Plateau, Northwest Coast, and Alaska. He is also a specialist in archaeological landscapes, remote sensing, human skeletal remains and predictive models.

Tyler Danielson
GIS Analyst
E3 Environmental, LLC, 871 Jefferson Avenue, St. Paul, MN 55102

M.S. in Geographic Information Science with a concentration in Natural Resource Management, Saint Mary's University of Minnesota; B.S. Natural Resource Management, University of Wisconsin - Stevens Point. Mr. Danielson has 6 years of professional experience analyzing GIS data to identify spatial relationships and display the results of analyses via maps, graphs and tables. He excels at data creation and manipulation, database management, advanced spatial analysis, scripting and advanced cartography.

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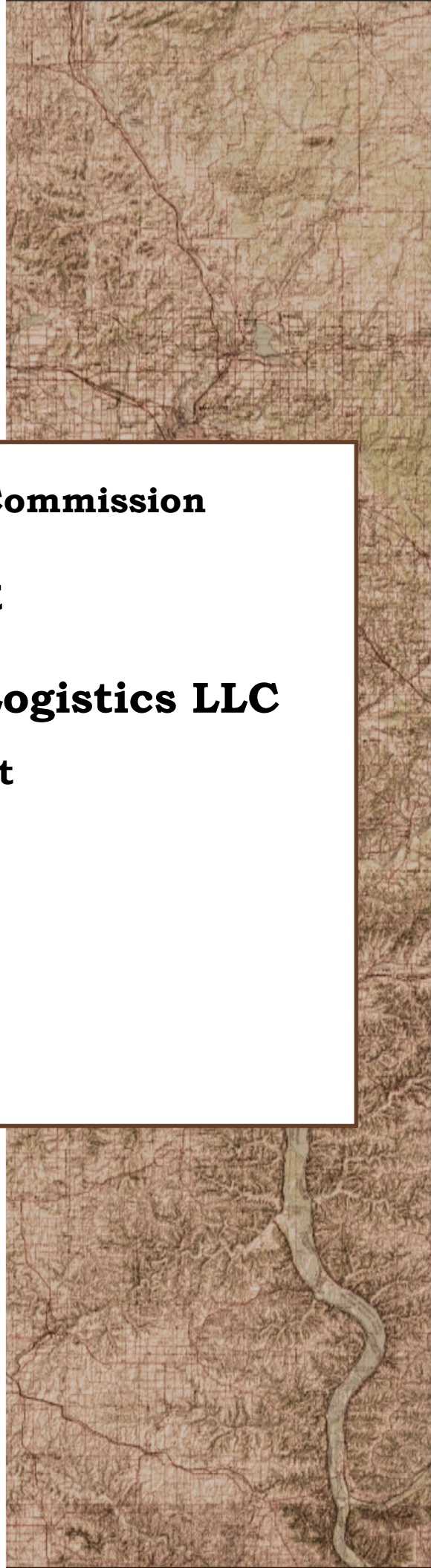

North Dakota Public Service Commission

Route Permit

Hess North Dakota Export Logistics LLC

ETP Pipeline Project

Prepared by:
E3 Environmental, LLC

May 2016

HESS

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APPENDICES

INTRODUCTION

Hess North Dakota Export Logistics LLC (Hess), a Delaware limited liability company, owns the Ramberg Truck Facility (RTF) and other terminal assets that support Hess Corporation's production operations in the Bakken, North Dakota. Hess Corporation operates the RTF through a series of service agreements with Hess Infrastructure Partners LP (HIP), its midstream energy joint venture. Hess is proposing the new Energy Transfer Partners (ETP) Pipeline Project (Project), which would be located in Williams County, North Dakota. The Project will connect the RTF to the ETP facility. The mainline would originate at the existing RTF and extend southeast to terminate at the new ETP, which is located approximately 7 miles south of Tioga, ND. The Project scope includes a new 12-inch diameter crude oil pipeline totaling approximately 1.1 miles in length. Refer to the maps in Appendix B for an overview of the Project. Hess submits to the North Dakota Public Service Commission (PSC or Commission) a single consolidated application for a Certificate of Corridor Compatibility and Route Permit for the Project.

The application provides the requisite information as stipulated by:

- North Dakota Century Code, Energy Conversion and Transmission Facility Siting Act, Section 49-22-08.1; and,
- North Dakota Administrative Code, Chapter 69-06-05, Transmission Facility Permit.

SECTION 1: DESCRIPTION

1.1 TYPE OF TRANSMISSION FACILITY

The Project will result in a new crude oil transmission pipeline. The steel pipeline will meet U.S. Department of Transportation (DOT) regulations, specifically the design criteria outlined in 49 C.F.R. part 195 subpart C. The Project will be constructed per 49 C.F.R. part 195 subpart D, and operated and maintained per 49 C.F.R. part 195 subpart F.

1.2 PURPOSE OF TRANSMISSION FACILITY

The purpose of the Project is to transport crude oil from the RTF to the ETP Facility. From the ETP facility, the product will be transported via interconnecting pipelines for distribution to refineries across the United States. Hess estimates the Project will cost approximately $4.5 million to develop.

1.3 LENGTH, SIZE AND DESIGN OF PIPELINE FACILITY

1.3.1 LENGTH OF FACILITY

The Project is approximately 1.1 miles in length.

1.3.2 PIPE SIZE

The Project pipeline specifications are detailed below:

- 12-inch diameter steel pipe
- 0.375-inch line pipe wall thickness, 0.500-inch bore pipe wall thickness

1.3.3 OPERATING PRESSURE AND THROUGHPUT

The Project has been designed with the following design parameters listed below:

- Normal Operating Pressure: 100 pounds per square inch gauge (psig)
- Maximum Operating Pressure: 1,184 psig
- Normal Throughput: approximately 50,000 barrels per day (bpd)
- Maximum Throughput: approximately 70,000 bpd
- Maximum Operating Temperature: 100 degrees Fahrenheit

1.4 ABOVEGROUND FACILITIES

All tie-in facilities will be located within the existing facility fence lines. No aboveground structures will be constructed outside of the existing terminals.

1.5 WIDTH OF RIGHT-OF-WAY

The Project will be constructed utilizing a 100-foot construction right-of-way (ROW). Hess will maintain a 50-foot permanent ROW along the entire length of the pipeline.

1.6 LOCATION

The Project will be located in Williams County, North Dakota and result in a transmission pipeline originating at the RTF, and will extend to the northeast to

terminate at the ETP Facility, which is located approximately seven (7) miles south of Tioga, ND. Refer to the Project maps provided in Appendix B.

1.7 PROJECT SCHEDULE

1.7.1 ROUTE PERMIT

Hess seeks a Route Permit on or before August 5, 2016.

1.7.2 CERTIFICATE OF CORRIDOR COMPATIBILITY

Hess seeks a Certificate of Corridor Compatibility on or before August 5, 2016.

1.7.3 RIGHT-OF-WAY ACQUISITION

Right-of-way acquisition is 100% complete.

1.7.4 CONSTRUCTION SCHEDULE

Hess has scheduled construction activities to commence during the third quarter of 2016. The construction activities will take approximately three (3) months to complete. Commissioning and restoration activities will commence immediately after construction is complete.

1.7.5 ADDITIONAL PROJECT PERMITS OR AUTHORIZATIONS

The Project will be constructed in compliance with applicable federal, state and local laws, regulations or plans. Hess will obtain necessary permits or approvals for the construction and operation of the Project.

SECTION 2: ROUTE ANALYSIS AND ENVIRONMENTAL STUDIES

2.1 PIPELINE ROUTE

Hess has conducted a thorough analysis of the Project Corridor as reported in the Application for a Certificate of Corridor Compatibility. This analysis was a broad based study of the proposed Corridor (a one-mile corridor centered upon a proposed route). The purpose of this analysis is to confirm the Corridor is suitable and will cause minimal environmental impacts, thus conforming to the PSC siting criteria.

In conjunction with these efforts, Hess studied routing alternatives and developed the Project alignment (Route). Hess chose this Route to meet landowner requests and to minimize impacts to environmental features. The Route meets the Project's objectives while conforming to the PSC's transmission route siting requirements. In support of Hess' route selection, desktop studies were refined and augmented with field studies of the Route.

Trained natural and cultural resource specialists conducted field studies in March 2016. The purpose of the 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 survey corridor, and (2) to provide the baseline field data necessary to prescribe alternative routing or mitigation as necessary to minimize environmental impacts. The Survey Corridor for fieldwork was 250-feet in width and was centered upon the Route. The results of these field surveys are summarized in the following sections, the Natural Resources Report located in Appendix D and the Cultural Resource Report in Appendix E. Per guidance from the NDSHPO only the Cultural Resources Report can be found in Appendix E.

2.2 ROUTE ALTERNATIVES

Construction of the Project will provide firm, reliable service for an average 50,000 bpd from the RTF to the ETP Facility. From the ETP Facility, the product will be transported to refineries across the United States. Hess identified and evaluated several project alternatives; however, none of these alternatives effectively satisfied the Project objective. These alternatives included:

- No Action Alternative; and
- Trucking Alternative.

No Action Alternative:

This alternative would leave the region constrained by limited transport capacity for safe and reliable transmission of crude oil products to markets. A no action alternative could result in the curtailment of crude oil production. For these reasons, Hess rejected a no action alternative.

Trucking Alternative:

This alternative was reviewed and eliminated due to the volume of crude oil to be transported. The normal daily throughput of the Project will be approximately 50,000 barrels or 2,100,000 gallons of crude oil. The average load for a truck carrying crude oil is approximately 178 barrels (approximately 7,500 gallons) per truck. Thus, it would require 281 trucks per day, an average of twelve (12) trucks every hour for twenty-four (24) hours a day to transport the volume of product the pipeline would transport to the ETP facility. This level of truck activity is not logistically feasible as it would cause significant amounts of heavy vehicle traffic for area residents, as well as additional wear and tear on the infrastructure. Disruption in the trucking capacity due to seasonal load restrictions on roads, inclement weather or road repairs would cause a delay in delivering this valuable resource to market. This alternative is not desirable; therefore, Hess rejected a *Trucking Alternative*.

2.3 ENVIRONMENTAL SURVEY

Field surveys were conducted in March of 2016. The Survey Corridor was a 250-foot corridor centered upon the proposed Route. The Survey Corridor is depicted on the maps in Appendix B.

2.3.1 NOXIOUS WEEDS

"Noxious weed" is a general term used to describe fast-spreading, non-native plant species in a given area. Noxious weeds have adverse ecological and economic impacts due to their ability to outcompete native plant species for habitat and resources. No noxious weeds were identified within the Survey Corridor during field surveys. Refer to Appendix D for the Natural Resource Report and Section 5 for proposed mitigation procedures that will be implemented in the event that noxious weeds are encountered during construction activities.

2.3.2 TREE/SAPLING/SHRUB SURVEY

During the field surveys, crews performed a detailed tree/shrub inventory. This inventory recorded the pre-construction status of these resources, which will form the baseline for restoration and mitigation reconciliation. Based on this effort, ten (10) tree and shrub areas were located within the Survey Corridor. Of these, only three (3) areas are crossed by the Route. See Appendix D for the complete Natural Resources Report and Section 5 for planned mitigation measures.

2.3.3 WETLAND AND WATERBODIES SURVEY

The Survey Corridor was inventoried for wetland and waterbody features (*i.e.*, creek, pond, streams, rivers). Field crews identified features, characterized these features as a wetland or waterbody and recorded feature boundaries relative to the proposed Route to facilitate avoidance mitigation where practicable. Appendix D contains the Natural Resources Report, which outlines the results of these field studies.

2.3.3.1 WETLAND SURVEY

No wetland features were identified during the field surveys. Refer to Appendix D for the Natural Resources Report, and Section 5 of this document for mitigation measures.

2.3.3.2 WATERBODIES SURVEY

Field surveys identified one (1) stream within the Survey Corridor. This stream is crossed by the Route. Refer to Appendix B for the mapped location of this feature, Appendix D for the Natural Resources Report and Section 5 for mitigation measures.

2.3.4 WILDLIFE INVENTORY

Approximately 160 wildlife species are resident or seasonal visitors to the Corridor. These include common mammals (*e.g.*, white-tailed deer, mule deer, raccoon and pronghorn antelope); various songbirds (*e.g.*, western meadowlark, LeConte's sparrow, horned lark); raptors (*e.g.*, bald eagle, golden eagle, red-tailed hawk, rough-legged hawk) and numerous other fauna. The Survey Corridor was inventoried for sensitive species and their critical habitat. No threatened or endangered species or their critical habitats were observed by field biologists. Appendix D contains the Natural Resources Report, which outlines the results of these field studies.

2.3.4.1 FEDERALLY PROTECTED SPECIES SURVEY

Under authority of the Endangered Species Act (ESA), the U.S. Fish and Wildlife Service (USFWS) and the Fisheries Service division of the National Oceanic and Atmospheric Administration (NOAA) have identified and maintained a list of species and critical habitats that have been afforded protection under the ESA. The ESA also provides a program for the conservation of threatened and endangered plants and animals and the habitats in which they live.

On March 31, 2016, E3 Environmental, LLC (E3), on behalf of Hess, requested a USFWS review of the Project, requesting information relating to the presence or absence of threatened and endangered species within the Corridor. A response from the USFWS is pending. Refer to Appendix C for agency correspondence.

Hess commissioned field studies to confirm the presence or absence of these species and/or their critical habitats along the proposed Route. The results of this assessment are provided below. Refer to Appendix D for the Natural Resources Report, which outlines the results of these field studies, and Section 5 for proposed mitigation measures.

Whooping crane: The Aransas Wood Buffalo Population of Whooping Cranes engages in semi-annual migration through North Dakota. This flock breeds in the Wood Buffalo National Park in Alberta and Northwest Territories, Canada, and winters in the Aransas National Wildlife Refuge in Texas. North Dakota provides migratory habitat for the species, providing roosting and feeding opportunities during migration. During migration, the species is most closely associated with larger wetland complexes for roosting habitat, typically using adjacent uplands to forage. The Project is located

within the migratory corridor for the whooping crane and suitable foraging habitat (*i.e.*, cultivated cropland and wetlands) was observed within the Survey Corridor. The proposed Project may affect but is not likely to affect the whooping crane due to the planned commencement of construction in the 3rd quarter of 2016.

Least tern: Suitable shoreline habitat for breeding and nesting terns does not occur in the Survey Corridor. Least terns may transition through the Project area during migration; however, impacts to the terns are not anticipated.

Pallid sturgeon: The preferred habitat of the pallid sturgeon does not occur in the Survey Corridor. Therefore, impacts to the species are not anticipated.

Gray wolf: Potentially suitable habitat for the gray wolf does occur in the Survey Corridor, however, potential habitat is not expansive and the activities associated with construction and later operations will likely serve as a deterrent to this species. The proposed Project is not likely to affect the gray wolf.

Rufa Red knot: Suitable habitat is not present within the Survey Corridor. Adverse impacts to the red knot are not anticipated.

Piping plover: The Survey Corridor does not contain suitable habitat for breeding and nesting. Adverse impacts to the piping plover are not anticipated.

Northern long-eared bat (NLEB): Field efforts identified one tree within the Survey Corridor that could potentially provide suitable habitat for this species. The Project is located outside of the White-Nose Syndrome Zone, as such, tree-removal activities are not restricted. Impacts to the NLEB are not anticipated.

Dakota skipper: Suitable skipper habitat was not identified during field surveys within the Survey Corridor. Impacts to the Dakota skipper are not anticipated.

Bald and Golden Eagle: Field surveys conducted in March of 2016 confirmed suitable habitat is present within the Survey Corridor or within line-of-site of the Survey Corridor. No bald or golden eagle nests were observed during field surveys. Refer to Section 5 for mitigation measures should a bald or golden eagle be observed during construction.

Migratory Birds: Field studies confirmed suitable habitat for migratory birds exists within the Survey Corridor. Potential raptor nests were not observed within 0.5 miles of the Survey Corridor. Section 5 contains mitigation measures to be implemented should migratory birds be encountered during construction.

2.3.4.2 U.S. FISH AND WILDLIFE SERVICE MANAGED LANDS

On March 31, 2016, E3, on behalf of Hess, requested a USFWS review of the Project and information relating to the presence or absence of USFWS managed land within the Survey Corridor. The USFWS response is pending. Refer to Appendix C for a record of this correspondence.

2.3.5 NORTH DAKOTA STATE HISTORIC PRESERVATION OFFICE

The North Dakota State Historic Preservation Office (NDSHPO) is responsible for managing the historic and archaeological resources of the state; and maintains records of all previously recorded cultural resources within the state.

A Class I cultural resources inventory (literature review) was conducted of records from the State Historical Society of North Dakota to identify previously completed cultural resource investigations and recorded cultural resources within the Corridor.

The Class I cultural resources inventory identified one (1) previously recorded cultural resource within the Corridor.

The ensuing Class III cultural resource inventory of the Survey Corridor was completed in March 2016. No new or previously recorded cultural resources were identified within the Survey Corridor.

The Cultural Resources Report was submitted to the NDSHPO on April 6, 2016 requesting concurrence with the recommendation of *No Significant Sites Affected* for the Project. Concurrence was received on April 8, 2016. Refer to Appendix C for documentation of agency consultations and Appendix E for the Cultural Resources Report.

SECTION 3: ANALYSIS OF NEED BASED ON PRESENT AND PROJECTED DEMAND, INCLUDING SYSTEM STUDIES

The Project will transport product from formations in the Williston Basin. The development of hydrocarbon production in the Williston Basin has increased significantly in recent years due to advancements in deep horizontal directional drilling techniques and subsequent oil extraction in the Bakken and Three Forks Shale formations. Studies conducted by the North Dakota Department of Mineral Resources and the USGS in 2010 estimated mean undiscovered volumes of 3.65 billion barrels of recoverable crude oil reserves may be available in North Dakota's deep shale formations. Information from the Department of Mineral Resources indicates that oil production has increased dramatically over the past five years. In January of 2011, North Dakota produced 342,923 barrels of oil per day. That figure has increased to 34,785,094 barrels per day in January of 2016.

A major constraint in transporting hydrocarbons from North Dakota to 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 crude oil, natural gas and natural gas liquids. 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.

Construction of the Project will provide firm, reliable transport of an average 50,000 bpd of crude oil between the RTF and the ETP Facility. From the ETP, the product will be transported via interconnecting pipelines for distribution to refineries in mid-continent and gulf coast area refineries.

SECTION 4: SITING CRITERIA ANALYSIS

4.1 FACTORS TO BE CONSIDERED IN EVALUATING APPLICATIONS AND DESIGNATIONS OF SITES, CORRIDORS AND ROUTES (NDCC 49-22-09)

4.1.1 AVAILABLE RESEARCH AND INVESTIGATION RELATING TO THE EFFECTS OF THE LOCATION, CONSTRUCTION AND OPERATION OF THE PROPOSED FACILITY ON PUBLIC HEALTH AND WELFARE, NATURAL RESOURCES AND THE ENVIRONMENT

The Project is designed to provide delivery throughput from the RTF to the ETP Facility for distribution to market hubs/centers and markets nationwide. Hess Corporation operates the RTF pursuant to services agreements with HIP, the indirect owner of the RTF. As such, all routing was anchored from this location to potential destinations. The ETP Facility was chosen due to the capacity of product being transported and the access to more markets.

Route planning between the RTF and the ETP Facility identified and evaluated several options for routing this Project. These studies were designed to define a preferred route that achieves project objectives, is technologically and economically feasible to construct, and minimizes impacts to landowners and the environment. The key logistical considerations included the location of the RTF, identification of existing utility corridors for collocation, and acquisition of pipeline ROW from area landowners.

Field studies were conducted to identify environmental, biological and cultural resources along the Route; the results of this effort are discussed in Section 2 of this document. The full Natural Resources Report is provided in Appendix D. Refer to Appendix E for the Cultural Resources Report. The sections below discuss possible effects on the public health and welfare.

4.1.2 THE EFFECTS OF NEW ENERGY CONVERSION AND TRANSMISSION TECHNOLOGIES AND SYSTEMS DESIGNED TO MINIMIZE ADVERSE ENVIRONMENTAL EFFECTS

The Project does not include energy conversion or transmission technologies/systems specifically designed to minimize adverse environmental impacts.

The Project will be constructed in compliance with environmental permits; the conditions of these permits are designed to minimize adverse environmental impacts. Refer to Section 5 of this document for a full description of the mitigation measures.

4.1.3 ADVERSE DIRECT AND INDIRECT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED SHOULD THE PROPOSED SITE OR ROUTE BE DESIGNATED

Unavoidable adverse direct and indirect environmental effects will be temporary and minimized through compliance with environmental permits. The potential impacts to resources including vegetation, wildlife, agricultural operations, transportation and

noise levels are discussed in the following sections. Hess will mitigate these temporary impacts to the maximum extent possible.

The Project will be constructed in compliance with applicable environmental permits; the conditions of these permits are designed to minimize adverse environmental impacts. Refer to Section 5 for a full description of the mitigative measures planned to minimize impacts resulting from the Project's location, construction and operation.

4.1.4 ALTERNATIVES TO THE PROPOSED CORRIDOR OR ROUTE WHICH ARE DEVELOPED DURING THE HEARING PROCESS AND WHICH MINIMIZE ADVERSE EFFECTS

Hess will fully participate in the hearing process and will address any alternatives developed during the hearing process, as applicable.

4.1.5 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF NATURAL RESOURCES SHOULD THE PROPOSED CORRIDOR AND ROUTE BE DESIGNATED

Hess is not aware of any irreversible or irretrievable commitments of natural resources that will result from the requested approvals.

4.1.6 DIRECT AND INDIRECT ECONOMIC IMPACTS OF THE PROPOSED FACILITY

Hess will invest approximately $4.5 million in North Dakota to develop this Project, generating additional tax revenues annually. Once constructed and in-service, the continued costs of maintenance and operation of the Project are minimal.

4.1.7 EXISTING PLANS OF THE STATE, LOCAL GOVERNMENT AND PRIVATE ENTITIES FOR OTHER DEVELOPMENTS AT OR IN THE VICINITY OF THE PROPOSED ROUTE

Hess, to the best of its knowledge, is not aware of existing plans of the state, local government and/or private entities for development at or in the vicinity of the proposed route.

4.1.8 THE EFFECT OF THE PROPOSED ROUTE ON EXISTING SCENIC AREAS, HISTORIC SITES AND STRUCTURES AND PALEONTOLOGICAL OR ARCHAEOLOGICAL SITES:

Hess commissioned Class I and Class III cultural resource inventories. No cultural resources were identified within the Survey Corridor. All related agency consultations can be found in Appendix C, and supporting documentation of field studies can be found in Appendix E.

Project-specific consultation with various federal, state and local agencies did not identify any scenic areas along the Route. Refer to Appendix C for a record of these consultations.

4.1.9 THE EFFECT OF THE PROPOSED ROUTE ON AREAS WHICH ARE UNIQUE BECAUSE OF BIOLOGICAL WEALTH OR BECAUSE THEY ARE HABITATS FOR RARE AND ENDANGERED SPECIES

The proposed Route is not anticipated to result in permanent impacts to the environment. See Section 2 for a comprehensive discussion of Hess' effort to identify sensitive environmental resources along the proposed Route and Section 5 for a comprehensive discussion of proposed mitigation. Hess has worked with agencies to develop a route that avoids or minimizes environmental impacts. Provided the mitigation plans are fully implemented and environmental permit conditions are executed, the Project will not result in any impact to listed or sensitive species or their habitats. See Appendix C for complete federal and state agency consultations. Detailed survey results can be found in Appendix D.

4.1.10 PROBLEMS RAISED BY FEDERAL AGENCIES, OTHER STATE AGENCIES AND LOCAL ENTITIES

Hess provided Project specific consultations to various federal, state and local agencies. Through this consultation process, these agencies had the opportunity to identify possible sensitive environmental resources along the Route and any related agency concerns. A summary of these concerns are below. A complete record of these communications can be found in Appendix C; mitigation measures to address these concerns are discussed in Section 5 of this document.

On April 11, 2016, the North Dakota Parks and Recreation Department (NDPRD) provided comments to Hess recommending that Hess revegetate impacted areas with native species. The agency expressed no other concerns. Hess will revegetate disturbed areas to landowner specifications. In the absence of a landowner request, Hess will use a native seed mix.

On April 11, 2016, the North Dakota State Water Commission provided comments to Hess regarding the proper disposal of all waste material associated with the project and that it is not to be placed in any identified floodway. The agency expressed no other concerns. Hess will dispose of all waste material properly.

4.2 EXCLUSION AREAS (NDAC 69-06-08-02(1))

Exclusion areas are geographical areas that must be excluded in the consideration of a route for a transmission facility. When evaluating the extent of an exclusion area an appropriate buffer was considered to protect the integrity of the area, this buffer is dependent upon the resource. A survey corridor may contain exclusion areas; however, exclusion areas may not encompass more than 50% of the survey corridor width at any point, unless there is no reasonable alternative. The following table and text identify and discuss exclusion areas within the Survey Corridor.

Exclusion Area	Within Project Survey Corridor	Crossed by Route	50% or More of Survey Corridor	Section Providing Discussion of Resource
Federal				
National Parks or Memorial Parks	No	No	No	4.2.1
Historic Sites or Landmarks	No	No	No	2.3.5, 4.2.1
Natural Landmarks or Monuments	No	No	No	4.2.1
Wilderness Areas	No	No	No	4.2.1
State				
Historic Sites, Monuments, or Historical Markers;	No	No	No	4.2.2
Archaeological Sites	No	No	No	2.3.5, 4.2.2
Parks	No	No	No	4.2.2
Nature Preserves	No	No	No	4.2.2
County				
Parks	No	No	No	4.2.3
Recreation Areas	No	No	No	4.2.3
Municipal Parks	No	No	No	4.2.3
Other				
Areas Critical to the Life Stages of Threatened or Endangered Animal or Plant Species	No	No	No	Section 2.3, 4.2.4, Section 5
Areas where Animal or Plant Species that are Unique or Rare to this State would be Irreversibly Damaged	No	No	No	4.2.5
Areas within 1,200 feet of a geographic center of an intercontinental ballistic missile (ICBM) launch or launch control facility.	No	No	No	4.2.6
Areas within 30 feet on either side of a direct line between (ICBM) launch or launch control facilities to avoid microwave interference.	No	No	No	4.2.7

4.2.1 FEDERAL RESOURCES

Hess has initiated consultations with federal and state agencies and conducted a comprehensive review of published information. Hess confirmed no national parks,

memorial parks, historic sites or landmarks, natural landmarks, historic sites, monuments, or wilderness areas within the Survey Corridor.

4.2.2 STATE RESOURCES

Hess has initiated consultations with federal and state agencies and conducted a comprehensive review of published information. Hess confirmed the absence of state parks, monuments, historical markers, archaeological sites or nature preserves within the Survey Corridor.

4.2.3 COUNTY RESOURCES

Hess has confirmed through a combination of agency coordination, review of publicly available information, and field studies that no county parks, recreation areas, municipal parks or parks owned by other subdivisions of government bodies are located within the Survey Corridor. Refer to Appendix C for documentation of agency correspondence.

4.2.4 OTHER EXCLUSION AREAS

4.2.4.1 AREAS CRITICAL TO THE LIFE STAGES OF THREATENED AND ENDANGERED ANIMAL OR PLANT SPECIES

Hess commissioned natural resource surveys of the proposed Route. The scope of the surveys included documentation for the presence or absence of federally listed and state listed species of concern, or evidence of suitable habitats for these species. Emphasis was placed on those species identified through project consultations for the corridor analysis that agencies indicated had the potential to occur within the Survey Corridor and, therefore, the Route. The results of these field efforts are detailed in Section 2.3 and planned mitigative measures are discussed in Section 5 of this document. Refer to Appendix D for the complete Natural Resources Report.

4.2.4.2 AREAS WHERE ANIMAL OR PLANT SPECIES THAT ARE UNIQUE OR RARE TO THIS STATE WOULD BE IRREVERSIBLY DAMAGED

Based upon agency consultations and subsequent field surveys, the Project will not result in irreversible impacts that would be detrimental to sensitive plant and animal species or their habitats. The implementation of the proposed mitigation plans and full compliance with environmental permits will fully mitigate the potential for irreversible damage.

4.2.4.3 AREAS WITHIN 1,200 FEET OF THE GEOGRAPHIC CENTER OF AN ICBM LAUNCH OR LAUNCH CONTROL FACILITY

Upon review of tabular location data and aerial imagery compiled by the University of Wyoming, there are no areas within 1,200 feet of the geographic center of an Intercontinental Ballistic Missile (ICBM) launch or launch control facility located within the Survey Corridor or crossed by the Route.

4.2.4.4 AREAS WITHIN THIRTY (30) FEET ON EITHER SIDE OF A DIRECT LINE BETWEEN ICBM LAUNCH OR LAUNCH CONTROL FACILITIES TO AVOID MICROWAVE INTERFERENCE

A review was completed of data compiled by the University of Wyoming that contained tabular location data and aerial imagery. This review confirmed the absence of areas within thirty (30) feet on either side of a direct line between ICBM launch, or launch control facilities within the Survey Corridor, or crossed by the Route.

4.3 AVOIDANCE AREAS (NDAC 69-06-08-02(2))

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 survey corridor may contain avoidance areas; however, avoidance areas may not encompass more than 50% of the survey corridor width at any point, unless there is no reasonable alternative. The following table and text identify and discuss avoidance areas within the Survey Corridor.

Avoidance Area	Within Survey Corridor	Crossed by Route	50% or more within Survey Corridor	Section Providing Discussion
Federal				**4.3.1**
Historic Districts	No	No	No	
Wildlife Areas	No	No	No	
Wild, Scenic or Recreational Rivers	No	No	No	
Wildlife Refuges	No	No	No	
Grasslands	No	No	No	
State				**4.3.2**
Wild, Scenic or Recreational Rivers	No	No	No	
Game Refuges or Game Management Areas	No	No	No	
Forests or Forest Management Lands	No	No	No	
Grasslands	No	No	No	
Other				**4.3.3**
Historical Resources not specifically designated as Exclusion or Avoidance Areas	No	No	No	4.3.3.1
Areas of Known Geologic Instability	No	No	No	4.3.3.2
Areas within 500 Feet of a Residence, School, or Place of Business	No	No	No	4.3.3.3
Reservoirs and Municipal Water Supplies	No	No	No	4.3.3.4
Water Sources for Organized Rural Water Districts	No	No	No	4.3.3.5
Irrigated Land (not applicable to underground facilities)	NA	NA	NA	4.3.3.6

Avoidance Area	Within Survey Corridor	Crossed by Route	50% or more within Survey Corridor	Section Providing Discussion
Areas of Recreational Significance which are not Designated as Exclusion Areas	No	No	No	4.3.3.7

4.3.1 FEDERAL RESOURCES

Hess conducted agency consultations, a comprehensive review of publicly available information, and field studies of the Survey Corridor. This review indicated the absence of designated or registered historic districts, refuges, grasslands, and wild, scenic or recreational rivers in the Survey Corridor.

4.3.2 STATE RESOURCES

Hess conducted a review of publicly available resources and concluded no designated or registered state wild, scenic or recreational rivers, game refuges, game management areas, management areas, forests, forest management lands, or grasslands are crossed by the Survey Corridor.

4.3.3 OTHER AVOIDANCE AREAS

4.3.3.1 HISTORICAL RESOURCES NOT SPECIFICALLY DESIGNATED AS EXCLUSION OR AVOIDANCE AREAS

Hess conducted a review of publicly available information, initiated project specific agency consultations and augmented the agency review with field studies. Through these efforts, Hess has confirmed the absence of historical resources that are not specifically designated as exclusion or avoidance areas within the Survey Corridor. Refer to Appendix C for documentation of agency consultations and Appendix E for the Cultural Resources Report.

4.3.3.2 AREAS OF KNOWN GEOLOGIC INSTABILITY

Geologic instability generally refers to surface geology and areas where landslides have occurred. The North Dakota Geological Survey (NDGS) landslide mapping data was consulted for information regarding areas of landslides. Review of the landslide deposit data from the North Dakota Geological Survey indicated the absence of deposits within the Survey Corridor.

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 a review of PSC abandoned mine data, no mining activities are located within the Survey Corridor.

4.3.3.3 AREAS WITHIN 500 FEET OF A RESIDENCE, SCHOOL OR PLACE OF BUSINESS

Aerial photography was utilized to identify structures located within 500 feet of the proposed pipeline alignment. Hess confirmed the absence of potentially occupied structures within 500 feet of the Route.

4.3.3.4 RESERVOIRS AND MUNICIPAL WATER SUPPLIES

No reservoirs or municipal water supplies were identified within the Survey Corridor.

4.3.3.5 WATER SOURCES FOR ORGANIZED RURAL WATER DISTRICTS

The Williams County Water Resource Board (WCWRB) has water resources located throughout Williams County, and as such, the Corridor is wholly within the WCWRB. However, no water sources are crossed by the Route, nor were any identified within the Survey Corridor.

4.3.3.6 IRRIGATED LAND

This criterion does not apply to underground transmission facilities; as such, it is not applicable to this project.

4.3.3.7 AREAS OF RECREATIONAL SIGNIFICANCE WHICH ARE NOT DESIGNATED AS EXCLUSION AREAS

Hess has confirmed the Route does not traverse areas of recreational significance.

4.4 SELECTION CRITERIA (NDAC 69-06-08-02(3))

The selection criteria require assessment of the environmental impacts and alterations to land use that may result from the siting of the Project. Through this process, Hess believes the Project will successfully avoid or minimize these effects to the maximum extent practicable.

4.4.1 AGRICULTURAL IMPACTS

The Project will temporarily affect approximately 35 acres of private land in North Dakota; of which approximately 27 acres are located on privately owned lands used for agriculture and utilized by family farms and ranches.

Agricultural Production: Once construction is complete, the land will be restored to its pre-construction contours and land use. Hess will provide settlements to landowners for crop loss resulting from Project construction.

Family Farms and Ranches: Upon the completion of construction, the land will be restored to its pre-construction contours and land use. Hess has negotiated 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 C.F.R. 195. Hess works with local landowners and county officials to ensure pipeline markers are located where required but also in an acceptable location for these parties. These markers are to be placed in

full view so they are not accidentally damaged or cause damage to landowner or county equipment.

Lands Suitable for Irrigation: This section is not applicable to buried pipelines (NDAC 69-06-08-02(2)(h)).

Surface Drainage: Standard construction techniques will be employed and significant modifications to surface drainage patterns are not anticipated. 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 shall be restored to its original contours, vegetation shall be reestablished and impacts shall be minimal and temporary. Best management practices (BMPs) will be implemented to provide proper erosion and sediment control. Permanent impacts to surface drainage are not anticipated but will be minimized to the maximum extent possible.

Ground Water: Well data, recorded by the State Water Commission, has been reviewed for the Survey Corridor. Well data indicates groundwater in upland areas is located more than twenty (20) feet below the surface. Typical subsurface excavations associated with the Project will not extend to more than ten (10) feet below the ground surface. At that depth, the Project will not intersect the groundwater table, nor will the Project alter recharge rates or the infiltration, permeability, or percolation of water into the groundwater reservoir. Additionally, construction will not affect the lateral movement and/or groundwater quality.

4.4.2 THE IMPACTS UPON OTHER RESOURCES

Noise-Sensitive Land Uses: The Project is located in a rural setting, effectively isolating it from the majority of sensitive receptors. Construction of the Project will temporarily affect the local noise environment. The ambient sound level of a region is defined by the total noise generated within the specific environment and is usually comprised of sounds emanating from natural and artificial sources. Construction of the Project will be conducted during typical working hours and is expected to cause temporary increases in ambient sound within and adjacent to the Project. The use of heavy equipment or trucks will be the primary noise source 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.

Visual Effect on Adjacent Areas: Tie-in facilities will be placed within the boundaries of existing operating terminals. As such, impacts to the view shed are not anticipated.

Extractive and Storage Resources: This Project will not affect any extractive or storage resources.

Wetlands, Woodlands and Wooded Areas: Hess commissioned field surveys to identify and record the locations of these resources along the proposed Route. Refer to

Section 2 for a comprehensive discussion of the field studies results, Appendix C for copies of related agency correspondence, and Section 5 for proposed mitigation.

Radio and Television Reception, and other Communication or Electronic Control Facilities: Hess does not anticipate the Project will affect radio, television, or other electronic control facilities.

Human Health and Safety: Hess' Environmental, Health and Safety Policy meets federal and state laws, rules and regulations, and is enforced equally with respect to both Hess and its contractors. The implementation of this policy promotes a safe and healthy workplace during construction and operation of all Hess' assets. In addition, the operation of the pipeline will be monitored in accordance with DOT regulations.

Animal Health and Safety: The wildlife currently inhabiting the Survey Corridor is common and is generally mobile. The local wildlife inhabitants will not be permanently displaced by the Project and no measurable impact to the viability of these populations will occur. Hess does not anticipate species of special concern to experience direct impacts due to construction or operation of the Project.

Plant Life: There will be no impacts to plant life associated with the construction or operation of the pipeline. No species of special concern will be impacted by the Project.

4.5 POLICY CRITERIA (NDAC 69-06-08-02.4)

4.5.1 POLICIES AND COMMITMENTS TO LIMIT ENVIRONMENTAL IMPACT

Hess is committed to conducting its business in compliance with all applicable environmental laws and regulations. These laws, regulations and standards are designed to safeguard the environment, human health, wildlife and natural resources. Hess will conduct its activities with the objectives of providing a healthful and safe workplace for its employees and preventing accidents and environmental incidents. All persons and firms providing service to Hess are required to conduct their work in compliance with environmental conditions, permit authorizations and applicable regulations.

4.5.2 LOCATION AND DESIGN

The Project will be located in Williams County, North Dakota originating at the RTF, and will extend to the northeast to terminate at the ETP Facility. Project maps are provided in Appendix B.

The Project will be approximately 1.1 miles in length, constructed of steel and will utilize a 12-inch diameter pipe. The pipe installed will have a line pipe wall thickness of 0.375-inches and bore pipe wall thickness of 0.500-inches denoted as the American Petroleum Institute (API) Code 5L specification X52 pipeline pipe. The maximum operating pressure of the pipeline will be 1,184 psig.

The proposed pipeline will meet U.S. DOT regulations, specifically the design criteria outlined in 49 C.F.R. part 195 subpart C, and will be constructed per 49 C.F.R. part 195 subpart D, and operated and maintained per 49 C.F.R. part 195 subpart F.

4.5.3 TRAINING AND UTILIZATION OF AVAILABLE LABOR IN THIS STATE FOR THE GENERAL AND SPECIALIZED SKILLS REQUIRED

Pipeline construction is a specialized niche construction market. The primary contractor will supply specialized skilled labor. Hess will draw upon the local labor force to supply labor as appropriate. The workforce is anticipated to reach a peak of approximately 150 personnel.

4.5.4 ECONOMIES OF CONSTRUCTION AND OPERATION

Hess will invest approximately $4.5 million in North Dakota to construct the Project. This includes the design and construction of the pipeline as well as the real estate services and easement acquisitions. The greatest economic impacts will be realized during construction which is planned to commence in the third quarter of 2016. Once constructed and in-service, the continued costs of maintenance and operation of the proposed pipeline are minimal.

4.5.5 USE OF CITIZEN COORDINATING COMMITTEES

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

4.5.6 COMMITMENT OF A PORTION OF THE TRANSMITTED PRODUCT FOR USE IN THIS STATE

The Project will interconnect with existing facilities. The products handled, transferred, and shipped at these facilities are currently delivered to markets located inside and outside of the state.

4.5.7 LABOR RELATIONS

Hess maintains positive labor relations with its staff and contract work force and does not anticipate encountering any adverse labor relations on this Project. The labor market in the region is generally supportive of the oil and gas industry.

4.5.8 THE COORDINATION OF FACILITIES

Hess via joint venture owns and operates the RTF; operations will be coordinated by its management.

4.5.9 MONITORING OF IMPACTS

Hess Corporation has established and maintains positive landowner and community relationships throughout the region through its open communication and commitment

to corporate citizenship standards that are based on integrity. Hess Corporation will monitor landowner concerns through its Surface Land Team and the Hess Community Connection program, which is Hess Corporation's own ombudsmen program that takes a proactive approach to requests on the 1,200 miles of pipeline it owns and operates. In a similar manner, Hess Corporation will monitor community concerns and will respond to all reasonable concerns brought to its attention by local community leaders. Hess will select a 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.

4.5.10 UTILIZATION OF EXISTING AND PROPOSED ROW AND CORRIDORS

Hess chose the preferred Project alignment in an effort to maximize the use of existing utility corridors. Approximately 60% (0.66 miles) of the Project is co-located with existing utility corridors. Refer to Appendix B for maps depicting portions of the Project that are collocated with other utilities.

4.5.11 OTHER EXISTING OR PROPOSED TRANSMISSION FACILITIES

Appendix F contains Hess' 10-Year Plan, which was filed with the Commission on June 30, 2014 (Case No. PU-14-508). This Plan contains details regarding existing and planned Hess assets.

SECTION 5: MITIGATIVE MEASURES

5.1 LOCATION

The Project is a new approximately 1.1 mile, crude oil pipeline with a diameter of 12-inches. The pipeline will originate at the RTF, and will extend to the northeast to terminate at the ETP Facility. Refer to the project maps provided in Appendix B.

Trees and shrubs: Hess will comply with the Commission's tree and shrub mitigation specifications. Field surveys included a pre-construction tree and shrub inventory. The clearing or removal of trees or shrubs will be done selectively, in a manner that minimizes the disturbance to woody vegetation and in compliance with the Commission's specifications. The replacement of trees and shrubs will be based upon actual impacts due to construction, shall meet the 2:1 replacement ratio specified, and will be fully documented.

Wetlands and Waterbodies: Hess will minimize impacts to waterbodies by minimizing workspace through these features and by utilizing low-impact crossing methods such as horizontal directional drilling if appropriate. Furthermore, Hess will conduct all jurisdictional crossings in compliance with the U.S. Army Corps of Engineers (USACE) Nationwide Permit #12. Features will be returned to their pre-construction condition and contours.

Whooping crane: The whooping crane is federally listed as an endangered species. It is present in North Dakota on a semi-annual basis during the spring and fall migration between breeding grounds in Wood Buffalo National Park in Alberta and Northwest Territories, Canada, and winter grounds in the Aransas National Wildlife Refuge in the Gulf of Mexico. Field surveys identified potential migratory foraging and roosting habitat in the Survey Corridor.

In North Dakota, the cranes will typically pass through the state during the spring migration occurring March through early June. Construction activities for the Project are scheduled to begin in the third quarter of 2016 (August), which should largely mitigate impacts to this species. Additionally, to mitigate potential impacts to migratory cranes, Hess will suspend heavy equipment operations if whooping cranes are observed within 0.5 miles (line of sight) from active construction activities. Suspended activities will resume in the absence of whooping cranes. See Appendix C for Hess's consultation with the USFWS.

Bald and Golden Eagle: Construction activities will occur outside of the breeding season. No evidence of eagle nesting activities nor suitable habitat was recorded during field studies. In the event nesting activities are observed prior to construction, Hess would initiate notification to appropriate agencies.

Migratory Bird Treaty Act: If Project activities occur within the active breeding season, Hess shall conduct a sweep of the construction right-of-way, prior to clearing activities to identify potential active nesting birds. If an active nest is observed, Hess

shall establish and maintain an exclusion buffer around the nest until the site is no longer active.

Cultural Resources: Hess submitted the Cultural Resources Report to the NDSHPO on April 6, 2016 requesting concurrence with the recommendation of *No Significant Sites Affected* for the Project. Concurrence was received on April 8, 2016. No resources were identified during field surveys. In the event of an unanticipated discovery, the Project's Unanticipated Discovery Plan will be implemented.

Noxious Weeds: Noxious weeds were not identified within the Survey Corridor during field surveys. If noxious weed are identified during construction the areas will be delineated as such. Equipment leaving infested areas will be inspected visually prior to leaving the area. The vehicles and equipment shall be cleaned (*e.g.*, power washed) to remove remaining soils and vegetation prior to entering uninfected tracts.

5.2 CONSTRUCTION

The construction of the proposed pipeline will be conducted in an orderly sequence designed to complete the Project in the minimum amount of time required to safely prepare the site, install the pipeline and restore the areas disturbed by construction.

Construction is estimated to require approximately three (3) months. Construction techniques will be employed to minimize the area of ground disturbance, off site deposition of sediments, and long-term impacts to agricultural productivity. Construction activities shall conform to all applicable permit stipulations; these requirements are mandated by the agency and implemented by the Project sponsor for minimizing impacts to the environment.

Restoration will immediately follow pipeline construction. Final grading will restore the original contours of the land. Disturbed areas will be prepared for re-seeding and restoration will be coordinated to meet landowner specifications.

5.3 OPERATION

Once put into service, the Project will operate continuously, delivering crude oil from the RTF to the ETP Facility. Normal pipeline operations are imperceptible to the public, as they are buried and therefore not visible, and require only minimal aboveground activity. Standard operating procedures will conform to applicable DOT requirements, which include regular pipeline monitoring and periodic inspection. Additionally, routine maintenance of the ROW will likely be required to remain in compliance.

SECTION 6: DESCRIPTION OF RIGHT-OF-WAY PREPARATION, CONSTRUCTION AND RECLAMATION PROCEDURES

6.1 TYPICAL PIPELINE CONSTRUCTION PROCEDURES

Construction will be an assembly-line process and will include the following general tasks: surveying and staking, clearing and grading, trenching, pipe stringing, pipe bending, welding, coating, hydrostatic testing, lowering in, tie-ins, backfilling, rough grading, and final restoration (*e.g.*, topsoil replacement, final grading, seeding and mulching, where required). The pipeline may be placed into service before final restoration has been completed in all areas.

At any location in the Project area, construction activities will require approximately three (3) months to complete from start to finish, except when weather-related delays affect the schedule. However, construction activity at any location will not be continual but will occur in distinct phases with several days or weeks between each phase.

Surveying and Staking: Prior to construction activities, Hess will stake the centerline, establish the boundaries of the approved work areas (*e.g.*, the construction ROW boundaries and temporary extra workspace areas) and flag the location of approved access roads and foreign utility lines. Wetland/waterway boundaries and other environmentally sensitive areas also will be marked or fenced for protection at this time as appropriate.

Clearing and Grading: Prior to clearing, landowner fences will be braced and cut, and temporary gates and fences will be installed to control livestock where necessary. A clearing crew will clear the work area of vegetation and obstacles that may be encountered (*e.g.,* remaining trees, stumps, logs, brush, and rocks) in the work area.

The ROW will be graded, where necessary, to provide a reasonably level work surface and to segregate topsoil. Topsoil will be carefully removed and stored along the edge(s) of the ROW in a manner that allows for a haul road and trench line. The topsoil depth in the area is variable, but generally, the topsoil is between 2-inches and 9-inches deep with the deepest topsoil in valleys and the thinnest topsoil on the hillsides and hilltops. The topsoil depth and the layer removed will be determined in the field; upon completion of pipeline construction, the trench will be backfilled and topsoil will be returned to the upper soil horizon. All disturbed areas shall be graded to restore the original contours.

Where steep slopes or side slopes are encountered, the construction contractor may re-grade the slope, or in areas of side slopes, two-tone the area to create level working surface. At these locations, excess spoil will be pushed to the side of the construction ROW, distributed over the working area and travel lane, or stored in alternative temporary workspace (ATWS). This material will be returned to the original location and preconstruction contours reestablished during restoration.

Concurrent with grading, erosion and sediment control devices will be installed as appropriate based upon site conditions. Waterbodies may be bored using horizontal directional drilling (HDD) methods to place pipe under the waterbody without disturbing it. The pipeline will be placed such that adequate cover from the bottom of the waterbody will be in place. This will be individual to the waterbody but will be no closer than five (5) feet to the bottom of the waterbody. Construction mats will also be installed across saturated areas to prevent rutting as equipment travel the ROW. Erosion and sediment control devices, which may include silt fences, straw wattles, straw bales and road access pads, will be installed where necessary to prevent soil and sediment from leaving the construction work area.

Following installation of the pipe and backfilling of subsoil in the trench, the ROW will be returned to the original grade and the topsoil will be redistributed over the work area.

Trenching: The trench will be excavated by using backhoes to a depth that provides sufficient cover over the pipeline after backfilling. The bottom width of the trench will be sufficient to accommodate the 12-inch diameter pipeline. Typically, the trench will be excavated to an approximate depth of six (6) feet to allow for a minimum of five (5) feet of cover after construction. In cultivated areas, the depth of cover will be below the maximum tillage depth. Additional cover requirements may be applicable at public road crossings.

Trench spoil will be stored adjacent to but will not be mixed with topsoil on the non-working side of the ROW. In some cases, however, where sufficient space will be lacking on the non-working side, trench spoil may be side cast on the travel lane and spread over the working side of the ROW.

Pipe Stringing, Bending, and Welding: Sections of externally coated pipe up to 60-feet long *(i.e.,* joints) will be transported over public roads to the ROW by truck and placed or "strung" along the ROW parallel to the trench in a continuous line. After the pipe sections are strung along the trench and before they are welded together, individual sections of the pipe may be bent, where necessary, so the finished pipeline sections conform to the natural contours of the land. Typically, a track-mounted, hydraulic pipe-bending machine would be used. Where multiple or complex bends greater than what can be properly bent in the field are required, a factory made "fitting" will be used.

After the pipe sections are bent, the joints will be welded together into sections and placed on temporary supports. Welding will comply with requirements listed in Title 49 C.F.R. Part 195 and API Standard 1104 *Welding of Pipelines and Related Facilities*. Each weld will be tested by using radiographic non-destructive examination to ensure no defective welds are present and Hess engineering standards are met. Welds that do not meet standards and specifications will be removed and/or repaired.

A third-party contractor certified in non-destructive inspection will be used and inspections will be performed as outlined in Title 49 C.F.R. Part 195. After the welds

are approved, a protective epoxy coating will be applied to the welded joints. The pipeline will subsequently be electronically and visually inspected for defects in the epoxy coating. Damage to or defects in the coating will be repaired prior to lowering-in the pipeline. Cathodic protection systems will also be directly bonded to the pipe at that time.

Lowering-in and Backfilling: The trench will be inspected for the presence of rocks and other debris that could damage the pipe or protective coating. If rocks or other obstructions are observed, these will be removed or the pipeline trench bottom will be padded with subsoil or sand prior to the pipeline being lowered into the trench.

If the trench bottom were obscured by water, the trench will be dewatered. Where dewatering may be required, Hess will pump water from the trench into well-vegetated upland areas or into sediment filtration/energy dissipation devices.

In areas of steep slopes, breakers consisting of sand bags or foam will be installed to prevent 'piping' from occurring along the pipe in the trench after the area was backfilled.

The trench will be backfilled using the native material removed and compacted; however, the trench may be crowned slightly to accommodate settling.

Hydrostatic Testing: Hess will hydrostatically test the pipeline. Hydrostatic testing will conform to DOT standards and will establish the maximum operating pressure for the pipeline when it is operational. Testing involves installation of test headers, which control the pressure applied. The test headers will be later removed upon the completion of a successful pressure test. The test procedures are a function of pressure and time. Once the desired test pressure has been achieved, the test section must hold the pressure for an eight (8) hour period, without a significant change in pressure. Once testing is completed, the test water will be evacuated. The line is then dried and prepared for commissioning. Hess will either procure discharge permit(s) from the North Dakota Department of Health, with the ensuing discharge conforming to the conditions stipulated in the permit, or capture the water and transport it offsite for disposal.

Final Tie-in and Commissioning: Following successful pressure testing, test manifolds will be removed and the final pipeline tie-ins will be made. After final tie-ins are complete, the tie-in welds are inspected and the line is sufficiently dried, the pipeline will be commissioned. Commissioning involves activities to verify equipment is properly installed and working, the controls and communications systems are functional, and the pipeline is ready for service. The pipeline will be cleaned and dried using mechanical devices; the line will be purged of air and then loaded with product.

Cleanup and Restoration: Final cleanup will begin after backfilling as soon as weather and site conditions permit. During cleanup, construction debris remaining on the ROW will be collected and disposed of properly. Work areas will be graded and restored to preconstruction contours as closely as practical.

During restoration, segregated topsoil will be spread over the surface after final grading and permanent erosion controls will be installed. After permanent erosion control devices are installed, disturbed, non-cultivated areas will be seeded and slopes mulched where required. Seed mixes will be approved in advanced by the landowner, and seeding will occur within the recommended seeding dates for the Project area.

For cultivated areas, no seed or mulch will be applied after the topsoil was replaced unless specifically requested by the landowner.

Markers showing the location of the pipeline will be installed at fence and road crossings in order to identify the owner of the pipeline and convey emergency information in accordance with applicable governmental regulations, including DOT safety requirements. Special markers providing information and guidance to aerial patrol pilots will also be installed.

6.2 WETLAND AND WATERBODY CONSTRUCTION PROCEDURES

Waterbody Construction and Restoration: One identified stream will be crossed by the Project. If necessary, Hess will cross this feature using methods that will minimize the length of time necessary to install the pipeline and restore the stream bank, as well as to prevent sediment from entering the waterbody during construction to reduce the impacts to the waterbody. Hess will implement the following mitigative measures:

- Temporary extra workspaces will be located at least 50-feet from the edges of the waterbody, unless a ten (10) foot setback was identified for waterbodies located in actively cultivated agricultural fields.
- Temporary extra workspaces will be limited to the minimum size needed to construct the waterbody crossing.
- Riparian vegetation will be preserved by limiting clearing of vegetation between temporary extra workspace areas and waterbody edges.
- Temporary sediment and erosion control devices will be installed across the width of the ROW after clearing but before ground disturbance. These devices will remain in place throughout construction until stream banks and adjacent upland areas are stabilized.
- Trench spoil placement will be restricted to at least ten (10) feet from the water's edge on the ROW, or in temporary extra workspace areas.
- Waterbody buffers will be maintained (*e.g.*, temporary extra workspace area setbacks, refueling restrictions) in the field with signs until construction related ground-disturbing activities are complete.
- The use of equipment operating in the waterbody will be limited to that needed to construct the crossing.
- Storage and refueling activities will be restricted near surface waters and spill response procedures will be promptly implemented if a spill or leak occurs during construction.
- Bank stabilization and re-establishment of streambed and bank contours will be completed as soon as practicable after construction.

6.3 AGRICULTURAL LAND CONSTRUCTION AND RESTORATION PROCEDURES

Portions of the Project occur in agricultural areas. These areas consist of active croplands predominately used to grow durum, hard red spring wheat, red winter wheat, barley, sunflowers and canola. Agricultural lands are also used as range or pasture land for livestock production. Hess will utilize the following general construction methods in agricultural areas, consistent with the requirements of landowners:

- Prior to construction, landowners will be contacted and irrigation facilities, wells, waterlines and other livestock watering systems will be located.
- Water flow will be maintained in supply systems unless shutoff was coordinated with the affected parties.
- Existing fences will be cut and braced along the ROW, and temporary gates and fences, if necessary, will be installed to control livestock and limit public access.
- On all active agricultural lands, which include fallow or rotated cropland, hayfields, improved pastures and rangeland, Hess will remove the topsoil and segregate the soil from subsoil.
- Hess will decompact the travel lane on the ROW if requested by the landowner.
- On all actively cultivated lands free of shallow bedrock, the trench will be excavated to sufficient depth to allow a minimum of four (4) feet of soil cover between the top of the pipe and the final land surface after backfilling.
- Restoration and revegetation practices (*i.e.*, seeding) will comply with the requirements outlined in the landowner line list.
- Hess will not plant an annual cover crop on actively cultivated land unless requested by the landowner.
- Weed-free mulch will be used on steep slopes to control erosion unless the landowner requests mulch not be applied. Mulch will be crimped into the soil.
- Earthen diversion berms will be constructed to reduce runoff on steep slopes only when the landowner approves.
- No erosion control fabric will be used in rangeland without having landowner approval.
- Fences and gates will be replaced in accordance with landowner agreements.
- Private roads will be restored to equal pre-construction conditions.
- Hess will respond promptly to landowner concerns following construction to mitigate areas of subsidence and erosion problems should they occur.
- Hess will require the contractor to thoroughly clean the equipment and materials (*e.g.*, timber mats, bridges, etc.) at the contractor yard prior to mobilization to the ROW to prevent spread of nuisance weeds.

SECTION 7: EASEMENT, ACQUISITION, LANDOWNER NOTIFICATION AND EASEMENT COMPENSATION PLAN

7.1 LANDOWNER INFORMATION REGARDING EASEMENT ACQUISITION, AND NECESSARY EASEMENT CONDITIONS AND RESTRICTIONS

Once a preliminary route has been established, a title review is conducted of courthouse records for the purpose of identifying the current landowner. Hess initiates contacts with affected landowners via telephone to be followed with personal visits and e-mail correspondence. Contact by surface mail may be used as a last resort if no other means of landowner contact is successful.

The refinement of the Route includes adjustments made per landowner request. Hess negotiates with landowners in good faith, and necessary easement conditions and restrictions are presented and discussed.

7.2 COMPENSATION POLICY

Hess's practice for determining landowner compensation for easements is based on research of comparable fair market pricing and prior experience negotiating easements locally.

SECTION 8: LIST OF PREPARERS

William McCarthy, C.W.B.
Senior Environmental Compliance Analyst
E3 Environmental, LLC, 871 Jefferson Avenue, St. Paul, MN 55102

M.S. Wildlife Biology, University of Minnesota – Twin Cities; and B.S. Wildlife Biology, Michigan State University. Mr. McCarthy is an environmental compliance analyst with 20 years of environmental consulting experience working with various energy assets and regulatory agencies. As a compliance analyst, he has managed the environmental requirements for facility siting, pipeline routing, federal licensing and various federal, state and local permits. Mr. McCarthy is a certified wildlife biologist, and in this role conducts and coordinates field studies, agency consolations, mitigation and avoidance plans.

Katie Schmidt, EIT
Environmental Engineer and Senior Consultant
E3 Environmental, LLC, 871 West Jefferson Avenue, St. Paul, MN 55102

B.S. Civil Engineering with an emphasis in Environmental Engineering-Iowa State University. Ms. Schmidt is a Senior Environmental Consultant with ten years of experience working with various energy assets and regulatory agencies. As a consultant, she has managed multiple pipeline projects supporting clients through the construction permitting and siting processes, which included coordination with various federal, state and local agencies.

Jon Knudsen
Wildlife Biologist
E3 Environmental, LLC, 871 Jefferson Avenue, St. Paul, MN 55102

M.S. Biology, Idaho State University – Pocatello, ID; and B.S. Zoology, University of Wisconsin – Madison, WI. Mr. Knudsen has 10 years of environmental consulting and biological monitoring experience, which includes horizontal project management of oil, gas, wind, and mining projects in Colorado, Wyoming, Montana, and North Dakota. His expertise includes surveying sensitive species, writing technical reports, and consulting with regulatory agencies to ensure clients are in compliance with associated rules and regulations. In addition, Mr. Knudsen specializes in training energy development companies on wildlife-related issues, including the Endangered Species Act and Migratory Bird Treaty Act.

Garrett Knudsen, RPA
Senior Cultural Resource Specialist
E3 Environmental, LLC, 871 Jefferson Avenue, St. Paul, MN 55102

Ph. D. (candidate), Faculty of Archaeology and Anthropology, University of Cambridge, M.A. Anthropology, Idaho State University – Pocatello, ID; and B.S. Anthropology and Zoology, University of Wisconsin – Madison, WI. Mr. Knudsen is a Secretary of Interior qualified archaeologist with over 15 years of experience in cultural resource management, heritage preservation, and environmental compliance for private and public clients in the transportation, energy, and mining industries. Mr. Knudsen's regions of expertise include greater western North America; Midwest, Great Hess, Southwest, California, Texas, Great Basin, Plateau, Northwest Coast, and Alaska. He is also a specialist in archaeological landscapes, remote sensing, human skeletal remains, and predictive models.

Tyler Danielson
GIS Analyst
E3 Environmental, LLC, 871 Jefferson Avenue, St. Paul, MN 55102

M.S. in Geographic Information Science with a concentration in Natural Resource Management, Saint Mary's University of Minnesota; B.S. Natural Resource Management, University of Wisconsin - Stevens Point. Mr. Danielson has 6 years of professional experience analyzing GIS data to identify spatial relationships and display the results of analyses via maps, graphs, and tables. He excels at data creation and manipulation, database management, advanced spatial analysis, scripting and advanced cartography.

Appendix A

Engineering Documents

ETP PIPELINE PROJECT

WOP# NDP-BLBAK-PPL-WOP-01005

PIPELINE SUPERINTENDENT	SIGNATURE AND DATE	RICK CUTRER 701-420-6927
PROJECT LEAD	SIGNATURE AND DATE	SUWAT SUWANSATHIT 281-906-4477
DISCIPLINE ENGINEER	SIGNATURE AND DATE	CHRIS ROBERTSON 970-286-2325
DESIGNER	SIGNATURE AND DATE	TOM MALONEY 970-375-6826

DRAWING INDEX

ITEM	DRAWING NO.	REV	DRAWING TITLE	DOCUMENT STATUS
1	NDP-BLBAK-PPL-IDX-01008	B	ETP PIPELINE PROJECT MAPPING TITLE SHEET AND DRAWING INDEX	RE-ISSUED FOR REVIEW
2	NDP-BLBAK-PPL-ALS-01060	B	ETP PIPELINE PROJECT PIPELINE ALIGNMENT SHEET COVER SHEET	RE-ISSUED FOR REVIEW
3	NDP-BLBAK-PPL-ALS-01061	B	ETP PIPELINE PROJECT ALIGNMENT SHEET 12" STEEL CRUDE PIPELINE - SHEET 1 OF 2	RE-ISSUED FOR REVIEW
4	NDP-BLBAK-PPL-ALS-01062	B	ETP PIPELINE PROJECT ALIGNMENT SHEET 12" STEEL CRUDE PIPELINE - SHEET 2 OF 2	RE-ISSUED FOR REVIEW
5	NDP-BLBAK-PPL-ALS-01063	B	ETP PIPELINE PROJECT STIPULATION SHEET GENERAL & LANDOWNER STIPULATIONS	RE-ISSUED FOR REVIEW
6	NDP-BLBAK-PPL-ALS-01064	A	ETP PIPELINE PROJECT PIPELINE ALIGNMENT SHEET PIPELINE CROSSING LIST	ISSUED FOR REVIEW

ISSUED FOR REVIEW

DRAWING NUMBER	TITLE
REFERENCE DRAWINGS	

811 Know what's below. Call before you dig.

NORTH DAKOTA ONE CALL

NO	DATE	DESCRIPTION	DRAWN BY	CHK'D BY	APPV'D BY
B	3/15/16	RE-ISSUED FOR REVIEW	TMM	CCR	MLM
A	2/9/16	ISSUED FOR REVIEW	TMM	CCR	MLM

REVISIONS

CH2MHILL

HESS CORPORATION
EXPLORATION & PRODUCTION

NORTH DAKOTA PRODUCTION
BEAVER LODGE BAKKEN
NDP-BLBAK-PPL-WOP-01005

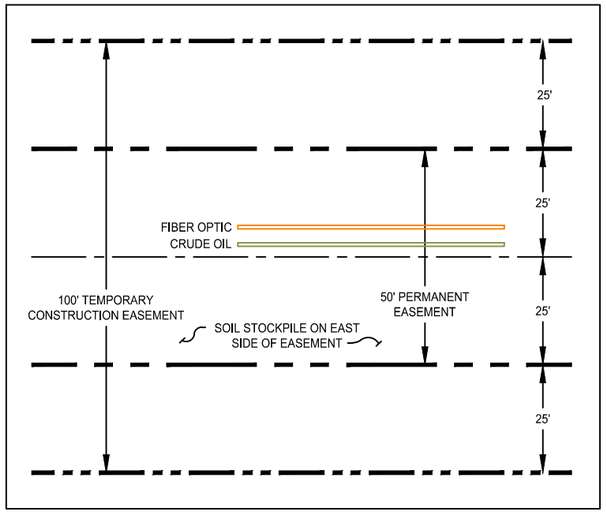
ETP PIPELINE PROJECT
MAPPING TITLE SHEET AND DRAWING INDEX

DRAWN BY:	DESIGN BY:	CHECKED BY:	APPRVD BY:	DATE:	SCALE:
TMM	TMM	CCR	MLM	2/8/16	N/A

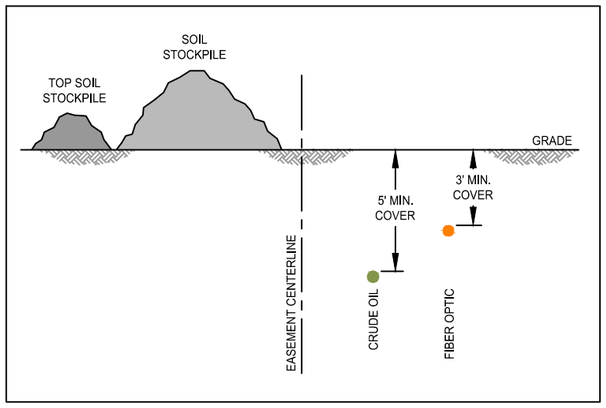
SIZE	DRAWING No.	HESS DRAWING No.	REV
B		NDP-BLBAK-PPL-IDX-01008	B

K:\Jobs\Hess\2015 Projects\ETP Pipeline\MAPPING\DRAWING INDEX\NDP-BLBAK-PPL-IDX-01008.dwg 3-16-16 11:01:44 AM tmmaloney

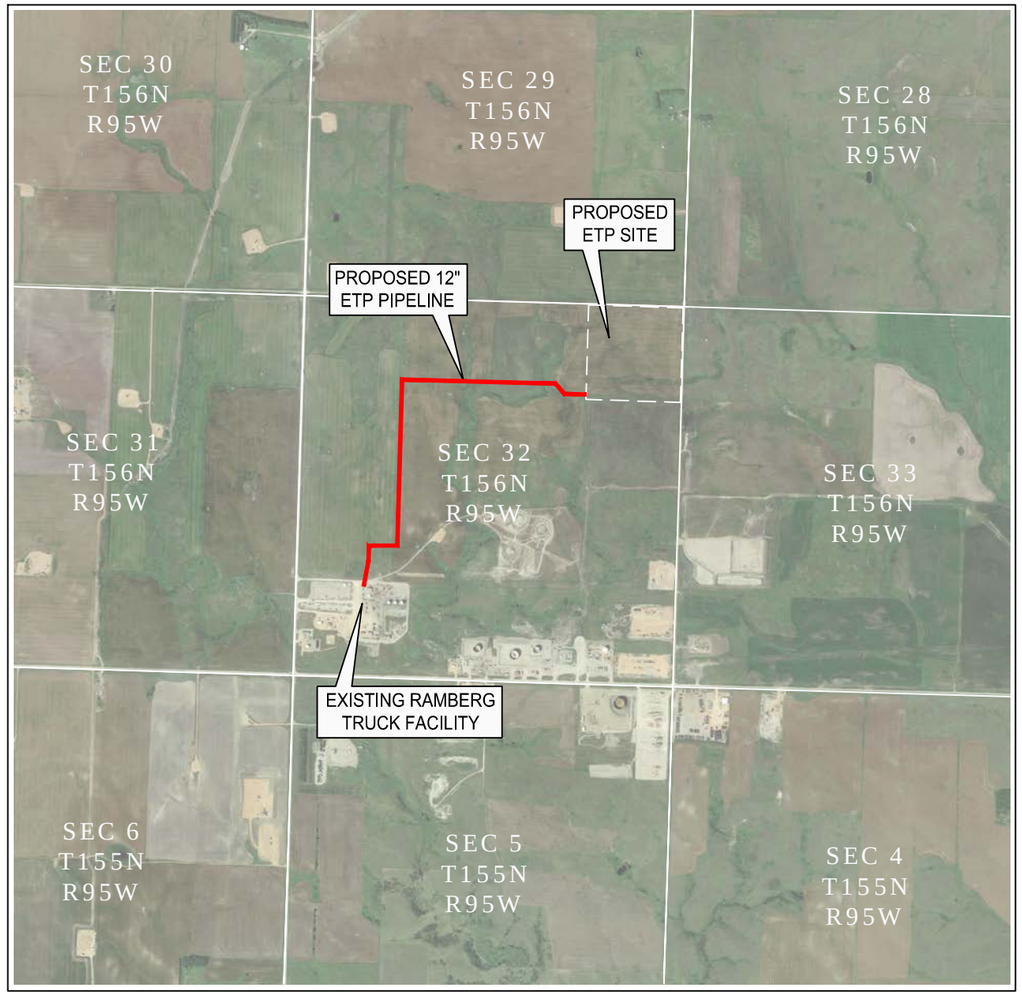
ETP PIPELINE PROJECT
ALIGNMENT SHEETS
WILLIAMS COUNTY, NORTH DAKOTA



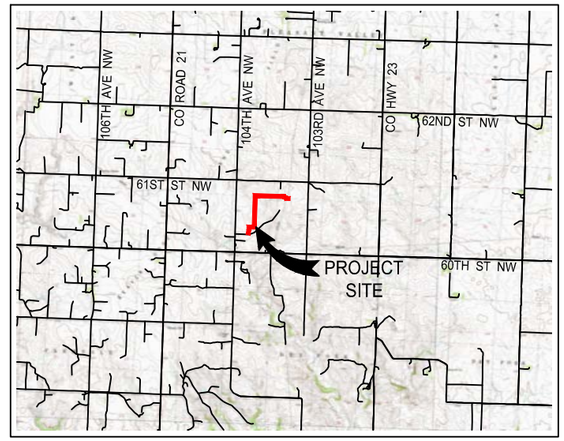
EASEMENT TRENCH PLAN VIEW
NTS



EASEMENT TRENCH PROFILE
NTS



PROJECT AREA MAP
1" = 1000'



VICINITY MAP
1" = 1 MILE

PRODUCT	MATERIAL	LENGTH
CRUDE OIL	12" STEEL	5,893'
	FIBER OPTIC CABLE	5,893'

ISSUED FOR REVIEW

DRAWING NUMBER	TITLE
REFERENCE DRAWINGS	

811 Know what's below. Call before you dig.
NORTH DAKOTA ONE CALL

NO	DATE	DESCRIPTION	DRAWN BY	CHK'D BY	APPV'D BY
B	3/15/16	RE-ISSUED FOR REVIEW	TMM	CCR	MLM
A	2/9/16	ISSUED FOR REVIEW	TMM	CCR	MLM

REVISIONS

CH2MHILL

HESS CORPORATION
EXPLORATION & PRODUCTION

NORTH DAKOTA PRODUCTION
BEAVER LODGE BAKKEN
NDP-BLBAK-PPL-WOP-01005

ETP PIPELINE PROJECT
PIPELINE ALIGNMENT SHEET
COVER SHEET

DRAWN BY:	DESGN BY:	CHECKED BY:	APPRVD BY:	DATE:	SCALE:
TMM	TMM	CCR	MLM	2/8/16	1" = 1000'

SIZE	DRAWING No.	HESS DRAWING No.	REV
B		NDP-BLBAK-PPL-ALS-01060	B

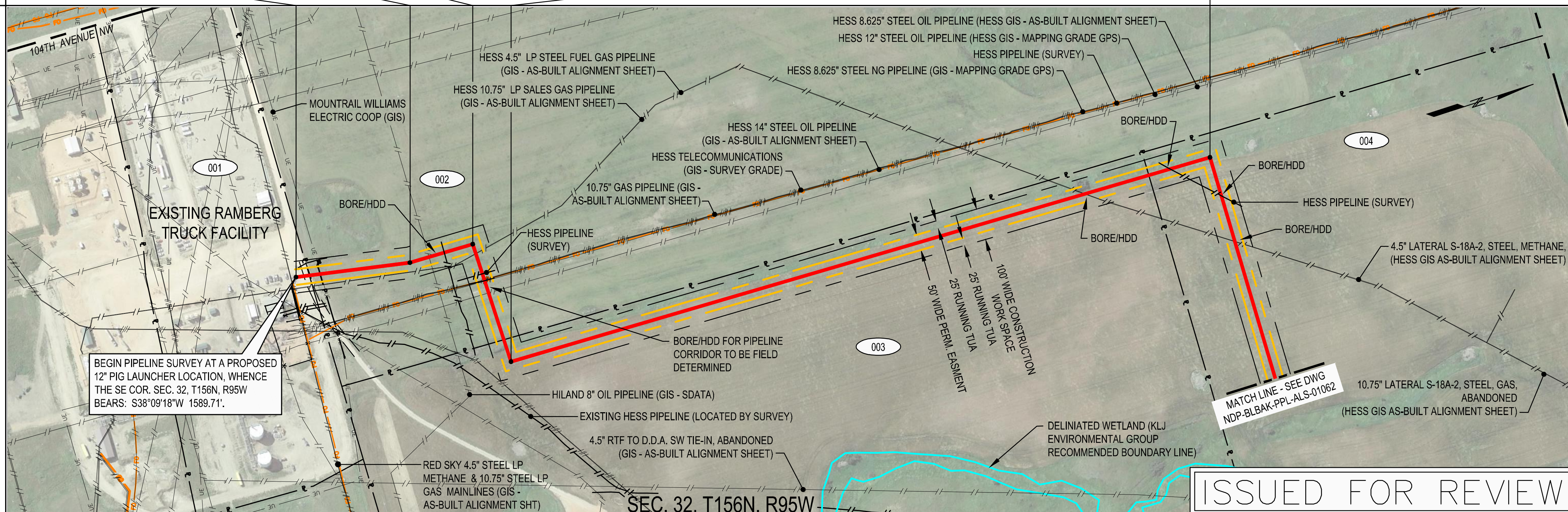
K:\Jobs\Hess\2015 Projects\ETP Pipeline\MAPPING\ALIGNMENT SHEET COVER SHEET\NDP-BLBAK-PPL-ALS-01060.dwg 3-15-16 01:27:07 PM tmmaloney

OWNER / TRACT NO. / R.O.W. WIDTH / RODS/FT	STA. 00+00.0 BEGIN SURVEY	HESS CORPORATION (001) 50 FT WIDTH 42.6 FT/2.6 RODS	STA. 0+42.6 PROPERTY BOUNDARY	DILLAND, RAYMOND (002) 50 FT WIDTH 847.2 FT/51.3 RODS	STA. 8+89.8 PROPERTY BOUNDARY	DAVIDSON, MARY C. (003) 50 FT WIDTH 2,177.4 FT/132.0 RODS	STA. 30+67.2 PROPERTY BOUNDARY	DAVIDSON, RYAN M. & JENICE (004) 50 FT WIDTH 932.8 FT/56.5 RODS	STA. 40+00.0 MATCHLINE
MIN. COVER		60" DEPTH		60" DEPTH		60" DEPTH		60" DEPTH	

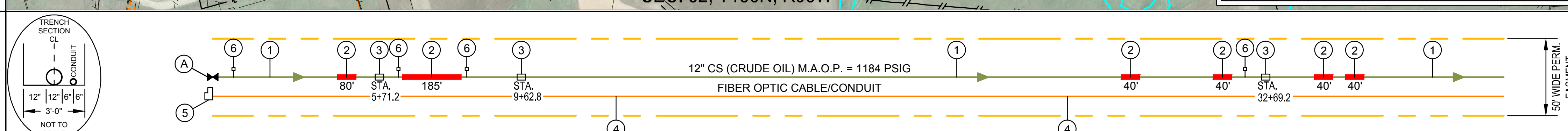
STATIONS

- STA. 00+00.0 BEGIN SURVEY AT A PROPOSED 12" LAUNCHER LOCATION 8000
- N 10°46'42" E
- STA. 0+25.1 EDGE OF ROAD 8125
- STA. 0+42.6 PROPERTY LINE 8126 EXIT HESS / ENTER DILLAND
- STA. 0+45.3 EDGE OF ROAD 8127
- STA. 0+73.2 POWER POLE OFFSET 27' LEFT
- STA. 0+77.2 AERIAL POWER (SURVEY) 8128
- STA. 0+78.8 POWER (GIS - MOUNTRAIL/WILLIAMS ELECTRIC CO-OP) 8129
- P.I. 3+63.7 △ 09°12'59" LT 8008
- STA. 4+12.0 BEGIN BORE/HDD
- STA. 4+27.2 C/L HILAND 8" OIL PIPELINE (GIS - SDATA) 8130
- STA. 4+76.8 C/L HILAND PIPELINE (SURVEY) 8131
- STA. 4+92.0 END BORE/HDD
- P.I. 5+71.2 △ 88°25'06" RT 8013
- STA. 5+91.2 BEGIN BORE/HDD
- STA. 6+01.9 C/L 4.5" STEEL FUEL GAS PIPELINE (HESS GIS AS-BUILT ALIGNMENT SHEET) 8132
- STA. 6+03.4 C/L 10.75" ABANDONED PIPELINE (HESS GIS AS-BUILT ALIGNMENT SHEET) 8133
- STA. 6+69.8 C/L HESS PIPELINE (SURVEY) 8134
- STA. 6+89.5 C/L 10.75" GAS PIPELINE (HESS GIS AS-BUILT ALIGNMENT SHEET) 8135
- STA. 6+90.5 HESS TELECOMMUNICATIONS (HESS GIS SURVEY GRADE) 8136
- STA. 6+91.0 C/L HESS 14" STEEL OIL PIPELINE (HESS GIS AS-BUILT ALIGNMENT SHEET) 8137
- STA. 6+92.5 C/L HESS 8.625" STEEL NAT GAS PIPELINE (HESS GIS MAPPING GRADE GPS) 8138
- STA. 6+93.1 C/L HESS PIPELINE (SURVEY) 8139
- STA. 6+94.3 C/L HESS 12" STEEL OIL PIPELINE (HESS GIS MAPPING GRADE GPS) 8140
- STA. 7+34.0 C/L HESS 8.625 STEEL OIL PL (HESS GIS AS-BUILT ALIGNMENT SHEET) 8141
- STA. 7+76.2 END BORE/HDD
- STA. 8+89.8 PROPERTY LINE 8142 EXIT DILLAND / ENTER DAVIDSON
- P.I. 9+62.8 △ 88°17'06" LT 8022
- STA. 28+36.0 BEGIN BORE/HDD 8143
- STA. 28+55.3 C/L 10.75" ABANDONED PIPELINE (HESS GIS AS-BUILT ALIGNMENT SHEET)
- STA. 28+57.8 C/L 4.5" STEEL FUEL GAS PIPELINE 8144 (HESS GIS AS-BUILT ALIGNMENT SHEET)
- STA. 28+76.0 END BORE/HDD
- STA. 30+67.2 PROPERTY LINE 8145 EXIT MARY DAVIDSON / ENTER RYAN DAVIDSON
- STA. 31+17.5 BEGIN BORE/HDD
- STA. 31+37.5 C/L HESS PIPELINE (SURVEY) 8146
- STA. 31+57.5 END BORE/HDD
- P.I. 32+69.2 △ 89°51'03" RT 8069
- STA. 33+75.9 BEGIN BORE/HDD
- STA. 33+95.9 C/L HESS PIPELINE (SURVEY) 8147
- STA. 34+15.9 END BORE/HDD
- STA. 35+27.1 BEGIN BORE/HDD
- STA. 35+46.2 C/L 4.5" STEEL FUEL GAS PIPELINE 8148 (HESS GIS AS-BUILT ALIGNMENT SHEET)
- STA. 35+48.0 C/L 10.75" ABANDONED PIPELINE 8149 (HESS GIS AS-BUILT ALIGNMENT SHEET)
- STA. 35+67.1 END BORE/HDD
- STA. 40+00.0 MATCH LINE

ALIGNMENT



MATERIAL



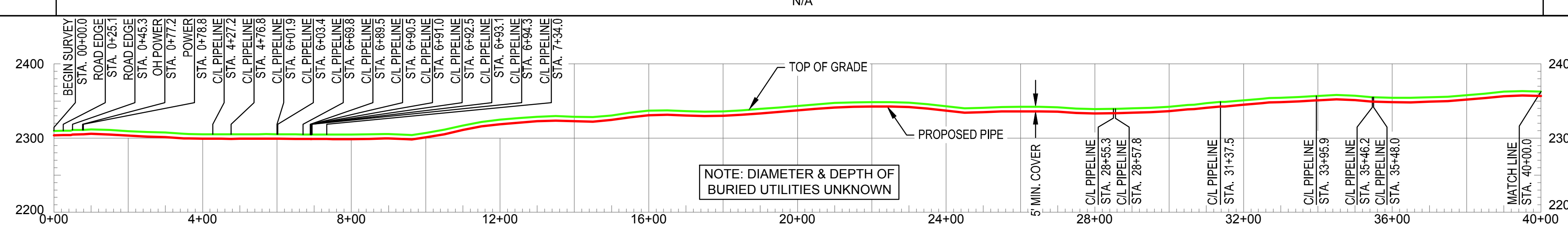
ENGINEERING DATA / ENVIRONMENTAL

	STA. 00+00.0		STA. 40+00.0
DESIGN FACTOR	0.72		
CLASS LOCATION	CLASS 1		
LAND USE	DEVELOPED, & OTHER HUMAN USE	STA. 0+42.6 AGRICULTURAL	
WATER FEATURE CROSSINGS	N/A		
WATER FEATURE LENGTH	N/A		

PROFILE

VERTICAL SCALE 1"=100'

HORIZONTAL SCALE 1"=200'



NOTES

Know what's below. Call before you dig. (811) — NORTH DAKOTA ONE CALL

1) STATIONING IS BASED ON HORIZONTAL DISTANCES.
2) ALL GAS, WATER AND UTILITY LINES SHOULD BE LOCATED PRIOR TO ANY EXCAVATING, DIGGING, OR TRENCHING ANYWHERE ON OR NEAR THIS SITE.
3) CH2M HILL ASSUMES NO RESPONSIBILITY FOR THE SPECIFIC LOCATION OF ANY BURIED GAS, WATER, OR UTILITY LINES THAT MAY BE PRESENT ON OR NEAR THIS SITE, NOR IS ANY LIABILITY ASSUMED FOR ANY LEGAL ACTION WHICH RESULTS FROM A DISCOVERY OF A GAS, WATER, OR UTILITY LINE IN ADDITION TO OR IN A DIFFERENT LOCATION THAN SHOWN ON THIS PLAN.
4) SECTION SURVEY PROVIDED BY KLJ, INC., MARCH, 2016.
5) COORDINATE SYSTEM BASED ON NORTH DAKOTA STATE PLANE NORTH ZONE, US SURVEY FT.
6) BEARINGS ARE BASED ON A LINE MONUMENTED BY AN ALUMINUM CAP AT THE NORTHWEST CORNER AND AN ALUMINUM CAP (HORGAN) AT THE NORTHEAST CORNER OF SECTION 32, T156N, R95W, 5TH P.M. REFERENCE BEARING: S88°16'46"E
7) AERIAL PHOTO FROM GOOGLE EARTH (2013).
8) THE MINIMUM DEPTH OF COVER FOR THE PROJECT IS FIVE FEET. ADDITIONAL DEPTH COVER IS REQUIRED AT ROAD AND WATER BODY CROSSINGS. ADDITIONAL DEPTH OF COVER IS TO BE IN ACCORDANCE WITH REFERENCED PERMIT DRAWINGS, SITE SPECIFIC DRAWINGS OR CONSTRUCTION SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.
9) THE PRELIMINARY BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA.
10) THE REQUIRED ONE CALL NOTIFICATION IS THE RESPONSIBILITY OF THE CONSTRUCTION CONTRACTOR.
11) THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS.
12) ADDITIONAL WARNING SIGNS MAY BE REQUIRED AS DICTATED BY CONSTRUCTION CONTRACT.
13) HOT INDUCTION BENDS PROVIDED. IF NOT SHOWN ON THE ALIGNMENT SHEET DRAWING, FIELD BENDS SHALL BE UTILIZED.

LEGEND

SURVEY CENTERLINE	DITCH/DRAIN FLOWLINE
SECONDARY PIPELINE C/L	WETLAND BOUNDARY
CONSTRUCTION WORKSPACE	COUNTY ROADS/HIGHWAY
TEMPORARY USE AREA	FIELD ROADS
SECTION LINE	TRACT NUMBER
EXISTING PIPELINE	VALVE
EXISTING PIPELINE (GIS)	PIGGABLE "WYE"
PROPERTY LINE	BARRED TEE
POWER LINE	TEST STATION
FENCE LINE	PIPELINE MARKER
TELEPHONE CABLE	WELL HEAD
UNDERGROUND ELECTRIC	CASING
WATER LINE	CONCRETE COATED PIPE
FIBER OPTIC CABLE	BORE / DIRECTIONAL DRILL

BILL OF MATERIALS

1	12" PIPE, API 5L, PSL-2, 0.375" W.T., GR X-52, 16-18 MILS FBE + 2.5-4 MILS	3,575'
	ROUGH COAT	
2	12" PIPE, API 5L, PSL-2, 0.500" W.T., GR X-52, 16-18 MILS FBE + 2.5-4 MILS	425'
	ROUGH COAT	
3	90° INDUCTION BEND, 5D, API 5L, PSL-2, 0.500 W.T., GR X-52, 16-18 MILS FBE +	3
	2.5-4 MILS ROUGH COAT	
4	FIBER OPTIC CABLE AND CONDUIT	4,000'
5	FIBER OPTIC CABLE VAULT	1
6	PIPELINE MARKERS	4

REFERENCE DRAWINGS

REF.	DRAWING NO.	DRAWING TITLE
A	NDP-BLBAK-PIP-PLN-01000	PIPING PLAN & SECTIONS 16"x12" LAUNCHER - LEFT HAND

REVISIONS

NO.	DATE	BY	CHK	APPR	DESCRIPTION
A	02/09/16	TMM	CCR	MLM	ISSUED FOR REVIEW
B	03/15/16	TMM	CCR	MLM	RE-ISSUED FOR REVIEW

400' 200' 0 200' 400'

SCALE: 1" = 200'

FOR 22"x34" DRAWING FORMAT

ENGINEERING RECORD

DRAWN BY	TMM	02/02/16	REVIEWED BY	MLM	02/08/16
CHECKED BY	CCR	02/04/16	APPROVED BY		

PREPARED FOR: HESS

PREPARED BY: CH2MHILL

ALIGNMENT SHEET
ETP PIPELINE PROJECT
12" STEEL CRUDE PIPELINE - SHEET 1 OF 2
WILLIAMS COUNTY, NORTH DAKOTA
0+00.0 TO 40+00.0
BEAVER LODGE BAKKEN
NDP-BLBAK-PPL-WOP-01005

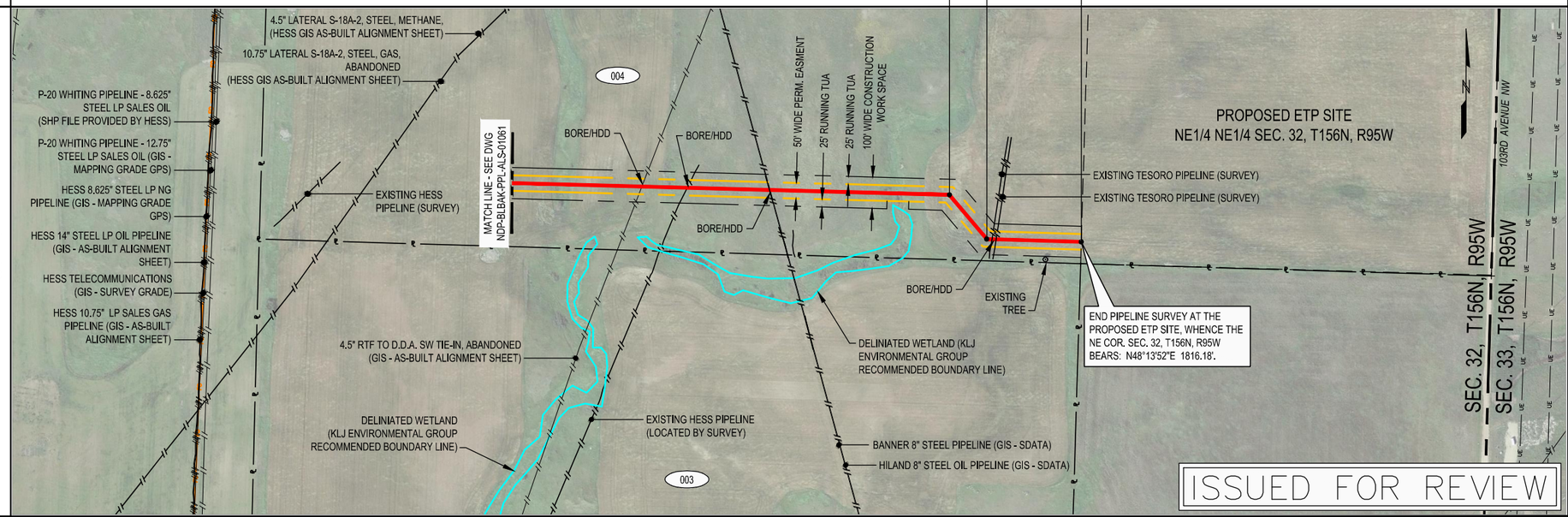
DWG. NO. NDP-BLBAK-PPL-ALS-01061 REV. B

OWNER		DAVIDSON, RYAN M. & JENICE	
TRACT NO.		004	
R.O.W. WIDTH RODS/FT		50 FT WIDTH 1,892.5 FT/114.7 RODS	
MIN. COVER	STA. 40+00.0 MATCHLINE	60" DEPTH	STA. 58+92.5 END SURVEY

STATIONS

STA. 40+00.0	MATCH LINE
STA. 43+96.8	BEGIN BORE/HDD
STA. 44+16.8	C/L 4.5" ABANDONED OIL PIPELINE 8150 (HESS GIS AS-BUILT ALIGNMENT SHEET)
STA. 44+36.8	END BORE/HDD
STA. 45+42.6	BEGIN BORE/HDD
STA. 45+62.6	C/L HESS PIPELINE (SURVEY) 8151
STA. 45+82.6	END DORE/HDD
STA. 48+07.0	BEGIN BORE/HDD
STA. 48+28.0	C/L BANNER 8" STEEL PIPELINE 8152 (HESS GIS - SDATA)
STA. 48+28.1	C/L 8" HILAND OIL PIPELINE 8153 (HESS GIS - SDATA)
STA. 48+27.8	C/L 8" HILAND OIL PIPELINE 8154 (LOCATED BY ONE-CALL)
STA. 49+47.0	END BORE/HDD
STA. 52+04.0	BEGIN WETLAND TWS AVOIDANCE
STA. 52+74.0	END WETLAND TWS AVOIDANCE
P.I. 54+03.5	△ 48°15'15" RT 8113
P.I. 55+89.2	△ 48°06'49" LT 8117
STA. 55+90.2	BEGIN BORE/HDD
STA. 56+06.3	C/L TESORO PIPELINE (SURVEY) 8155
STA. 56+19.3	C/L TESORO PIPELINE (SURVEY) 8156
STA. 56+30.2	END BORE/HDD
STA. 57+79.2	EXISTING TREE 60FT OFFSET RT
STA. 58+92.5	END SURVEY AT THE PROPOSED ETP SITE 8124

ALIGNMENT



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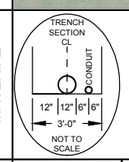
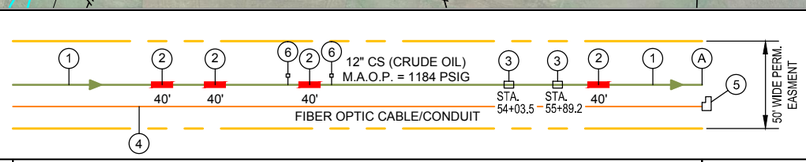




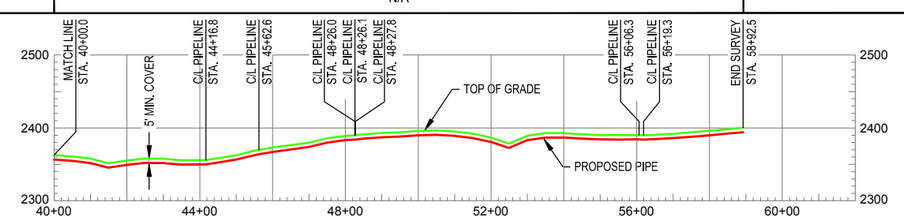
ENGINEERING DATA ENVIRONMENTAL

	STA. 40+00.0	STA. 58+92.5
DESIGN FACTOR	0.72	
CLASS LOCATION	CLASS 1	
LAND USE	AGRICULTURAL	
WATER FEATURE CROSSINGS	N/A	
WATER FEATURE LENGTH	N/A	

PROFILE

VERTICAL SCALE 1"=100'

HORIZONTAL SCALE 1"=200'



NOTE: DIAMETER & DEPTH OF BURIED UTILITIES UNKNOWN

NOTES

811 Know what's **below.** **Call** before you dig.

NORTH DAKOTA ONE CALL

1) STATIONING IS BASED ON HORIZONTAL DISTANCES.
2) ALL GAS, WATER AND UTILITY LINES SHOULD BE LOCATED PRIOR TO ANY EXCAVATING, DIGGING, OR TRENCHING ANYWHERE ON OR NEAR THIS SITE.
3) CH2M HILL ASSUMES NO RESPONSIBILITY FOR THE SPECIFIC LOCATION OF ANY BURIED GAS, WATER, OR UTILITY LINES THAT MAY BE PRESENT ON OR NEAR THIS SITE, NOR IS ANY LIABILITY ASSUMED FOR ANY LEGAL ACTION WHICH RESULTS FROM A DISCOVERY OF A GAS, WATER, OR UTILITY LINE IN ADDITION TO OR IN A DIFFERENT LOCATION THAN SHOWN ON THIS PLAN.
4) SECTION SURVEY PROVIDED BY KLJ, INC., MARCH, 2016.
5) COORDINATE SYSTEM BASED ON NORTH DAKOTA STATE PLANE NORTH ZONE, US SURVEY FT.
6) BEARINGS ARE BASED ON A LINE MONUMENTED BY AN ALUMINUM CAP AT THE NORTHWEST CORNER AND AN ALUMINUM CAP (HORGAN) AT THE NORTHEAST CORNER OF SECTION 32, T156N, R95W, 5TH P.M. REFERENCE BEARING: S88°16'46"E
7) AERIAL PHOTO FROM GOOGLE EARTH (2013).
8) THE MINIMUM DEPTH OF COVER FOR THE PROJECT IS FIVE FEET. ADDITIONAL DEPTH COVER IS REQUIRED AT ROAD AND WATER BODY CROSSINGS. ADDITIONAL DEPTH OF COVER IS TO BE IN ACCORDANCE WITH REFERENCED PERMIT DRAWINGS, SITE SPECIFIC DRAWINGS OR CONSTRUCTION SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.
9) THE PRELIMINARY BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED AND ALL WORK SHALL REMAIN WITHIN THE DESIGNATED WORK AREA.
10) THE REQUIRED ONE CALL NOTIFICATION IS THE RESPONSIBILITY OF THE CONSTRUCTION CONTRACTOR.
11) THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED ACCESS ROADS.
12) ADDITIONAL WARNING SIGNS MAY BE REQUIRED AS DICTATED BY CONSTRUCTION CONTRACT.
13) HOT INDUCTION BENDS PROVIDED. IF NOT SHOWN ON THE ALIGNMENT SHEET DRAWING, FIELD BENDS SHALL BE UTILIZED.

LEGEND

- SURVEY CENTERLINE
- SECONDARY PIPELINE C/L
- CONSTRUCTION WORKSPACE
- TEMPORARY USE AREA
- SECTION LINE
- EXISTING PIPELINE
- EXISTING PIPELINE (GIS)
- PROPERTY LINE
- POWER LINE
- FENCE LINE
- TELEPHONE CABLE
- UNDERGROUND ELECTRIC
- WATER LINE
- FIBER OPTIC CABLE
- DITCH/DRAIN FLOWLINE
- WETLAND BOUNDARY
- COUNTY ROADS/HIGHWAY
- FIELD ROADS
- TRACT NUMBER
- VALVE
- PIGGABLE "WYE"
- BARRED TEE
- TEST STATION
- PIPELINE MARKER
- WELL HEAD
- CASING
- CONCRETE COATED PIPE
- BORE / DIRECTIONAL DRILL

BILL OF MATERIALS

1	12" PIPE, API 5L, PSL-2, 0.375" W.T., GR X-52, 16-18 MILS FBE + 2.5-4 MILS	1,733'
	ROUGH COAT	
2	12" PIPE, API 5L, PSL-2, 0.500" W.T., GR X-52, 16-18 MILS FBE + 2.5-4 MILS	160'
	ROUGH COAT	
3	45° INDUCTION BEND, 5D, API 5L, PSL-2, 0.500 W.T., GR X-52, 16-18 MILS FBE +	2
	2.5-4 MILS ROUGH COAT	
4	FIBER OPTIC CABLE AND CONDUIT	1,893'
5	FIBER OPTIC CABLE VAULT	1
6	PIPELINE MARKERS	2

REFERENCE DRAWINGS

REF.	DRAWING NO.	DRAWING TITLE
A	NDP-BLBAK-PIP-PLN-01002	PIPING PLAN & SECTIONS 16"x12" RECEIVER - LEFT HAND

REVISIONS

NO.	DATE	BY	CHK	APPR	DESCRIPTION
A	02/09/16	TMM	CCR	MLM	ISSUED FOR REVIEW
B	03/15/16	TMM	CCR	MLM	RE-ISSUED FOR REVIEW

400' 200' 0 200' 400'

SCALE: 1" = 200'

FOR 22"x34" DRAWING FORMAT

ENGINEERING RECORD

DRAWN BY	TMM	02/02/16	REVIEWED BY	MLM	02/08/16
CHECKED BY	CCR	02/04/16	APPROVED BY		

PREPARED FOR: HESS

PREPARED BY: CH2MHILL

ALIGNMENT SHEET
ETP PIPELINE PROJECT
12" STEEL CRUDE PIPELINE - SHEET 2 OF 2
WILLIAMS COUNTY, NORTH DAKOTA
40+00.0 TO 58+92.5
BEAVER LODGE BAKKEN
NDP-BLBAK-PPL-WOP-01005

DWG. NO. NDP-BLBAK-PPL-ALS-01062 REV. B

Mar 15, 2016 – 1:29pm by tmmoloney – Path = K:\Jobs\Hess\2015 Projects\ETP Pipeline\MAPPING\ALIGNMENT SHEETS\NDP-BLBAK-PPL-ALS-01062.dwg

GENERAL STIPULATIONS

1. ALL TOPSOIL WILL BE SCRAPED AND SET TO ONE SIDE. SUBSOIL WILL BE PLACED ON OTHER SIDE OF TRENCH ALONG RIGHT-OF-WAY. SUBSOIL WILL BE BACKFILLED AND COMPACTED IN ACCORDANCE TO HESS DOCUMENT NUMBER BAK-CI-SPC-4001 SPECIFICATIONS. TOPSOIL WILL BE REPLACED AFTER EASEMENT WORK HAS BEEN COMPLETED. IF THE TOPSOIL IS NOT SCRAPED TO ONE SIDE, TOPSOIL WILL BE HAULED ONTO THE EASEMENT TO RESTORE IT TO THE ORIGINAL DEPTH OF TOPSOIL. SHOULD SINK AREAS OCCUR ON THE TRENCH AREA, TOPSOIL WILL BE HAULED IN TO FILL THE TRENCH AREA. ALL ROCKS WILL BE BURIED OR DISPOSED OF FOLLOWING DIRT WORK. CROPLAND AREAS DISTURBED WILL BE CULTIVATED FOLLOWING WORK AND ROCKS REPACKED. THE SUBJECT LAND WILL BE RESTORED TO AS NEAR ORIGINAL PRODUCTIVITY AND CONDITION.
2. WEEDS ON THE EASEMENT WILL BE CONTROLLED BY GRANTEE THROUGH THE GROWING SEASON. WEEDS WILL BE MONITORED IN GRASS LAND SEEDING UNTIL A GRASS STAND HAS BEEN ESTABLISHED AND CROP LAND EASEMENT WILL BE ATTENDED TO BY GRANTEE UNTIL A CROP HAS BEEN PLANTED THE FOLLOWING YEAR.
3. ALL FENCES AND GATES ARE TO BE CLOSED AND/OR FIXED DURING EASEMENT WORK (IF APPLICABLE). THEY ARE TO REPAIRED BACK TO ORIGINAL OR BETTER STATE.
4. IF DURING CONSTRUCTION, LANDOWNER (GRANTOR) OR TENANTS ARE UNABLE TO ACCESS THE FIELD FOR PLANTING, FERTILIZING OR REAPING, GRANTEE WILL PREPARE A TEMPORARY APPROACH TO ACCESS THE CROP (IF NEEDED).
5. SHOULD THE R.O.W. BECOME EXCEEDINGLY WET, TO WHERE CONSTRUCTION EQUIPMENT IS CREATING GREATER THAN 12" RUTS, APPROPRIATE MATTING OR OTHER PRECAUTIONS WILL BE USED UNTIL AREAS DRY OUT.
6. ALL TRASH, INCLUDING CONSTRUCTION MATERIALS, AND ITEMS NOT NATURAL TO THE AREA WILL BE CLEANED UP WHEN CONSTRUCTION ON R.O.W. IS COMPLETE, IF NOT PRIOR TO END OF CONSTRUCTION.

LANDOWNER STIPULATIONS

TRACT ID	OWNERS NAME	STIPULATIONS
001	HESS CORPORATION EXPLORATION & PRODUCTION	NO ADDITIONAL STIPULATIONS
002	DILLAND, RAYMOND	NO ADDITIONAL STIPULATIONS
003	DAVIDSON, MARY C.	1. ACCESS RESTRICTIONS: A. NO WINTER CONSTRUCTION. CALL RYAN PRIOR TO CONSTRUCTION. 2. SURVEY RESTRICTIONS: N/A 3. CONSTRUCTION STIPULATIONS: A. PICK UP ALL ROCKS AND HAUL OFF PROPERTY. 4. RECLAMATION STIPULATIONS: A. THIS PROPERTY IS CULTIVATED. NO SEEDING REQUIRED. B. FOLLOW UP WITH MARY DAVIDSON & RYAN DAVIDSON FOR TWO YEARS FOLLOWING PIPELINE CONSTRUCTION TO GO OVER RECLAMATION.
004	DAVIDSON, RYAN M. & JENICE	1. ACCESS RESTRICTIONS: A. NO WINTER CONSTRUCTION. CALL RYAN PRIOR TO CONSTRUCTION. 2. SURVEY RESTRICTIONS: N/A 3. CONSTRUCTION STIPULATIONS: A. PICK UP ALL ROCKS AND HAUL OFF PROPERTY. 4. RECLAMATION STIPULATIONS: A. THIS PROPERTY IS CULTIVATED. SEED MIX REQUIRED FROM STA. 44+17.0 TO STA. 54+00.0. B. SEED MIX PER NORTH DAKOTA BOARD OF UNIVERSITY AND SCHOOL LANDS NATIVE GRASS SEEDING SPECIFICATIONS. C. FOLLOW UP WITH RYAN DAVIDSON FOR TWO YEARS FOLLOWING PIPELINE CONSTRUCTION TO GO OVER RECLAMATION.

ISSUED FOR REVIEW

NO	DATE	DESCRIPTION	DRAWN BY	CHK'D BY	APPV'D BY
B	3/15/16	RE-ISSUED FOR REVIEW	TMM	CCR	MLM
A	2/9/16	ISSUED FOR REVIEW	TMM	CCR	MLM

REVISIONS

DRAWING NUMBER | TITLE

REFERENCE DRAWINGS

811 Know what's below. Call before you dig.

NORTH DAKOTA ONE CALL

CH2MHILL

HESS CORPORATION
EXPLORATION & PRODUCTION

NORTH DAKOTA PRODUCTION
BEAVER LODGE BAKKEN
NDP-BLBAK-PPL-WOP-01005

ETP PIPELINE PROJECT

STIPULATION SHEET
GENERAL & LANDOWNER STIPULATIONS

DRAWN BY:	DESGN BY:	CHECKED BY:	APPRVD BY:	DATE:	SCALE:
TMM	TMM	CCR	MLM	01/28/16	N/A

SIZE	DRAWING No.	HESS DRAWING No.	REV
B		NDP-BLBAK-PPL-ALS-01063	B

PIPELINE CROSSING LIST

ETP PIPELINE PROJECT							
STATION	DESCRIPTION	GIS DATA	SURVEYED	SIZE (IN.)	MATERIAL	OWNER	SOURCE
0+77.2	AERIAL POWER		X				
0+78.8	EXISTING ELECTRICAL POWER	X				MOUNTRAIL/WILLIAMS ELECTRIC CO-OP	
4+27.2	EXISTING PIPELINE - OIL	X		8		HILAND	SDATA
4+76.8	EXISTING PIPELINE		X			HILAND	
6+01.9	EXISTING PIPELINE - FUEL GAS	X		4.5	STEEL		AS-BUILT ALIGNMENT SHEET
6+03.4	EXISTING PIPELINE - SALES GAS - ABANDONED PIPELINE	X		10.75			AS-BUILT ALIGNMENT SHEET
6+69.8	EXISTING PIPELINE		X			HESS	
6+89.5	EXISTING PIPELINE - SALES GAS	X		10.75			AS-BUILT ALIGNMENT SHEET
6+90.5	FIBER OPTIC - HESS TELECOMMUNICATIONS	X					SURVEY GRADE
6+91.0	EXISTING PIPELINE - OIL	X		14	STEEL	HESS	AS-BUILT ALIGNMENT SHEET
6+92.5	EXISTING PIPELINE - NATURAL GAS	X					MAPPING GRADE GPS
6+93.1	EXISTING PIPELINE		X			HESS	
6+94.3	EXISTING PIPELINE -OIL	X		12	STEEL	HESS	MAPPING GRADE GPS
7+34.0	EXISTING PIPELINE - OIL	X		8.625	STEEL		AS-BUILT ALIGNMENT SHEET
28+55.3	EXISTING PIPELINE - ABANDONED	X		10.75			AS-BUILT ALIGNMENT SHEET
28+57.8	EXISTING PIPELINE - FUEL GAS	X		4.5	STEEL		AS-BUILT ALIGNMENT SHEET
31+37.5	EXISTING PIPELINE		X			HESS	
33+95.9	EXISTING PIPELINE		X			HESS	
35+46.2	EXISTING PIPELINE - FUEL GAS	X		4.5	STEEL		AS-BUILT ALIGNMENT SHEET
35+48.0	EXISTING PIPELINE - ABANDONED	X		10.75			AS-BUILT ALIGNMENT SHEET
44+16.8	EXISTING PIPELINE - ABANDONED OIL	X		4.5			AS-BUILT ALIGNMENT SHEET
45+62.6	EXISTING PIPELINE		X			HESS	
48+26.0	EXISTING PIPELINE	X		8	STEEL	BANNER	SDATA
48+26.1	EXISTING PIPELINE - OIL	X		8		HILAND	SDATA
48+27.8	EXISTING PIPELINE - OIL		X	8		HILAND	
56+06.3	EXISITNG PIPELINE		X			TESORO	
56+19.3	EXISTING PIPELINE		X			TESORO	

ISSUED FOR REVIEW

DRAWING NUMBER	TITLE
REFERENCE DRAWINGS	

811 Know what's below. Call before you dig.

NORTH DAKOTA ONE CALL

NO	DATE	DESCRIPTION	DRAWN BY	CHK'D BY	APPV'D BY
A	3/15/16	ISSUED FOR REVIEW	TMM	CCR	MLM

REVISIONS

CH2MHILL

HESS CORPORATION
EXPLORATION & PRODUCTION

NORTH DAKOTA PRODUCTION
BEAVER LODGE BAKKEN
NDP-BLBAK-PPL-WOP-01005

ETP PIPELINE PROJECT

PIPELINE ALIGNMENT SHEET
PIPELINE CROSSING LIST

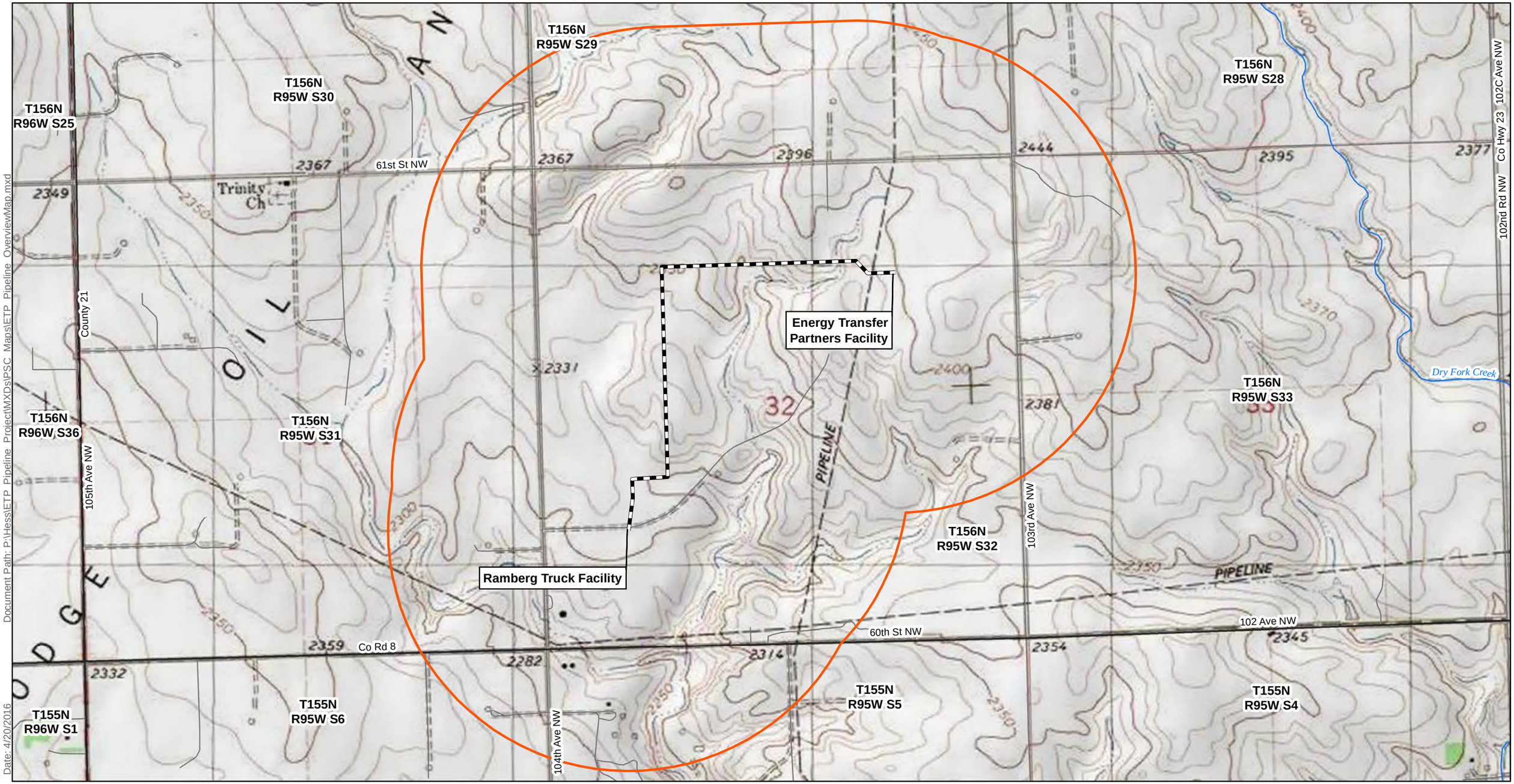
DRAWN BY:	DESGN BY:	CHECKED BY:	APPRVD BY:	DATE:	SCALE:
TMM	TMM	CCR	MLM	3/14/16	N/A

SIZE	DRAWING No.	HESS DRAWING No.	REV
B		NDP-BLBAK-PPL-ALS-01064	A

K:\Jobs\Hess\2015 Projects\ETP Pipeline\MAPPING\PIPELINE CROSSING LIST\NDP-BLBAK-PPL-ALS-XXXXX.dwg 3-15-16 04:25:26 PM tmmaloney

Appendix B

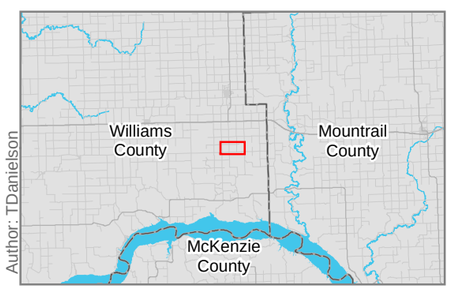
Project Maps



Document Path: P:\Hess\ETP Pipeline ProjectMXDs\PSC Maps\ETP Pipeline OverviewMap.mxd

Date: 4/20/2016

Author: TDanielson



- Milepost
- Valves
- Proposed Alignment
- Corridor (1 mile)
- NHD Flowline
- NHD Waterbody

Map not to scale, for environmental review purposes only.

N

0 0.125 0.25 0.5 Miles

1:12,000

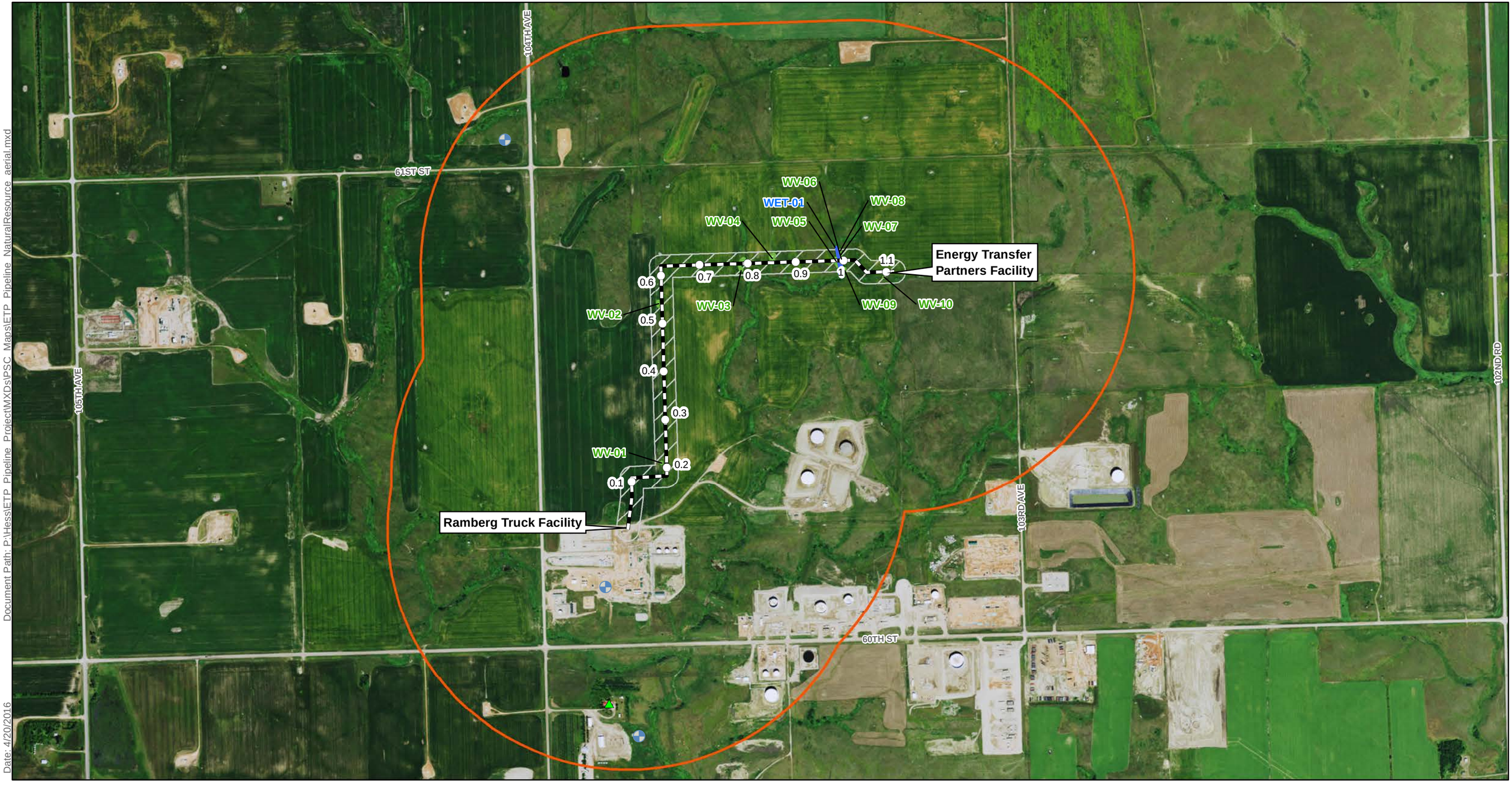
E3 Environmental
Enhancing Execution with Experience

Hess North Dakota Export Logistics LLC

ETP Pipeline Project

Overview Map

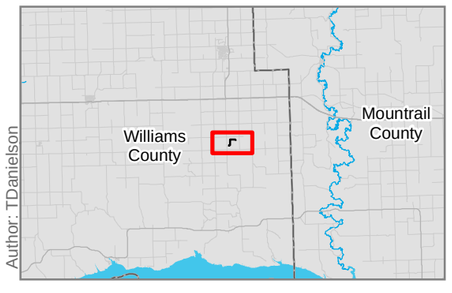
Williams County, North Dakota



Document Path: P:\Hess\ETP Pipeline Project\MXDs\PSC Maps\ETP Pipeline NaturalResource aerial.mxd

Date: 4/20/2016

Author: TDanielson



- Milepost
- Centerline
- Corridor (1 mile)
- Environmental Survey Corridor
- ND Well Data
- Potentially Occupied Structure
- Potentially Occupied Structure (w/in 500ft)
- Surveyed Wetlands
- Surveyed Woody Vegetation

*Refer to Natural Resource Report for detailed maps and tables.

N

E3 Environmental
Enhancing Execution with Experience

0 500 1,000 2,000 Feet

1:12,000

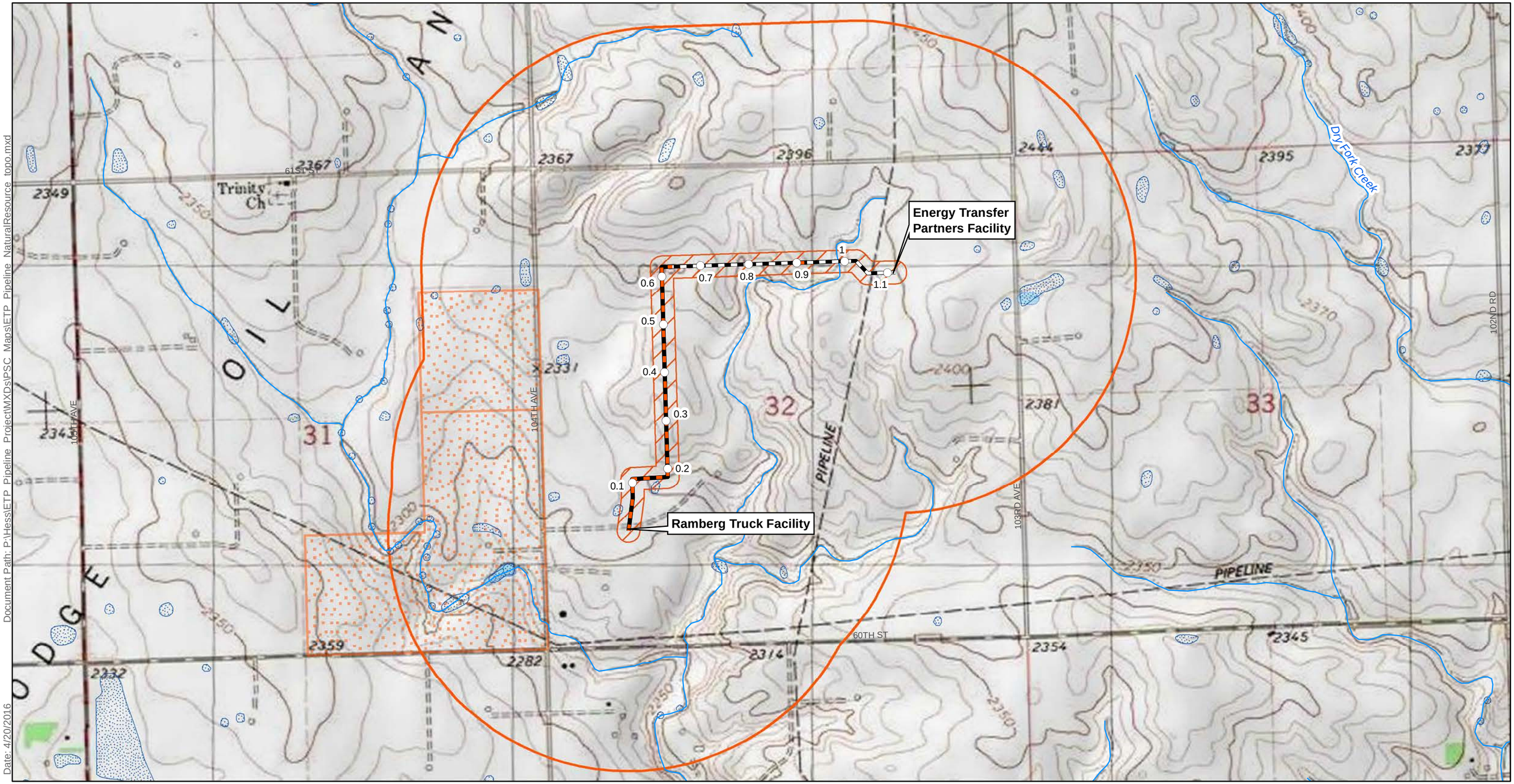
Map not to scale, for environmental review purposes only.

Hess North Dakota Export Logistics LLC

ETP Pipeline Project

Siting Criteria
Natural Resource - Aerial Map

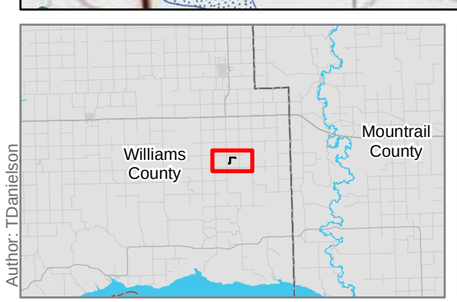
Williams County, North Dakota



Document Path: P:\Hess\ETP Pipeline ProjectMXDs\PSC Maps\ETP Pipeline NaturalResource topo.mxd

Date: 4/20/2016

Author: TDanielson



- Centerline
- Co-location
- Milepost
- Valve
- Corridor (1 mile)
- Environmental Survey Corridor
- NHD Waterway
- NHD Waterbody
- NWI Wetland

Criteria Data

- Federal Land
- State Land
- Native American Land
- Abandoned Mine
- PLOTS Land
- ICBM Facility
- ICBM Direct Line to Control Facility
- ND Mineral Trust Lands
- NDGS Landslide Deposits

N

E3 Environmental
Enhancing Execution with Experience

0 500 1,000 2,000 Feet

1:12,000

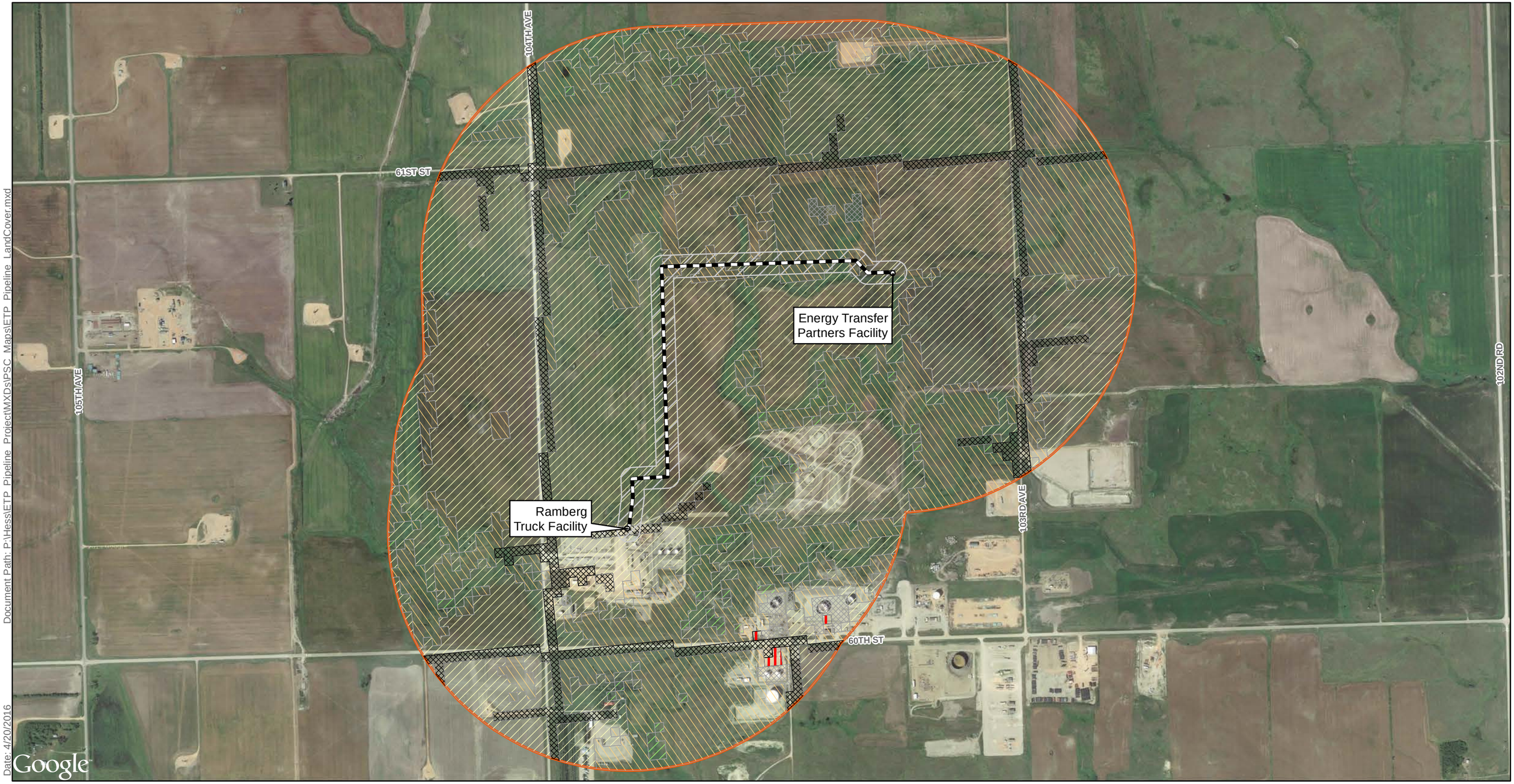
Map not to scale, for environmental review purposes only.

Hess North Dakota Export Logistics LLC

ETP Pipeline Project

Siting Criteria
Natural Resource - Topo Map

Williams County, North Dakota



Document Path: P:\Hess\ETP Pipeline ProjectMXDs\PSC Maps\ETP Pipeline LandCover.mxd

Date: 4/20/2016

Author: TDanielson

- Milepost
- Centerline
- Corridor (1 mile)
- Environmental Survey Corridor

GAP Land Cover

- Agricultural Vegetation
- Developed & Other Human Use
- Forest & Woodland
- Recently Disturbed or Modified
- Semi-Desert
- Shrubland & Grassland

*Refer to Natural Resource Report for detailed maps and tables.

N

E3 Environmental — Enhancing Execution with Experience

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

Hess North Dakota Export Logistics LLC

ETP Pipeline Project

Siting Criteria
Land Cover Map

Williams County, North Dakota

Appendix C

Agency Consultations

Hess North Dakota Export Logistics LLC ETP Pipeline Project Agency Consultations and Communications

Agency		Project Notification Sent	Type of Communication	Response Received	Agency Response Discussion	
					Certificate of Corridor Compatibility Section(s)	Route Permit Section(s)
U.S. Fish and Wildlife Service (USFWS)		3/31/16	Letter	Pending	2.3.1	2.3.4.1 2.3.5 5.1
North Dakota Game and Fish Department (NDGFD)		3/31/16	Letter	Pending	2.3.2	NA
North Dakota Parks and Recreation (NDPRD)		3/31/16	Letter	4/11/16	2.3.3	4.1.10
North Dakota Department of Trust Lands (NDDTL)	Surface Management Division	4/1/16	E-mail	4/1/16	2.3.4	NA
	Minerals Management Division	4/1/16	E-mail	4/4/16	2.3.4	NA
North Dakota State Water Commission		3/31/16	Letter	4/11/16	2.3.5	4.1.10
North Dakota State Historic Preservation Office (NDSHPO)		4/6/16	Letter	4/8/16	2.3.6	2.3.6
Western Area Water Supply Authority (WAWSA)		4/7/16	E-mail	Pending	2.3.7	NA
Williams County Water Resource Board		3/31/16	Letter	Pending	2.3.8	NA
Williams County Weed Control Board		4/1/16	Letter	Pending	2.3.9	NA

Consultation Maps

Maps utilized for all Agency Consultations

Document Path: P:\Hess\ETP_Pipeline_Project\MXDs\ConsultationMaps\Hess_AgencyNotification_aerial.mxd

Date: 3/30/2016

Author: TDanielson

- Proposed Route
- Corridor
- ND Mineral Trust Land
- NHD Waterway
- NWI Wetland
- NHD Waterbody

N

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0 0.25 0.5 1 Miles

1:15,000

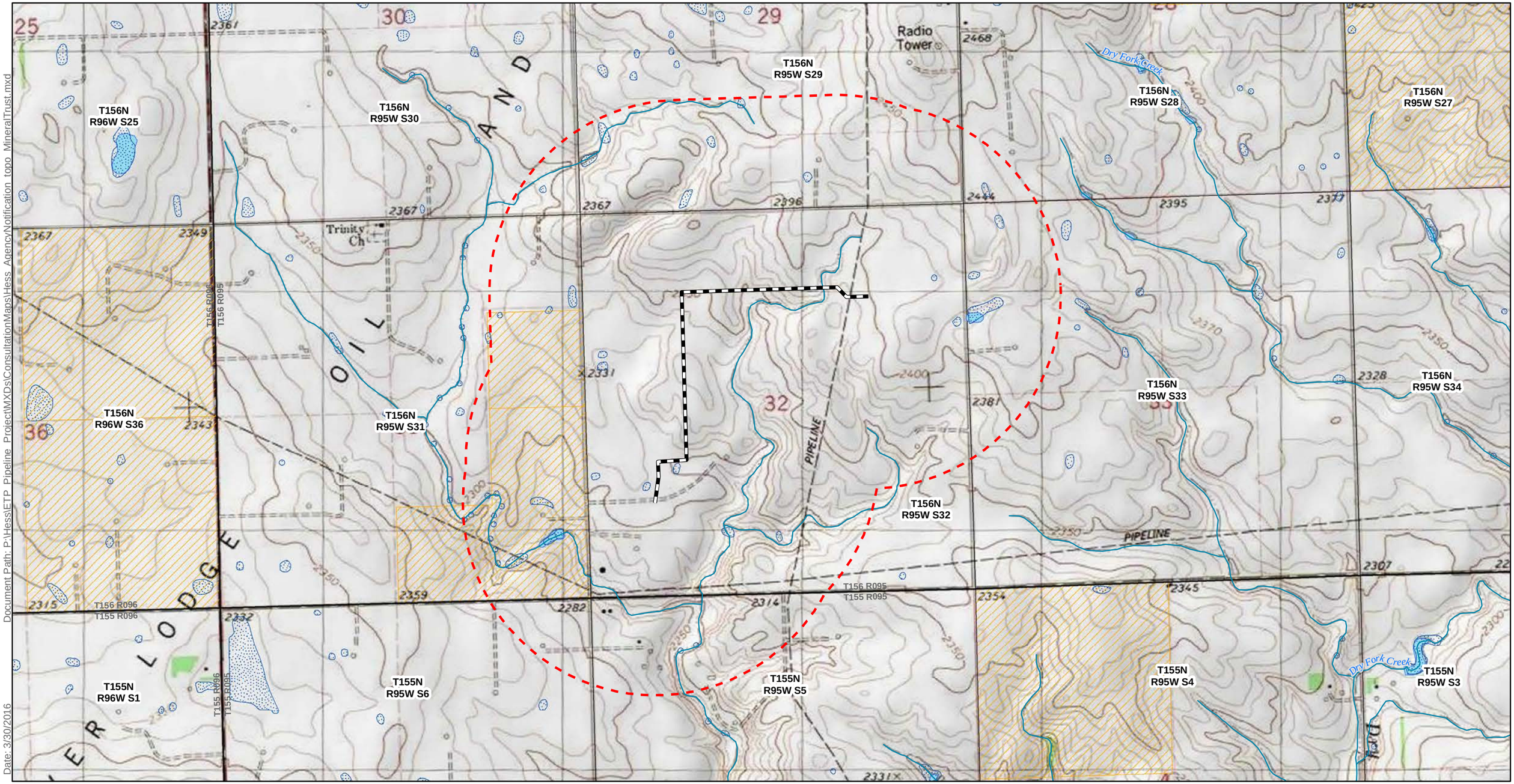
Map not to scale, for environmental review purposes only.

Hess Corporation

ETP Pipeline Project

Consultation Map - Topo

Williams County, ND



Proposed Route
Corridor
ND Mineral Trust Land
NHD Waterway
NWI Wetland
NHD Waterbody

N

0 0.25 0.5 1 Miles

1:15,000

Map not to scale, for environmental review purposes only.

E3 Environmental
Enhancing Execution with Experience

Hess Corporation

ETP Pipeline Project

Consultation Map - Topo

Williams County, ND

Author: TDanielson
Date: 3/30/2016
Document Path: P:\Hess\ETP Pipeline Project\MXDs\ConsultationMaps\Hess AgencyNotification topo MineralTrust.mxd

U.S. Fish and Wildlife Service

Consultation

RECORD OF TELEPHONE CONVERSATION

Contact: Jessica Johnson, USFWS-Bismarck	
Phone No: 701-250-4415	
Date: April 29, 2016	**Time:** 10:15 am CST
Prepared By: Katie Schmidt, Sr. Consultant, E3 Environmental, LLC	
Subject: Hess ETP Pipeline Project Consultation Letter	

Schmidt received a call from Johnson regarding the project consultation/notification letter submitted to the USFWS for review and comment regarding the Hess ETP Pipeline Project. Johnson asked if the project had a federal nexus, Schmidt confirmed that it did not, however that the project does fall under the purview of the North Dakota Public Service Commission's siting rules.

Johnson stated that in the absence of a federal nexus, the USFWS typically does not provide response to ND PSC project consultation/notifications unless the agency has a concern. As such, no response will be provided for the Hess ETP Pipeline Project.

March 31, 2016

Mr. Scott Larson, Field Supervisor
U.S. Fish and Wildlife Service
North Dakota Field Office
3425 Miriam Avenue
Bismarck, ND 58501-7926

Hess Corporation – ETP Pipeline Project
Project Notification and Request for Review

The Hess Corporation (Hess) is planning the ETP Pipeline Project (Project). The Project will result in the construction of an approximately 1.1 mile, 12-inch diameter, crude oil pipeline. The pipeline will cross Township 156N, Range 95W, Section 32 in Williams County, North Dakota. The Project is under the jurisdiction of the North Dakota Public Service Commission (PSC).

E3 Environmental, LLC (E3), on behalf of Hess, submits this information and respectfully requests the United States Fish and Wildlife Service (USFWS) to review a 1-mile wide study area, which is centered upon the Project alignment. Project location maps are enclosed.

On March 28, 2016, E3 reviewed the USFWS Information for Planning and Conservation (IPaC) system for the purpose of identifying threatened and endangered species, designated critical habitat, proposed critical habitat, Migratory Bird Treaty Act (MBTA) compliance, and other natural resource issues of concern that may occur within Williams County. The results include:

Federally Listed Species
Interior least tern (*Sternula antillarum*) – Endangered
Whooping crane (*Grus americana*) – Endangered
Pallid sturgeon (*Scaphirhynchus albus*) – Endangered
Gray wolf (*Canis lupus*) – Endangered
Piping plover (*Charadrius melodus*) – Threatened
Red Knot (*Calidris canutus rufa*) – Threatened
Northern Long-eared Bat (*Myotis septenrionnalis*) – Threatened

E3 has reviewed the available data describing the life history, critical habitat, and conservation measures associated with each species to evaluate the potential effects of the Project on these resources. The results of this analysis are as follows:

Interior least tern: The interior populations of the least tern have historically been associated with large river systems, such as the Missouri River, for breeding and migratory habitats. Breeding birds are known to congregate in colonies, utilizing sandbar habitat common to larger rivers. The least tern is typically found in North Dakota during the late spring and summer breeding season. The Project is approximately 9 miles from the Missouri River. Desktop analysis concluded that no

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St. Paul, MN 55102

suitable habitat is present within the Study Area; therefore, impacts to the least tern are not anticipated.

Whooping crane: The whooping crane is a large bodied waterbird that breeds in Canada and winters in the Gulf of Mexico. This species has been closely studied and monitored in recent years due to its small population. North Dakota provides migratory habitat for the species, providing roosting and feeding opportunities during migration. This species prefers larger wetland complexes for roosting habitat, typically using adjacent uplands for foraging opportunities. Roosting habitat is not present within the Study Area.

Precautionary measures would be implemented if whooping cranes are sighted in or near the Project area. Hess would suspend all heavy equipment operation should a whooping crane be spotted within 0.5 miles of the Project area. Heavy equipment activities would resume upon the departure of the individual(s). The USFWS would be notified of crane sightings. 2016 migration periods are estimated to occur from April 1st through June 1st, and September 15th through November 31st. The project schedule would likely avoid peak migration periods, and as such, impacts to this species are not likely.

Pallid sturgeon: The pallid sturgeon's preferred habitat includes the benthic environment associated with swift waters of large turbid, free-flowing rivers with braided channels, dynamic flow patterns, periodic flooding of terrestrial habitats, and requiring extensive micro habitat diversity. The species inhabits the Missouri and Mississippi Rivers from Montana to Louisiana. The Project is approximately 9 miles from the Missouri River. Desktop analysis concluded that no suitable habitat is present within the Study Area; therefore, impacts to the pallid sturgeon are not anticipated.

Gray wolf: The gray wolf is a large carnivore that through conservation measures has experienced measurable population recovery, particularly in the Great Lakes states of the upper Midwest. As populations rebound, individuals may break from packs to explore opportunities to establish packs in unoccupied territory. Roaming individuals can cover great distances without establishing viable breeding populations in previously unoccupied habitat(s). This species is not tolerant of human disturbance and will tend to avoid interaction with humans. The activities associated with construction would likely serve as a deterrent to this species. Therefore, this Project will have no impact on the gray wolf.

Piping plover: The piping plover is a small shore bird, typically associated with shorelines along small alkaline lakes, large reservoir beaches, and river islands and adjacent sand pits. Breeding birds select wide beaches with highly clumped vegetation covering less than 25% of the area. Current breeding range on the Northern Great Plains extends south along major prairie rivers including the Missouri River, and in alkali wetlands including those in North Dakota. The Missouri River, the nearest designated critical habitat for the piping plover, is located approximately 9 miles south of the proposed Project. Breeding season in North Dakota occurs mid-April through August. Desktop analysis has concluded that no suitable habitat is present within the Study Area; therefore, impacts to the piping plover or its designated critical habitat are not anticipated.

Rufa red knot: The Rufa red knot migrates between breeding grounds in the Arctic and wintering grounds in the Southern Hemisphere. A significant factor threatening the Rufa

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St. Paul, MN 55102

red knot is destruction and modification of its habitat due to beach erosion and shoreline protection projects. Migratory behavior and habitat requirements of this species are poorly understood particularly for those populations occupying the midcontinent flyways. Inland stopovers include the Mississippi Valley, Great Lakes, and Great Plains. Desktop analysis has concluded that no suitable habitat is present within the Study Area; therefore impacts to the Rufa red knot are not anticipated.

Northern long-eared bat: The northern long-eared bat (NLEB) roosts underneath bark, in cavities, or in crevices of both live and dead trees. Populations have also been found in cool environments such as caves and mines, and prefer to spend winter hibernating in locations with high humidity and no air currents. Breeding occurs in late summer or early fall in maternity colonies where females give birth around the same time, which may occur anywhere from late May to late July. The Final 4(d) rule exempts incidental take of the NLEB from all activities occurring in areas that have not been affected by white-nose syndrome. The Study Area occurs outside of the USFWS white-nose syndrome buffer zone; as such, there are no restrictions for Project activities.

USFWS Managed Lands:

Conservation programs such as Waterfowl Production Areas and wetland and grassland easements represent an important tool used by USFWS to identify and manage high quality wildlife habitat. A review of public records did not identify any of these USFWS managed lands in the Project study area.

Migratory Bird Consultation:

USFWS administers various wildlife related mandates of national concern including the MBTA. Hess understands that unlike the Endangered Species Act, the MBTA has no provisions for the allowance of a take and therefore compliance may best be achieved by avoiding or minimizing the potential to interact with migratory species during the active breeding season. Hess also understands that in North Dakota, the breeding season is typically defined as occurring annually from February 1 through July 15.

Enclosed, please find the topographic map and the aerial photo of the Project site and associated Study Area. These have been provided to assist the Department's review of the Project.

We appreciate your assistance with this request and look forward to your timely review and comments on this Project. E3 has been retained by Hess to provide environmental consulting support for this Project. Should you have any questions or require additional information, please contact me at 651-282-0652 or kschmidt@go2e3.com.

Sincerely,

Katie Schmidt

Katie Schmidt, Senior Consultant
E3 Environmental, LLC
871 Jefferson Ave
St. Paul, MN 55102

North Dakota Game and Fish Department

Consultation

Chris Schmidt

From: Chris Schmidt
Sent: Thursday, April 21, 2016 3:27 PM
To: 'glink@nd.gov'
Cc: Katie Schmidt (KSchmidt@go2e3.com)
Subject: Hess Corporation-ETP Pipeline Project: NDGFD Consultation
Attachments: HC_ETP Pipeline Project_NDGF Consultation_Final_03312016.pdf

Mr. Link,

My name is Chris Schmidt and work with Katie Schmidt at E3 Environmental, LLC. I am emailing you today to confirm you received the Hess Corporation ETP Pipeline Project consultation letter and maps that was sent to you on 3/31/2016 via Fedex (see attached). Please let me know if you have any questions or if you need any additional information to assist with your review of this project's consultation.

Thank you,

Chris Schmidt, GIT
Consultant
E3 Environmental, LLC
cschmidt@go2e3.com
O: 651.282.0654
M: 651.315.6066
871 Jefferson Avenue
St. Paul, MN 55102
www.go2e3.com

March 31, 2016

Mr. Greg Link, Chief
Conservation and Communication Division
North Dakota Game and Fish Department
100 N. Bismarck Expressway
Bismarck, ND 58501-5095

Hess Corporation – ETP Pipeline Project
State Conservation Priority Species Consultation

The Hess Corporation (Hess) is planning the ETP Pipeline Project (Project). The Project will result in the construction of an approximately 1.1 mile, 12-inch diameter, crude oil pipeline. The pipeline will cross Township 156N, Range 95W, Section 32 in Williams County, North Dakota. The Project is under the jurisdiction of the North Dakota Public Service Commission (PSC).

E3 Environmental, LLC (E3), on behalf of Hess, submits this information and respectfully requests the North Dakota Game and Fish Department (Department) to review a 1-mile wide study area, which is centered upon the Project alignment.

As indicated above, the purpose of this correspondence is to provide the Department notice of the Project such that the environmental topics that fall under the purview of the Department that are also relevant to the PSC's siting requirements for Energy Conversion facilities are administrated properly. It is our understanding that the Department curates information on the presence or absence of State Conservation Priority Species.

Enclosed please find the topographic map and the aerial photo of the Project site and associated Study Area. These have been provided to assist the Department's review of the Project.

We appreciate your assistance with this request and look forward to your timely review and comments on this Project. E3 has been retained by Hess to provide environmental consulting support for this Project. Should you have any questions or require additional information, please contact me at 651-282-0652 or kschmidt@go2e3.com.

Sincerely,
Katie Schmidt

Katie Schmidt, Senior Consultant
E3 Environmental, LLC
871 Jefferson Ave
St. Paul, MN 55102

North Dakota Parks and Recreation Department

Consultation

Jack Dalrymple, Governor
Mark A. Zimmerman, Director

1600 East Century Avenue, Suite 3
Bismarck, ND 58503-0649
Phone 701-328-5357
Fax 701-328-5363
E-mail parkrec@nd.gov
www.parkrec.nd.gov

April 11, 2016

Katie Schmitt
E3 Environmental, LLC
871 Jefferson Ave.
St. Paul, MN 55102

Re: Hess Corporation – ETP Pipeline

Dear Mr. Schmitt:

The North Dakota Parks and Recreation Department has reviewed the above referenced project for the proposed construction of 1.1 mile crude oil pipeline in Williams County.

Our agency scope of authority and expertise covers recreation and biological resources (in particular rare plants and ecological communities). The project as defined does not affect state park lands that we manage or Land and Water Conservation Fund recreation projects that we coordinate.

The North Dakota Natural Heritage biological conservation database has been reviewed to determine if any 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, there are no documented significant ecological community occurrences or plant and animal species of concern in our database within project area. Because this information is not based on a comprehensive inventory, there may be species of concern or otherwise significant ecological communities in the area that are not represented in the database. The lack of data for any project area cannot be construed to mean that no significant features are present. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources.

The Department recommends that the project be accomplished with minimal impacts and that all efforts be made to ensure that critical habitats not be disturbed in the project area to help secure rare species conservation in North Dakota. Regarding any reclamation efforts, we recommend that any impacted areas be revegetated with species native to the project area.

We appreciate your commitment to rare plant, animal and ecological community conservation, management and inter-agency cooperation to date. For additional information please contact me at (701-328-5370 or kgduttenhefner@nd.gov). Thank you for the opportunity to comment on this proposed project.

Sincerely,

Kathy Duttenhefner

Kathy Duttenhefner, Coordinator
Natural Resources Division

R.USNDNHI*2016-006KD1/26/2016KD1/26/2016

March 31, 2016

Ms. Kathy Duttenhefner, Coordinator
Natural Resources Division
North Dakota Department of Parks and Recreation
1600 East Century Avenue, Suite 3
Bismarck, ND 58503-0649

Hess Corporation – ETP Pipeline Project
Natural Heritage Inventory Review
State Park Lands; and Land and Water Conservation Fund Review

The Hess Corporation (Hess) is planning the ETP Pipeline Project (Project). The Project will result in the construction of an approximately 1.1 mile, 12-inch diameter, crude oil pipeline. The pipeline will cross Township 156N, Range 95W, Section 32 in Williams County, North Dakota. The Project is under the jurisdiction of the North Dakota Public Service Commission (PSC).

E3 Environmental, LLC (E3), on behalf of Hess, submits this information and respectfully requests the North Dakota Parks and Recreation Department (Department) to review a 1-mile wide study area, which is centered upon the Project alignment.

As indicated above, the purpose of this request is to provide the Department notice of the Project, and to ensure the environmental topics that fall under the purview of the Department, which are also relevant to the PSC's siting requirements for Energy Conversion facilities, are administrated properly. It is our understanding that the Department administers the following state programs:

- State Park Lands
- Land and Water Conservation Fund
- Natural Heritage Inventory

Enclosed, please find the topographic map and aerial photo of the Project Site and associated Study Area. These have been provided to assist the Department's review of the Project for the presence or absence of any lands, projects, and sensitive species.

We appreciate your assistance with this request and look forward to your timely review and comments on this Project. E3 has been retained by Hess to provide environmental consulting support for this Project. Should you have any questions or require additional information, please contact me at 651-282-0652 or kschmidt@go2e3.com.

Sincerely,

Katie Schmidt

Katie Schmidt, Senior Consultant
E3 Environmental, LLC
871 Jefferson Ave
St. Paul, MN 55102

Consultation

From: Haupt, Michael L.
To: Chris Schmidt
Cc: Katie Schmidt
Subject: RE: Hess Corporation: ETP Pipeline Project & Surface Trust Lands Consultation
Date: Friday, April 1, 2016 3:04:57 PM
Attachments: image001.png

Chris,

Good afternoon! There are no North Dakota School Trust lands involved in the proposed project. Thanks.

Michael L. Haupt
Land Management Professional, CPRM
North Dakota Department of Trust lands
1707 Nth 9th Street
Bismarck ND 58506-5523
701-328-1916
mhaupt@nd.gov

Note: You can track the real time status of your right-of-way application 24/7 at http://www.land.nd.gov/surface/right-of-way.aspx using either the ROW number or by entering at least the first three letters of the company name. By checking this site you can find the name, telephone number and email address of the person working on the application as well as its current status in real time.

From: Chris Schmidt [mailto:CSchmidt@go2e3.com]
Sent: Friday, April 01, 2016 12:15 PM
To: Haupt, Michael L. <mhaupt@nd.gov>
Cc: Katie Schmidt <KSchmidt@go2e3.com>
Subject: Hess Corporation: ETP Pipeline Project & Surface Trust Lands Consultation

Dear Mr. Haupt,

E3 Environmental, LLC (E3) has been retained by Hess Corporation to provide environmental consulting support for the ETP Pipeline Project (see attached). For your convenience, E3 is submitting an electronic copy of the project notification letter and maps to assist in your review of the Project.

Please let me know if I can be of further assistance, or if you have any questions or concerns regarding the attached file.

Thank you for your time and consideration.

Sincerely,

Chris Schmidt, GIT
Consultant
E3 Environmental, LLC
cschmidt@go2e3.com
O: 651.282.0654
M: 651.315.6066
871 Jefferson Avenue

St. Paul, MN 55102
www.go2e3.com

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March 31, 2016

Mr. Michael Haupt, Land Management Professional
North Dakota Department of Trust Lands
Surface Management Division
1707 North 9th Street, P.O. Box 5523
Bismarck, ND 58506-5523

Hess Corporation – Hess Corporation – ETP Pipeline Project
School Trust Lands Consultation

The Hess Corporation (Hess) is planning the ETP Pipeline Project (Project). The Project will result in the construction of an approximately 1.1 mile, 12-inch diameter, crude oil pipeline. The pipeline will cross Township 156N, Range 95W, Section 32 in Williams County, North Dakota. The Project is under the jurisdiction of the North Dakota Public Service Commission.

E3 Environmental, LLC (E3), on behalf of Hess, submits this information and respectfully requests the North Dakota Department of Trust Lands (Department) to review a 1-mile wide study area, which is centered upon the Project alignment, for the presence or absence of State School Trust Lands. This information will be included in a PSC application for the Project.

Enclosed, please find the topographic map and aerial photo depicting the Project site and associated Study Area. These have been provided to assist the Department's review of the Project.

We appreciate your assistance with this request and look forward to your timely review and comments on this Project. E3 has been retained by Hess to provide environmental consulting support for this Project. Should you have any questions or require additional information, please contact me at 651-282-0652 or kschmidt@go2e3.com

Sincerely,

Katie Schmidt

Katie Schmidt, Senior Consultant
E3 Environmental, LLC
871 Jefferson Ave
St. Paul, MN 55102

Consultation

Chris Schmidt

From: Bement, Allisen C. <abement@nd.gov>
Sent: Monday, April 04, 2016 8:29 AM
To: Chris Schmidt
Cc: Katie Schmidt
Subject: RE: Hess Corporation: ETP Pipeline Project & Mineral Management Consultation

Chris,

We agree that the data provided fairly represents the approximate location of the pipeline project as indicated by E3 Environmental and the proximity of mineral interests managed by this office to that pipeline, for use in a filing with the PSC in the state of North Dakota.

Allisen Bement, RL
Land Professional
ND Department of Trust Lands
701.328.1952
abement@nd.gov

From: Chris Schmidt [mailto:CSchmidt@go2e3.com]
Sent: Friday, April 01, 2016 12:15 PM
To: Bement, Allisen C. <abement@nd.gov>
Cc: Katie Schmidt <KSchmidt@go2e3.com>
Subject: Hess Corporation: ETP Pipeline Project & Mineral Management Consultation

Dear Ms. Bement,

E3 Environmental, LLC (E3) has been retained by Hess Corporation to provide environmental consulting support for the ETP Pipeline Project (see attached). For your convenience, E3 is submitting an electronic copy of the project notification letter, maps, and shapefiles to assist in your review of the Project.

Please let me know if I can be of further assistance, or if you have any questions or concerns regarding the attached files.

Thank you for your time and consideration.

Sincerely,

Chris Schmidt, GIT
Consultant
E3 Environmental, LLC
cschmidt@go2e3.com

O: 651.282.0654
M: 651.315.6066
871 Jefferson Avenue
St. Paul, MN 55102
www.go2e3.com

March 31, 2016

Ms. Allisen Bement, Land Professional
North Dakota Department of Trust Lands
Mineral Management Division
1707 North 9th Street, P.O. Box 5523
Bismarck, ND 58506-5523

Hess Corporation – ETP Pipeline Project
State Mineral Trust Lands Consultation

The Hess Corporation (Hess) is planning the ETP Pipeline Project (Project). The Project will result in the construction of an approximately 1.1 mile, 12-inch diameter, crude oil pipeline. The pipeline will cross Township 156N, Range 95W, Section 32 in Williams County, North Dakota. The Project is under the jurisdiction of the North Dakota Public Service Commission.

E3 Environmental, LLC (E3), on behalf of Hess, submits this information and respectfully requests the North Dakota Department of Trust Lands (Department) to review a 1-mile wide study area, which is centered upon the Project alignment.

A review of the Project and associated Study Area (see attached) for the presence of State Mineral Trust Lands was conducted using available information at www.land.nd.gov. The results of this search concluded that no State Lands are crossed by the Project, however State Lands parallel the Project in Township 156N, Range 95W, Section 31 in Williams County, which fall within the Study Area of the Project.

Enclosed, please find the USGS Topographic Map that depicts the Project site and associated Study Area, and State Mineral Trust Lands within the Study Area. This has been provided to assist the Department's review of the Project.

We appreciate your assistance with this request and look forward to your timely review and comments on this Project. E3 has been retained by Hess to provide environmental consulting support for this Project. Should you have any questions or require additional information, please contact me at 651-282-0652 or kschmidt@go2e3.com.

Sincerely,

Katie Schmidt

Katie Schmidt, Senior Consultant
E3 Environmental, LLC
871 Jefferson Ave
St. Paul, MN 55102

North Dakota State Water Commission

Consultation

North Dakota State Water Commission

900 EAST BOULEVARD AVENUE, DEPT 770 • BISMARCK, NORTH DAKOTA 58505-0850
701-328-2750 • TDD 701-328-2750 • FAX 701-328-3696 • INTERNET: http://swc.nd.gov

April 11, 2016

Katie Schmidt
E3 Environmental, LLC
871 Jefferson Avenue
St. Paul, MN 55102

Dear Ms. Schmidt:

This is in response to your request for review of environmental impacts associated with the Hess Corporation's ETP Pipeline project. The 1.1 mile, 12-inch diameter, crude oil pipeline project will cross Township 156N, Range 95W, Section 32 in Williams County, ND.

The proposed project has been reviewed by State Water Commission staff and the following comments are provided:

- There are no floodplains identified and/or mapped where this proposed project is to take place. The project takes place in an unmapped portion of Williams County. No floodplain permits are necessary from Williams County relative to the National Flood Insurance Program.

- It is the responsibility of the project sponsor to ensure that local, state and federal agencies are contacted for any required approvals, permits, and easements.

- All waste material associated with the project must be disposed of properly and not placed in identified floodway areas.

Thank you for the opportunity to provide review comments. If you have any questions, please call me at 701-328-4967.

Sincerely,

Linda Weispfenning
Water Resource Planner

LW:dm/1570

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March 31, 2016

Mr. Todd Sando, State Engineer
North Dakota State Water Commission
600 Bismark, ND 58854-0930

Hess Corporation – ETP Pipeline Project
Project Notification and Request for Review

The Hess Corporation (Hess) is planning the ETP Pipeline Project (Project). The Project will result in the construction of an approximately 1.1 mile, 12-inch diameter, crude oil pipeline. The pipeline will cross Township 156N, Range 95W, Section 32 in Williams County, North Dakota. The Project is under the jurisdiction of the North Dakota Public Service Commission (PSC).

E3 Environmental, LLC (E3), on behalf of Hess, submits this information and respectfully requests the North Dakota State Water Commission (NDSWC) to review a 1-mile wide study area, which is centered upon the Project alignment. Project location maps are enclosed.

As indicated above, the purpose of this correspondence is to provide notification of the Project and to provide the NDSWC the opportunity to comment on the Project. It is our understanding that the NDSWC administers water appropriation and sovereign lands permit programs, and may also have relevant information regarding rural water supply systems and projects. Copies of correspondence received in response to this letter will be included in the Corridor Certification and Route Permit application to be filed with the PSC.

We appreciate your assistance with this request and look forward to your timely review and comments on this Project. E3 has been retained by Hess to provide environmental consulting support for this Project. Should you have any questions or require additional information, please contact me at 651-282-0652 or kschmidt@go2e3.com.

Sincerely,

Katie Schmidt

Katie Schmidt, Senior Consultant
E3 Environmental, LLC
871 Jefferson Ave
St. Paul, MN 55102

North Dakota State Historic Preservation Office

Consultation

STATE HISTORICAL SOCIETY OF NORTH DAKOTA

April 8, 2016

Mr. Garrett Knudsen
Senior Archaeologist
E3 Environmental, LLC
871 Jefferson Avenue
St. Paul, MN 55102

ND SHPO REF: 16-0891 COE/PSC Hess Corp "Class I and Class III Cultural Resource Inventory of the ETP Pipeline Project, Williams County, North Dakota," in portions of [T156 R95W Section 32]

Dear Mr. Knudsen,

We reviewed ND SHPO REF: 16-0891 COE/PSC Hess Corp "Class I and Class III Cultural Resource Inventory of the ETP Pipeline Project, Williams County, North Dakota," and find it acceptable. If consulted by a federal agency, we would concur with a "No Historic Properties Affected" determination, provided the project occurs as described and mapped in your letter dated April 2016.

Thank you for the opportunity to review this project. We look forward to project updates. If you have any questions please contact Susan Quinnell, Review and Compliance Coordinator at (701)328-3576 or squinnell@nd.gov

Sincerely,

Claudia J. Berg
State Historic Preservation Officer (North Dakota)

April 6, 2016

Susan Quinnell
Review and Compliance Coordinator
State Historic Society of North Dakota
North Dakota Heritage Center
612 East Boulevard Avenue
Bismarck, ND 58505-0830
Phone: (701) 328-3576
Email: squinnell@nd.gov

Hess Corporation – Class I and Class III Cultural Resources Inventory of the ETP Pipeline Project, Williams County, North Dakota-Report

Dear Ms. Quinnell,

In March, 2016, E3 Environmental, LLC (E3) conducted a Class I and a Class III cultural resources inventory for the proposed Hess Corporation ETP Pipeline Project in Williams County, North Dakota. The survey area is comprised of a total of 34.7 acres. No previously recorded or unrecorded cultural resources were documented during field survey and no additional investigation is recommended. Enclosed is a hard copy of the Class I and Class III Cultural Resources Inventory of the ETP Pipeline Project, Williams County, North Dakota.

Please contact me with any questions or comments, as needed.

Sincerely,

Garrett Knudsen
Senior Archaeologist
E3 Environmental, LLC
871 W Jefferson Ave
St Paul, MN 55102
Direct: (651) 900-0501
gknudsen@go2e3.com

Enclosures: Hard copy of Class I and Class III Cultural Resources Inventory of the ETP Pipeline Project, Williams County, North Dakota.

Western Area Water Supply Authority

Consultation

Katie Schmidt

To: Jacob.Monson@wawsp.com
Cc: William McCarthy; Chris Schmidt
Subject: Hess Corporation-ETP Pipeline Project Notification
Attachments: Hess_AgencyNotification_aerial.pdf; Hess_AgencyNotification_topo_MineralTrust.pdf; ETP_Pipeline_shapefiles.zip

Dear Mr. Monson

I am providing you notification for the proposed construction of the Hess Corporation (Hess) ETP Pipeline Project (Project). The Project will result in an approximately 1.1-mile, 12-inch diameter crude oil pipeline and falls under the jurisdiction of the North Dakota Public Service Commission's siting authority. The purpose of this correspondence is to afford the Western Area Water Supply Authority (WAWSA) the opportunity to assess the Project and associated Corridor. In Williams County, North Dakota, the pipeline crosses Township 156N, Range 95W, Sections 32. The proposed Project is also depicted on the attached topographic and aerial maps. These and the attached data (coordinate system WGS 84) have been provided to assist the Authority's review of the Project for any concerns.

In closing, E3 Environmental, LLC has been retained by Hess to provide environmental consulting support for the Project. Should you have any questions or require additional information, please contact me either by phone or email. Per previous communication, see attached, no response from your agency indicates that the WAWSA has no concerns with the project.

Regards,

Katie

Katie Schmidt, EIT
Senior Consultant/Operations Manager
E3 Environmental, LLC
kschmidt@go2e3.com
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871 Jefferson Avenue
St. Paul, MN 55102
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E3 ENVIRONMENTAL™
Enhancing Execution with Experience™

Williams County Water Resource Board

Consultation

March 31, 2016

Mr. Roger Gunlikson, Vice Chairman
Williams County Water Resource Board
205 E Broadway, PO Box 2047
Williston, ND 58802-2047

Hess Corporation – ETP Pipeline Project
Project Notification and Request for Review

The Hess Corporation (Hess) is planning the ETP Pipeline Project (Project). The Project will result in the construction of an approximately 1.1 mile, 12-inch diameter, crude oil pipeline. The pipeline will cross Township 156N, Range 95W, Section 32 in Williams County, North Dakota. The Project is under the jurisdiction of the North Dakota Public Service Commission (PSC).

E3 Environmental, LLC (E3), on behalf of Hess, submits this information and respectfully requests the Williams County Water Resource Board to review and identify water sources within a 1-mile wide study area, which is centered upon the Project alignment. Project location maps are enclosed.

As indicated above, the purpose of this correspondence is to provide notification of the Project and to solicit comments that will assist in the regulatory process. To facilitate our review, we are requesting the following information be provided:

- Locations of any county-regulated drains, ditches, and/or other drainage features;
- Any special requirements, restrictions, or specifications regarding constructing pipelines across or under county regulated drainage features;
- Any local ordinances related to drainage; and
- Any permits issued through your office which may be applicable to the Project, and a summary of the permit process and anticipated timeframes.

We appreciate your assistance with this request and look forward to your timely review and comments on this Project. E3 has been retained by Hess to provide environmental consulting support for this Project. Should you have any questions or require additional information, please contact me at 651-282-0652 or kschmidt@go2e3.com.

Sincerely,

Katie Schmidt

Katie Schmidt, Senior Consultant
E3 Environmental, LLC
871 Jefferson Ave
St. Paul, MN 55102

Williams County Weed Control Board

Consultation

April 1, 2016

Mr. Jim Basaraba, Weed Control Officer
Williams County Weed Control Board
P.O. Box 1109
Williston, ND 58802-1109

Hess Corporation – ETP Pipeline Project
Project Notification and Request for Review

The Hess Corporation (Hess) is planning the ETP Pipeline Project (Project). The Project will result in the construction of an approximately 1.1 mile, 12-inch diameter, crude oil pipeline. The pipeline will cross Township 156N, Range 95W, Section 32 in Williams County, North Dakota. The Project is under the jurisdiction of the North Dakota Public Service Commission (PSC).

E3 Environmental, LLC (E3), on behalf of Hess, submits this information and respectfully requests the Williams County Weed Control Board to review a 1-mile wide study area, which is centered upon the Project alignment. Project location maps are enclosed.

Based on a review of the North Dakota Century Code 4.1-47-02 and North Dakota Department of Agriculture (NDDA) guidance documents, the following noxious weeds are currently listed:

- Absinth wormwood (*Artemisia absinthium*)
- Canadian thistle (*Cirsium arvense*)
- Diffuse knapweed (*Centaurea diffusa*)
- Leafy spurge (*Euphorbia esula*)
- Musk thistle *(Carduus nutans)*
- Purple loosestrife *(Lythrum salicaria)*
- Russian knapweed (*Acroptilon repens*)
- Spotted knapweed (*Centaurea masculosa*)
- Yellow toadflax (*Linaria vulgaris*)
- Dalmation toadflax (*Linaria dalmatica*)
- Saltcedar (*Tamarix chinensis*)

To facilitate our environmental review, we are requesting the following information for areas crossed that are within the 1-mile wide study area associated with the Project:

- Confirmation that the list of noxious weeds above is correct and current;
- Known locations of noxious and/or invasive weed species along the proposed route; and
- Guidance and/or recommendations for weed control, pesticide use, and non-chemical treatment options.

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St. Paul, MN 55102

We ask that your office provide the location, size, and extent of noxious/invasive weeds as a GIS shapefile (if possible), geographic coordinates (e.g., latitude/longitude), Public Land Survey System Section(s), or marked on a map. The information that your office provides will assist us in project planning and execution. Copies of correspondence received in response to this letter will be included in application to be filed with the PSC.

We appreciate your assistance with this request and look forward to your timely review and comments on this Project. E3 has been retained by Hess to provide environmental consulting support for this Project. Should you have any questions or require additional information, please contact me at 651-282-0652 or kschmidt@go2e3.com.

Sincerely,

Katie Schmidt, Senior Consultant
E3 Environmental, LLC
871 Jefferson Ave
St. Paul, MN 55102

Appendix D

Natural Resources Report

Photos courtesy of: Jon Knudsen

Natural Resource Survey Report
ETP Pipeline Project
Williams County, North Dakota

Prepared for:

Hess North Dakota Export Logistics LLC

Prepared by:

E3 Environmental, LLC

April 2016

E3 ENVIRONMENTAL
Enhancing Execution with Experience

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SECTION 1: INTRODUCTION

1.1 BACKGROUND

E3 Environmental, LLC (E3), at the request of Hess North Dakota Export Logistics LLC (Hess), performed natural resource surveys and reporting necessary to obtain permits to construct the ETP Pipeline Project (Project). The Project is approximately 1.1 miles in length and would transport crude oil from the Ramberg Truck Facility to the Energy Transfer Partners Facility.

E3 biologists conducted surveys to identify, delineate, and inventory natural resources that could potentially be impacted by pipeline construction and maintenance. The Project does need to meet the North Dakota Public Service Commission's (PSC) siting authority requirements. As such, surveys included:

- Raptor nest documentation and status determination
- Wetland and waterbody delineation and jurisdictional characterization
- Woody vegetation delineation and inventory
- Noxious weed inventory and delineation
- Federally protected species surveillance and habitat assessment

This report details the methodologies used by E3 biologists to complete the above surveys and presents the results and E3's recommendations.

1.2 REGULATORY JUSTIFICATION

Several federal and state laws protect native wildlife and natural resources from being destroyed or degraded by anthropogenic disturbance. The following Acts and regulations protect certain species and natural resources within Williams County (Project Area), and compliance with these Acts and regulations serves as justification for conducting the completed surveys.

1.2.1 CLEAN WATER ACT

The Clean Water Act of 1972 (CWA) (33 U.S.C. §1251 et seq.) prohibits the discharge of fill materials or pollutants into Waters of the United States or associated wetlands (jurisdictional waterbodies) without a permit from the USACE. Wetland and waterbody boundary determinations and associated jurisdictional characterizations were therefore conducted for the Project. The U.S. Army Corps of Engineers (USACE) administers the Nationwide Permit Program (NWP) which is a series of general permits that regulates ground-disturbing activities within jurisdictional features. This Project will comply with NWP No.12 utility line discharge, which regulates pipeline construction and maintenance in jurisdictional waterbodies.

1.2.2 MIGRATORY BIRD TREATY ACT

The Migratory Bird Treaty Act of 1918 (MBTA) (16 U.S.C. §§ 703–712) protects the majority of native birds species from being killed, sold, transported, harassed, or harmed. This also applies to bird parts, nests, feathers, and eggs. Most species found within the Project Area are protected under this Act, including raptors, which will frequently reuse nest sites.

1.2.3 BALD AND GOLDEN EAGLE PROTECTION ACT

The Bald and Golden Eagle Protection Act of 1940 (BGEPA) (16 U.S.C. §§ 668-668c) offers comprehensive protection for bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) in the United States. The BGEPA prohibits the take of eagles, including parts, nests, or eggs; and any disturbance of protected species, including any activity that could cause injury to the species, nest abandonment, or a decrease in productivity. Suitable roosting habitat, overwintering habitat, or previously-recorded nests for bald and golden eagles were not present within the Project Area.

1.2.4 ENDANGERED SPECIES ACT

The Endangered Species Act of 1973 (ESA) (16 U.S.C. § 1531 et seq.) contains a suite of protective measures pertaining to critically imperiled species at risk of extinction. These include species classified as threatened and endangered (T & E), defined as a species which has the potential of becoming endangered and a species which is in danger of extinction, respectively. Species are listed as threatened or endangered due to natural and anthropogenic factors threatening their existence, including disease, predation, habitat degradation, or inadequate regulation. The ESA also identifies habitats critical to listed species and provides mitigation strategies relating to activities within these habitats. Projects that impact listed species may be required to acquire permits to allow for take or to conduct more intensive field studies.

1.2.5 NORTH DAKOTA PUBLIC SERVICE COMMISSION MITIGATION REQUIREMENTS

The PSC's siting criteria requires that a proposed project's impacts to the PSC-specific exclusion and avoidance areas and selection criteria be considered when siting a transmission facility. These features include but are not limited to wetlands/waterways, noxious weeds, woody vegetation, and threatened and endangered species.

SECTION 2: SURVEY CORRIDOR

The Project, which is approximately 1.1 miles in length, is located entirely within private lands in Williams County, North Dakota. The Project originates at the Ramberg Trucking Facility located within the NWNE of Section 32 T156N:R95W and terminates at the Energy Transfer Partners facility located within the SWSW of Section 32 T156N:R95W. E3 conducted natural resource surveys utilizing a standard 250-foot corridor centered upon the proposed Project alignment (Survey Corridor). The Survey Corridor

encompassed approximately 34.7 acres. Refer to Appendix A for maps depicting the Project alignment and Survey Corridor. Natural resource surveys were conducted by E3 on March 24, 2016.

2.1 GENERAL LANDSCAPE CHARACTERIZATION

The Survey Corridor is located entirely within the Northwestern Glaciated Plains (42) Level III ecoregion, functioning as a transitional between moister, agricultural plains to the east and drier, broken plains to the west and southwest (Omernik, 1987; United States Environmental Protection Agency, 2013). The Northwestern Glaciated Plains ecoregion is characterized by morainal landscapes with abundant wetlands and significant surface irregularity (Omernik & Griffith, 2008). Mixed-grass prairie consisting of a short to mid-grass species dominate the landscape, where undisturbed. Intensive dryland farming and cattle ranching are the primary land-uses (Bryce, et al., 1998). This ecoregion marks the westernmost extent of continental glaciation.

Nested within the Northwestern Great Plains ecoregion, the Survey Corridor occurs in the Missouri Coteau Slope (42c) Level IV ecoregion (USEPA, 2013). The Missouri Coteau Slope (42c) ecoregion is characterized by gently rolling plains sloping towards the Missouri River (Bryce, et al., 1998). This ecoregion contains a low abundance of wetlands and drainages. Spring wheat, barley, alfalfa, and silage corn are the dominant crops cultivated in this region.

2.2 VEGETATION COMMUNITIES

Vegetation communities are described by their location within United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Major Land Resource Areas (MLRA), which are broad geographic areas characterized by a particular pattern of soil, climate, vegetation, and land use. The Survey Corridor crosses one MLRA: Central Dark Brown Glaciated Plains (MLRA 53B)(USDA, NRCS, 2006).

The Central Dark Brown Glaciated Plains support prairie vegetation dominated by western wheatgrass (*Pascopyrum smithii*), needleandthread (*Hesperostipa comata*), big bluestem (*Andropogon gerardi*), and little bluestem (*Schizachyrium scoparium*) (USDA, NRCS, 2006). Shrub and forb species including prairie rose (*Rosa arkansana*), western snowberry (*Symphoricarpos occidentalis*), stiff goldenrod (*Solidigo rigida*), and echinacea (*Amorpha canescens*) are interspersed throughout the uplands and mixed-prairie. Woodlands are mostly absent from this region.

Three ground-cover types, modeled by the Gap Analysis Program (GAP) as ecological systems, occur within the Survey Corridor: Cultivated Cropland, Northwestern Great Plains Mixedgrass Prairie, and Developed - Open Space (described below). All ecological

systems/cover-types within the Survey Corridor are included in Table 1 based on United States Geological Survey (USGS) GAP land cover data (US Geological Survey, 2011).

- Cultivated Cropland: This vegetation cover dominates the Survey Corridor, encompassing the entire north to south leg of the Project. These areas would have been composed of Northwestern Great Plains Mixedgrass Prairie before being developed for agricultural purposes. Canola, corn, wheat, and alfalfa are the most common crop species being cultivated within the Survey Corridor.

- Northwestern Great Plains Mixedgrass Prairie: This vegetation cover type forms a mosaic with cultivated cropland along the east to west leg of the Survey Corridor. Dominant grasses for this ecological system include western wheatgrass, green needlegrass, and fescue (*Festuca spp.*), although blue grama (*Bouteloua gracilis*) and needle-and-thread (*Hesperostipa comate*) may also dominate. Shrub species including western snowberry, fringed sagewort (*Artemisia frigida*), and silver sagebrush (*Artemisia cana*) are also associated with this ecological system. Cool-season exotics such as Kentucky bluegrass (*Poa pratensis*), smooth bromegrass (*Bromus inermis*), and Japanese brome (*Bromus japonicas*) can increase in dominance due to intensive grazing. This system is one of the most disturbed grassland systems in North Dakota (Comer, et al., 2003).

- Developed – Open Space: This cover type consists of previously-developed parcels of land, including pipeline scars, well pads, and industrial plant footprints. Most of this cover-type occurs within the southern portion of the Survey Corridor.

Table 1. GAP vegetation types and acreages within the Survey Corridor.

Vegetation Type	Acres	% of Survey Corridor
Cultivated Cropland	26.5	76.1%
Northwestern Great Plains Mixedgrass Prairie	7.7	22.1%
Developed – Open Space	0.6	1.7%
Total	**34.8**	**99.9%**

2.3 CLIMATE

The Project Area climate is semi-arid to subumid and continental, with warm summers and very cold winters (Sucik, 2002). In January, the average temperature is 13 degrees Fahrenheit, with an average daily minimum temperature of -2 degree Fahrenheit. In July, the average temperature is 71 degrees Fahrenheit, with an average daily maximum temperature of 84 degrees Fahrenheit. Mean annual precipitation for the Project Area is

14 inches. Most of the precipitation falls during the warm period with about 73 percent falling April through September (Sucik, 2002). The average seasonal snowfall is approximately 30 inches.

National Weather Service data for the Williston, North Dakota monitoring station (located approximately 30 miles southwest of Survey Corridor) recorded precipitation totals for the period from January 2015 to December 2015 to be 12.04 inches as described in Table 2 below (National Oceanic and Atmospheric Adminsistration (NOAA), 2015). The normal precipitation average for this time period is 14.37 inches. For this time period, rainfall was 2.33 inches below normal.

Table 2. Monthly recorded precipitation at National Weather Service Station in Williston, North Dakota.

Month	Recorded Precipitation	Normal Precipitation	Difference (inches)
January	0.48	0.59	-0.11
February	0.46	0.39	0.07
March	0.47	0.71	-0.24
April	0.27	1.00	-0.73
May	1.82	1.92	-0.10
June	1.90	2.52	-0.62
July	1.55	2.54	-0.99
August	0.89	1.45	-0.56
September	2.22	1.06	1.16
October	1.07	0.92	0.15
November	0.36	0.65	-0.29
December	0.55	0.62	-0.07
Total	**12.04**	**14.37**	**-2.33**

Source: NOAA preliminary climate Data Reports

2.4 SOILS

Soil types intersected by the Survey Corridor were analyzed through the NRCS Web Soil Survey in March of 2016 (NRCS, 2016a). Described below are the components of dominant soil orders within the Survey Corridor, including Bowbells, Lehr, Williams, Zahill, and Zahl soils. A list of all soil classifications and the acreage encompassed by the Survey Corridor are located in Table 3.

2.4.1 BOWBELLS

The Bowbells soil series is composed of deep and very deep, well to moderately well drained, moderately permeable soils. These soils are formed from glacial till on glacial till plains or moraines with slopes of 0 to 9 percent. Belfield soils are present in areas

with a mean annual temperature of 42 degrees Fahrenheit, receiving 14 inches mean annual precipitation. Small grain agriculture, hay, and pasture are the primary land uses associated with soils in the Bowbells series, while potential native vegetation populations include western wheatgrass, big bluestem, and green needlegrass (NRCS, 2016b).

2.4.2 LEHR

The Lehr soil series is composed of very deep, somewhat excessively drained soils that form over loamy alluvium over sand and gravel. These soils have moderate to moderately rapid permeability with 2 to 25 percent slopes in outwash plains and stream valley terraces. Lehr soils are present in areas with a mean annual temperature of 40 degrees Fahrenheit, receiving 14 inches mean annual precipitation. Small grain, corn, and hay crop agriculture are the primary land uses associated with soils in the Lehr series, while potential native vegetation populations include western wheat grass, blue grama, and upland sedges (NRCS, 2016b).

2.4.3 WILLIAMS

The Williams soil series is composed of very deep, well drained soils that are in calcareous glacial till. These soils are located on glacial till plains and moraines with slopes of 0 to 35 percent. Williams soils are present in areas with a mean annual temperature of 40 degrees Fahrenheit, receiving 14 inches mean annual precipitation. Small-grain agriculture and pasture are the primary land uses associated with soils in the Williams series, while potential native vegetation populations include western wheatgrass, needle-and-thread, blue grama, green needlegrass, and prairie junegrass (*Koeleria cristata*) (NRCS, 2016b).

2.4.4 ZAHILL

The Zahill soil series is composed of very deep, well drained soils that are formed in till. These soils are located in till plains, hills, moraines, and escarpments with slopes of 0 to 65 percent. Zahill soils are present in areas with a mean annual temperature of 42 degrees Fahrenheit, receiving 13 inches mean annual precipitation. Range and dryland crop agriculture and the primary land uses associated with soils in the Zahill series, while potential native vegetation populations include western wheatgrass, needle-and-thread, little bluestem, bluebunch wheatgrass, prairie junegrass, sedges, and blue grama (NRCS, 2016b).

2.4.5 ZAHL

The Zahl soil series is composed of very deep, well drained, moderately slow or slowly permeable soils. These soils are formed in calcareous glacial till, and are located on glacial till plains, moraines, and valley side slopes with slopes of 1 to 60 percent. Zahl soils are present in areas with a mean annual air temperature of about 40 degrees Fahrenheit, receiving 14 inches mean annual precipitation. Rangeland, pasture, and

small grain agriculture are primary the land uses associated with soils in the Zahl series, while potential native vegetation populations include western wheatgrass, little bluestem, and needle-and-thread (NRCS, 2016b).

Table 3. Soil components and acreages within Survey Corridor.

Map Unit Symbol	Soil Types	Slopes (percent)	Acres within Survey Corridor	Percent within Map Unit
C132C	Williams-Zahl-Zahill complex	6 to 9	27.0	77.8%
C135D	Zahl-Williams loams	9 to 15	3.0	8.7%
C210B	Williams-Bowbells loams	3 to 6	1.6	4.8%
C818B	Lehr-Williams loams	0 to 6	3.0	8.7%
Survey Corridor Total			**34.7**	**100.0%**

Source: **(NRCS, 2016a)**

SECTION 3: SURVEY METHODOLOGY

E3 completed natural resource surveys within the Survey Corridor on March 24, 2016. Natural resource surveys were performed on foot by a team of E3 biologists following guidelines published by the PSC, USACE, Bureau of Land Management (BLM), and United States Forest Service (USFS). Data was collected using Trimble® Juno T41/5, Trimble® GeoExplorer 6000 XT, or Trimble® GeoExplorer 6000 XH handheld GPS units facilitated with Terrasync® GIS software. Binoculars and spotting scopes assisted biologists with the observation and identification of wildlife within the Survey Corridor. All natural resource surveys were conducted concurrently, allowing the entire Survey Corridor to be completed during a single site visit.

3.1 RAPTOR NESTS

Pedestrian raptor nest surveys were conducted by E3 biologists within the Survey Corridor and within line-of-site of the Survey Corridor. Suitable nesting substrates, such as ash and elm stands, were searched for raptor nests within the Survey Corridor. Located nests, if found, were observed from a distance suitable to avoid disturbing the birds, using binoculars or spotting scopes to identify adult birds exhibiting nesting or brooding behavior (e.g. incubating or behaving agonistically). If nests were determined inactive, and within the Survey Corridor, the areas under, around, and in the nests were searched for signs of recent activity (fresh mute, regurgitated pellets, eggs, eggshell fragments, prey remains, etc.). Accurate GPS locations of raptor nests were recorded at each nest site and the nest status, condition, substrate, and species of raptor using the nests were documented (if possible). Annual activity status and productivity determinations for nests were unlikely due surveys being conducted outside of the

nesting window. However, many species of raptors (e.g. red-tailed hawks) reuse nesting sites annually; active nests in future years would have surface disturbance stipulations applied.

3.2 WETLANDS

E3 biologists identified and defined the boundaries of all wetlands observed during field surveys using methodology in accordance with the USACE *Wetlands Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0)* (Environmental Laboratory, 2010). For an area to be delineated as a regulated wetland, the hydrophytic vegetative, wetland hydrology, and hydric soils must all be present and consistent with federal classification criteria. Wetlands inventoried within the Survey Corridor were classified using the Cowardin System, developed by the USFWS (Cowardin et al. 1979).

Desktop review of the Survey Corridor indicates both lentic and lotic wetlands are present within the Project Area. The National Wetlands Inventory (NWI) contains two palustrine emergent wetlands within the Survey Corridor (USFWS, 2016a). The National Hydrography Dataset (NHD) does not contain wetlands within the Survey Corridor.

3.2.1 WETLAND VEGETATION

More than 50 percent of the vegetative cover must consist of obligate or facultative wetland species as determined by the dominance test using the 50/20 rule; the prevalence index; or by evidence of morphological adaptation (USACE 1987). Hydrophytic vegetation was determined to be present if any of these three indicators were satisfied. If none of the indicators are satisfied, then hydrophytic vegetation is absent unless (1) indicators of hydric soil and wetland hydrology are present and (2) the site meets the requirements for a problematic wetland situation.

3.2.2 WETLAND HYDROLOGY

To be considered a wetland, there must be evidence of periodic or permanent ground inundation. The presence of wetland hydrology was evaluated by recording the extent of observed surface flows, the depth of inundation, the depth to saturated soils, and the depth to free water in soil test pits. Other evidence such as water-stained leaves or general drainage patterns can indicate a site has the proper hydrology to be a wetland.

3.2.3 WETLAND SOILS

The National Technical Committee for Hydric Soils (NTCHS) defines a hydric soil as a soil that is formed under conditions of saturation, flooding, or ponding that occurs long enough during the growing season to develop anaerobic conditions (or conditions of limited oxygen) at or near the soil surface and that favor the establishment of hydrophytic vegetation. The USDA-NRCS *Field Indicators of Hydric Soils in the United*

States—Guide for Identifying and Delineating Hydric Soils, Version. 7.0 was used to determine the presence of hydric soils (2010). The soil conditions within the Survey Corridor were sampled by taking cores along wetland/upland boundary to examine the water table depth and to identify hydric indicators.

3.3 WATERBODIES

E3 biologists identified and defined the boundaries of all waterbodies observed during field surveys by mapping the ordinary high water mark (OHWM) of each feature. Common indicators of an OHWM include open water or evidence of a natural line visible on the bank, shelving or terracing, changes in soil characteristics, vegetation changes, the presence of litter and debris, and watermarks on structures that are inundated during normal high water conditions. The OHWM typically represents the potential limits of the USACE's jurisdiction. However, the USACE has full discretion in determining the jurisdictional status of referenced wetlands and waterbodies in this report. A non-jurisdictional characterization was made for this waterbody, following the criteria outlined in the *U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook* (2007).using methodology.

The NWI dataset does not contain waterbodies which are intersected by the Survey Corridor (USFWS, 2016a). However the NHD contains one intermittent stream which crosses the Survey Corridor.

3.4 WOODY VEGETATION

The PSC requires utilities to adhere to their tree and shrub mitigation plan, which specifies replacement and monitoring requirements as well as a maximum construction corridor of 50 feet through areas of woody vegetation. E3 biologists mapped, characterized, and inventoried woody vegetation, defined as trees and shrubs, present within the Survey Corridor. The boundaries of each distinct woody vegetation habitat were mapped and are depicted on the Project maps in Appendix A. Woody vegetation within each habitat was inventoried using several PCS-approved techniques, depending on habitat type and size. Direct tallies (100%) were employed in forested upland lands, shrublands, and riparian zones for all trees greater than one-inch diameter at breast height (DBH) when possible; sub-sampling was employed in woodlands too dense to directly count. Large shrub patches were inventoried by measuring percent cover, unless habitat patches were small enough to count each individual. Regardless of DBH, all trees and shrubs were mapped, characterized, and inventoried within shelterbelts and windbreaks. E3 biologists taxonomically identified and tallied all species within each habitat. Refer to Appendix B for a table detailing the woody vegetation identified within the Survey Corridor.

3.5 NOXIOUS WEEDS

Noxious weeds are defined by the Federal Noxious Weed Act of 1974 as "a plant which is of foreign origin, is new to, or is not widely prevalent in the United States, and can directly or indirectly injure crops or other useful plants, livestock or the fish and wildlife resources of the United States, or public health" (Title 7 United States Code 2801-2814, 2011). The State of North Dakota defines noxious weeds as "weeds that are difficult to control, easily spread, and injurious to public health, crops, livestock, land, or other property" (North Dakota Century Code 4.1-47-01, 2015). North Dakota has County Weed Boards in all 53 counties, each of which has the opportunity to add noxious weeds to the state list for regulation only within their jurisdiction.

The North Dakota Department of Agriculture identifies 11 plant species as noxious weeds (2016). Williams County does not recognize any additional problematic noxious weeds within its boundaries (North Dakota Department of Agriculture, 2016) (Table 4).

Table 4. State and County designated noxious weeds with the potential to occur within the Survey Corridor.

Common Name	Scientific Name	Noxious Designation	
		North Dakota	Williams County
Absinth wormwood	*Artemisia absinthium*	X	X
Baby's breath	*Gypsophila paniculata*		
Black henbane	*Hyoscyamus niger*		
Canada thistle	*Cirsium arvense*	X	X
Common burdock	*Arctium minus*		
Dalmatian toadflax	*Linaria dalmatica*	X	X
Diffuse knapweed	*Centaurea diffusa*	X	X
Field bindweed	*Convolvulus arvensis*		
Halogeton	*Halogeton glomeratus*		
Houndstongue	*Cynoglossum officinale*		
Leafy spurge	*Euphorbia esula*	X	X
Musk thistle	*Carduus nutans*	X	X
Purple loosestrife	*Lythrum salicaria*	X	X
Russian knapweed	*Acroptilon repens*	X	X
Saltcedar	*Tamarix ramosissima*	X	X
Spotted knapweed	*Centaurea stoebe*	X	X
Yellow toadflax	*Linaria vulgaris*	X	X

Source: North Dakota Department of Agriculture, 2016

E3 conducted surveys for noxious weeds within the Survey Corridor. Noxious weed infestations were identified and delineated in the field by mapping their boundaries using Trimble GPS units. Percent cover for all noxious weeds within each patch was estimated for each species. Refer to the Project maps in Appendix A for the locations of these features.

3.6 THREATENED AND ENDANGERED SPECIES

The USFWS Information, Planning, and Conservation System (IPaC) was accessed on March 18, 2016 to obtain information regarding the presence of T & E species within the Survey Corridor (Table 5). This information does not represent a comprehensive survey, but rather acknowledges the potential presence of listed species within the Survey Corridor. The USFWS identifies 8 threatened, endangered, or candidate species that have the potential to occur within the Survey Corridor or could potentially be impacted by development within the Survey Corridor (USFWS, 2016b). However, no critical habitat for these species is currently identified within the Survey Corridor. These listed species were surveyed for opportunistically during the field visit in 2016.

Table 5. Federally listed species with the potential to occur within the Project Area.

Common Name	Scientific Name	Federal Status
Interior least tern	*Sterna antillarum athalassos*	Endangered
Piping plover	*Charadrius melodus*	Threatened
Rufa red knot	*Calidris canutus rufa*	Threatened
Sprague's pipit	*Anthus spragueii*	Candidate
Whooping crane	*Grus americana*	Endangered
Pallid sturgeon	*Scaphirhynchus albus*	Endangered
Gray wolf	*Canis lupus*	Endangered
Northern long-eared bat	*Myotis septentrionalis*	Threatened

Source: (USFWS, 2016b).

3.6.1 INTERIOR LEAST TERN

Federal Status: Endangered

The interior least tern is the smallest member of the gull and is federally listed as endangered due to river channelization and impoundment, water pollution, and lower water levels. The interior least tern is found throughout major interior rivers of the United States, including the Mississippi and Missouri rivers, where terns nest in bare, sandy areas along open water bodies. Nests are shallow holes and constructed between late April and August. Least terns prefer habitat near open or flowing water, where they

hover in search of food, and dive for small fish in the water (USFWS, 2016c). The interior least tern is identifiable by its small size, measuring at approximately nine inches in length. Breeding adults have gray upper bodies and white lower bodies, with a black cap, black nape, and black eye stripe. Vocalization is short and high pitched (USFWS, 2016c).

3.6.2 PIPING PLOVER

Federal Status: Threatened

The piping plover is a small shorebird that is federally listed as threatened due to human disturbance and habitat destruction. The piping plover is identifiable by its small size and stocky stature, with a sandy brown colored upper body, and white lower body. During the breeding season, adults have a black forehead, a black breast band, and an orange bill (USFWS, 2016c). This species nest on open, sparsely vegetated sand or gravel beaches adjacent to alkali wetlands; and on beaches, sand bars, and dredged material islands of major river systems (USFWS, 2016c).

3.6.3 RUFA RED KNOT

Federal Status: Threatened

The rufa subspecies of the red knot is a medium sized shorebird that is federally listed as threatened due to horseshoe crab overharvesting, coastal development, and climate change. The rufa red knot is identifiable by its proportionally large wingspan of 20 inches to its body length of 9 inches. This bird is a larger member of the sandpiper family, with a short, straight bill that tapers to the tip. During breeding, rufa red knots bear a reddish breeding plumage, which is gray the rest of the year (USFWS, 2016c). Migratory habits and habitat requirements of this species are poorly understood, especially for populations utilizing midcontinent and intercontinental flyways. Migration routes are typically between South America and Canada, with inland stopovers in the Great Plains, Great Lakes, and various areas within the Mississippi Valley (USFWS, 2016c).

3.6.4 SPRAGUE'S PIPIT

Federal Status: Candidate

The Sprague's pipit is a small songbird that is a candidate for federal listing due to human habitat disturbance and habitat loss. The Sprague's pipit is identified by its light gray plumage, with dark brown primaries that are edged in white. This small bird delivers a distinctive flight song, and is known to hover in the air for minutes at a time, before steeply diving down to its nest (National Audubon Society, 2015). This species prefers prairie and grassland areas with little disturbance; it is deterred by the grazing and agricultural practices which have replaced much of its natural habitat. Sprague's pipit, unlike the American pipit, does not occur in flocks and eludes observation by

covering in short grass within dry prairies. Nesting occurs on bare ground within prairie depressions or grass clumps.

3.6.5 WHOOPING CRANE

Federal Status: Endangered

The whooping crane is a large bird species that is federally listed as endangered due to habitat destruction and historic over-hunting. The whooping crane is identified by its height, standing erect at five feet, and by its snow white plumage, with black primaries. This large-bodied bird is known by its vocal tone, which is a loud, single note that is vocalized when alarmed. The whooping crane may live up to 30 years (USFWS, 2016c). This species prefers a variety of wetland habitats in both salt and fresh water. Nesting occurs in wetland potholes in Canada, predominantly consisting of bulrush, but also including populations of cattail, sedge, musk-grass, and other common aquatic plants. Nest sites are typically found in shallow diatom ponds. Migration paths include stops in a variety of landscapes, although wetlands are preferred throughout the route (USFWS, 2016c).

3.6.6 PALLID STURGEON

Federal Status: Endangered

The pallid sturgeon is an aquatic fish that is federally endangered, primarily due to the habitat destruction resulting from river channelization and damming. The pallid sturgeon is identified by its flat, shovel-shaped snout, with a long, slender, and fully plated caudal peduncle. Consistent with other sturgeon species, the mouth of the pallid sturgeon is ventrally positioned, protrusible, and toothless. This species has a cartilaginous skeletal structure (USFWS, 2016c). The pallid sturgeon is a large river obligate, primarily in Missouri and Mississippi River Systems, in areas with diverse habitat options. Pallid sturgeons prefer benthic environments with predominantly sandy and fine substrates, with successful populations of micro-invertebrates and deep water for spawning activity (USFWS, 2016c).

3.6.7 GRAY WOLF

Federal Status: Endangered

The gray wolf is a large canine species that is federally listed as endangered due to habitat destruction, human interference, and overhunting. The gray wolf is identifiable by its canine body shape, long bushy tail with a black tip, and a mix of gray and brown coat colors. The average size of a gray wolf is 3-5 feet in length, weighing approximately 60-145 pounds (USFWS, 2016c). This species prefers a wide range of habitat, including forests, plains, prairies, agricultural areas, swamps, and barren lands, but has been extirpated from most of its historic range. Dens are located near water and dug into well-drained soil on a south-facing slope, under boulders, among tree roots, or in cut

banks, hollow logs, or other natural structures. This species is a roaming animal, therefore are wide-ranging and rare to encounter (USFWS, 2016c).

3.6.8 NORTHERN LONG-EARED BAT

The northern long-eared bat (NLEB) is a federally threatened species not only due to habitat destruction, but also due to onset white-nose syndrome (WNS), which affects many bat species in the United States. NLEBs are medium sized bats with a body length of 3-4 inches and a wingspan of 9-10 inches. Their fur color ranges medium to dark brown on the back and light brown on the underside. This bat is distinguished by its long ears (USFWS, 2016c). During the summer months, this small mammal roosts individually or in colonies underneath bark, or in any indentations on both live and dead trees. The NLEBs tend to select tree stand roosts based on a range of factors, including the ability of the tree to retain loose bark and provide crevices or cavities for cover. Signs of roost presence include fallen loose bark and fecal matter in concentrated areas near tree bases in older stands. Breeding begins in late summer or early fall (USFWS, 2016c). Currently, the NLEB is managed as threatened under the Final 4(d) rule.

SECTION 4: RESULTS

4.1 RAPTOR NESTS

No raptor nests were recorded by E3 biologists during pedestrian surveys in March of 2016.

4.2 WETLANDS

No wetlands were identified within the Survey Corridor (Table 6).

4.3 WATERBODIES

E3 identified and delineated one waterbody within the Survey Corridor, totaling approximately 0.13 acres (Table 6). This feature is characterized as an unnamed intermittent stream which is part of the Dry Fork Creek drainage network. Surface water was present within a small portion of the channel during surveys in March, 2016. This waterbody is likely non-jurisdictional due to its lack of flow or hydrological influence to Dry Fork Creek; however, the USACE has final authority on jurisdictional status. Refer to the Project maps in Appendix A for the location of this feature.

Table 6. Wetlands, Waterbodies, and their Associated Acreages and Jurisdictional Determinations within the Survey Corridor.

Water Feature ID	Feature Type	Data Source	Jurisdictional Determination*	PCN Required	Crossing Length (ft)	Surveyed Acres
WB-01	Waterbody	NHD	No	No	23	0.13

*USACE has final authority over jurisdictional status

4.4 WOODY VEGETATION

Woody vegetation was relatively sparse throughout the Survey Corridor, where small communities chokecherry (*Prunus virginiana*), fireberry hawthorn (*Crataegus chrysocarpa*), and green ash (*Fraxinus pennsylvanica*) intermix within the grasslands and fields, forming a mosaic across the landscape. A total of 10 woody vegetation patches were mapped within the Survey Corridor, totaling 0.25 acres. Of the 10 patches, 3 (0.08 acres) are woodland or tree patches and 7 (0.17 acres) are shrub communities. Appendix B lists the species inventory within each patch, the estimated number of trees that could be removed with a 50-foot construction right-of-way (ROW), and the estimated mitigation (2:1) for each woody vegetation patch. Table 7 lists all woody vegetation mapped within the Survey Corridor by species, with the total number disturbed and the estimated mitigation.

Table 7. Total number of trees/shrubs by species disturbed by the 50-ft construction ROW and the estimated mitigation number per species.

Tree Species	Sum within Survey Corridor	Sum within 50-ft Const. ROW	Sum of Est. Mitigation
Fireberry hawthorn	31	9	18
Green ash	1	0	0
Chokecherry	53	21	42
Grand Total	**85**	**30**	**60**

4.5 NOXIOUS WEEDS

No noxious weed patches were observed or mapped by E3 biologists within the Survey Corridor during surveys.

4.6 THREATENED AND ENDANGERED SPECIES

No candidate, threatened, or endangered species were encountered by E3 biologists during field surveys within the Survey Corridor. The following sections detail the potential effects the Project could have on listed species.

4.6.1 INTERIOR LEAST TERN

Federal Status: Endangered

The Missouri River, located approximately 9.25 miles to the south of the Project, provides suitable breeding and nesting habitat for least terns. However, the Survey Corridor does not contain the sandbars, riverbanks, and broad beaches necessary for colonial nesting. Due to the lack of nesting habitat within the Survey Corridor, impacts to the interior least tern are not anticipated.

4.6.2 PIPING PLOVER

Federal Status: Threatened

Lake Sakakawea and the Missouri River, located approximately 9.25 miles to the south of the Project, provide suitable breeding and nesting habitat for piping plovers. This area is mapped as critical habitat by the USFWS. However, the Survey Corridor does not contain the sandbars or gravel beaches necessary for nesting. Due to the lack of nesting habitat within the Survey Corridor, impacts to the piping plover are not anticipated.

4.6.3 RUFA RED KNOT

Federal Status: Threatened

North Dakota is a possible migration stopover in spring and autumn for the rufa red knot, particularly within Lake Sakakawea and its major tributaries. Due to the lack of suitable foraging habitat within the Survey Corridor, impacts to this species and its associated habitat are not anticipated.

4.6.4 SPRAGUE'S PIPIT

Federal Status: Candidate

Potentially suitable breeding habitat for the Sprague's pipit was identified in areas where relatively undisturbed grasslands were observed within the Survey Corridor. If construction activities occur during the breeding season, E3 recommends a clearance sweep of the Survey Corridor to identify nesting locations. In the event that an active nest site(s) would be identified, then appropriate avoidance mitigation such as establishing a buffer is recommended to avoid direct impacts.

4.6.5 WHOOPING CRANE

Federal Status: Endangered

Suitable migratory habitat for the whooping crane is potentially located within the Survey Corridor (wet fields and croplands). If whooping cranes are sighted within 0.5 miles of the Project, E3 recommends suspending all heavy equipment operation until birds vacate the area. Any potential sightings of whooping cranes would be verified and

reported to the USFWS. Provided these measures are fully implemented, potential impacts to this species are not anticipated.

4.6.6 PALLID STURGEON

Federal Status: Endangered

The Project does not cross any waterbodies classified as suitable habitat for the pallid sturgeon. Therefore, the Project will have no impacts to this listed species.

4.6.7 GRAY WOLF

Federal Status: Endangered

The Survey Corridor intersects potentially suitable habitat for the gray wolf, however potential habitat is not expansive, and is near regular human activity. Because the Project would likely act as a deterrent to this species, impacts to this species are unlikely.

4.6.8 NORTHERN LONG-EARED BAT

Federal Status: Threatened

Potentially suitable habitat in the form of a single green ash tree occurs within the Survey Corridor. However, because the Project occurs outside of the White-Nose Syndrome Zone, there are no restrictions to tree-removing activities per the Final 4(d) Rule. Therefore, no impacts to this species are anticipated.

SECTION 5: RECOMMENDATIONS

Based on the findings during field surveys, E3 recommends the following guidance to maintain compliance with regulatory agencies and minimize its impact on resident natural resources:

Raptors:

- Conduct a raptor nest survey within line-of-site of the Survey Corridor prior to construction (if construction occurs before September 1)
- Adhere to USFWS-suggested timing buffers for active raptor nests during nesting season (April 15-August 30)
- Report active nest sites to the USFWS

Woody vegetation:

- Minimize removal of woody vegetation
- Follow PSC guidelines for tree-clearing activity

Wetlands/waterbodies:

- Minimize ground disturbance activities through wetlands/waterbodies
- Minimize equipment rutting by use of construction mats
- Restore disturbed areas promptly to original contours

Noxious weeds:

- Minimize topsoil spread and traffic in areas with high concentrations of noxious weeds
- Visually inspect equipment prior to leaving infested areas – clean vegetation and soils from vehicles and equipment prior to entering uninfected tracts
- Contractors will thoroughly clean the equipment and materials (e.g., timber mates, bridges, etc.) at the contractor yard prior to mobilization to the Project and upon departure from locations of infestations to prevent spread of nuisance weeds

Threatened and Endangered Species:

- If any threatened or endangered species are encountered during construction activities, report internally for external communication to agencies, as appropriate.
- If construction activities occur between April 15-July15, conduct a breeding bird sweep of the impacted area within two weeks of construction to minimize impacts to protected bird species (including Sprague's pipit)

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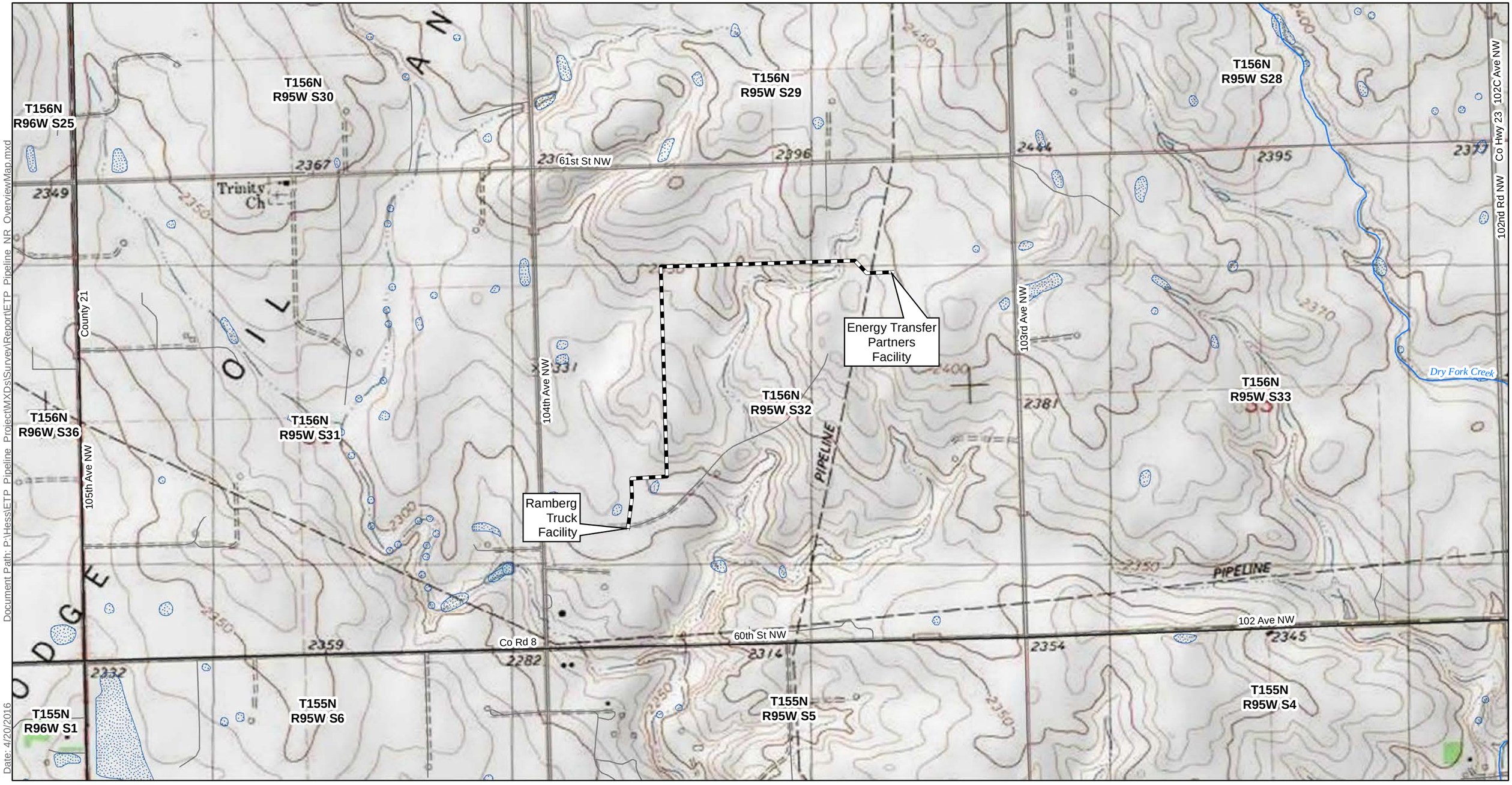
Appendix A

Natural Resource Maps



- Milepost
- Valves
- Proposed Alignment
- Section Boundary
- Township Boundary
- Federal Land
- Joint Ownership
- Local Land
- Native American Land
- Private Conservation Land
- State Land
- Unknown

Map not to scale, for environmental review purposes only.

N

E3 Environmental — Enhancing Execution with Experience

0 0.175 0.35 0.7 Miles

1:12,000

Hess North Dakota Export Logistics LLC

ETP Pipeline Project

Overview Map

Williams County, North Dakota

Author: TDanielson

Date: 4/20/2016

Document Path: P:\Hess\ETP_Pipeline_ProjectMXDs\Survey\Report\ETP_Pipeline_NR_OverviewMap.mxd

Document Path: P:\Hess\ETP_Pipeline_Project\MXDs\Survey\Report\ETP_Pipeline_NR_Survey_ReportMaps_Draft.mxd

Date: 4/20/2016

Author: TDanielson

- Milepost
- Centerline
- Natural Resouce Survey Corridor

Class

- Shrub
- Tree

Waterbody Features

Class, Jurisdictional Determination

- Waterbody, No
- Waterbody, Yes
- Wetland, No
- Wetland, Yes

E3 Environmental
Enhancing Execution with Experience

0 90 180 360 Feet

1:2,500

Map not to scale, for environmental review purposes only.

Hess North Dakota Export Logistics LLC
ETP Pipeline Project

Natural Resource Survey

Page 1 of 2

Williams County, North Dakota

Document Path: P:\Hess\ETP Pipeline Project\MXDs\Survey\Report\ETP Pipeline NR Survey ReportMaps Draft.mxd

Date: 4/20/2016

Author: TDanielson

Milepost

Centerline

Natural Resouce Survey Corridor

Class

Shrub

Tree

Waterbody Features

Class, Jurisdictional Determination

Waterbody, No

Waterbody, Yes

Wetland, No

Wetland, Yes

N

E3 Environmental
Enhancing Execution with Experience

0 95 190 380 Feet

1:2,630

Map not to scale, for environmental review purposes only.

Hess North Dakota Export Logistics LLC

ETP Pipeline Project

Natural Resource Survey

Page 2 of 2

Williams County, North Dakota

Appendix B

Woody Vegetation

Woody Veg

Woody Veg ID	Patch Type	Species	Number of Plants			Area Surveyed (Acres)	Anticipated Disturbance (Acres)
			Survey Area	Const. ROW	Estimated Mitigation		
WVS-01	Upland Shrub	Chokecherry	8	0	**0**	0.0041	0.0000
WVS-02	Upland Deciduous	Chokecherry	45%	45%	**45%**	0.0379	0.0063
WVS-03	Upland Shrub	Fireberry Hawthorn	13	4	**8**	0.0664	0.0208
WVS-04	Upland Shrub	Fireberry Hawthorn	18	5	**10**	0.0862	0.0247
WVS-05	Upland Deciduous	Chokecherry	25	15	**30**	0.0381	0.0222
WVS-06	Upland Shrub	Chokecherry	6	6	**12**	0.0021	0.0021
WVS-07	Upland Shrub	Chokecherry	3	0	**0**	0.0008	0.0000
WVS-08	Upland Shrub	Chokecherry	1	0	**0**	0.0008	0.0000
WVS-09	Upland Shrub	Chokecherry	10	0	**0**	0.0083	0.0000
WVS-10	Upland Shrub	Green Ash	1	0	**0**	0.0008	0.0000

% = Percent Cover

Appendix E

Cultural Resources Report

Redacted

Appendix F

10-Year Plan

CROWLEY | FLECK PLLP
ATTORNEYS

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June 30, 2014

via Hand Delivery

Mr. Darrell Nitschke
Executive Director
NORTH DAKOTA
PUBLIC SERVICE COMMISSION
600 East Boulevard, Dept. 408
Bismarck, ND 58505-0480

Dear Mr. Nitschke:

In re: Hess Corporation Ten-Year Plan
Our File No. 11-024-049

On behalf of Hess Corporation ("Hess"), we hereby submit eleven copies of Hess's Ten-Year Plan pursuant to North Dakota Century Code § 49-22-04 and North Dakota Administrative Code Chapter 69-06-02.

Sincerely yours,

BRIAN R. BJELLA

bw
Enc.
Ten-Year Plan to:
County Auditors:
McKenzie and Williams Counties
Brent Lohnes, Director Operations - Minot, ND
Notice to:
State Agencies and Officers designated in
§ 69-06-01-05, N.D. Adm. Code.

HESS CORPORATION
Tioga Office Complex
10384 68th St NW
Tioga, North Dakota 58852
701-664-6200

June 24, 2014

PUBLIC SERVICE COMMISSION – State Capitol
Director of Administration
600 East Boulevard, Dept 408
Bismarck, ND 58505-0480

RE: HESS CORPORATION – 2014 Ten-Year Plan

Dear Director of Administration:

On behalf of HESS CORPORATION ("HESS"), we hereby submit HESS's Ten-Year Plan pursuant to North Dakota Century Code § 49-22-04 and North Dakota Administrative Code Chapter 69-06-02.

SECTION A: Existing Energy Conversion Facilities.

HESS has completed the Tioga Gas Plant expansion. This project was approved by the North Dakota Public Service Commission in Case No. PU-10-120.

SECTION B: Energy Conversion Facilities Under Construction.

HESS has no energy conversion facilities currently under construction.

SECTION C: Proposed Energy Conversion Facilities on Which Construction is Intended Within the Ensuing Five Years.

HESS has no proposed energy conversion facilities during the next five-year time period.

SECTION D: Proposed Energy Conversion Facilities During the Next Ten-Year Time Period.

HESS has no other proposed energy conversion facilities during the next ten-year time period.

SECTION E: Existing Transmission Facilities (Electric).

HESS has no existing electrical transmission facilities.

SECTION F: Existing Transmission Facilities (Pipeline).

1. Location: HESS currently has in operation a pipeline beginning at its gas plant located at Tioga, North Dakota, extending southerly under Lake Sakakawea and then extending in a southwesterly direction to an interconnect point with the Northern Border pipeline south of Watford City, North Dakota. This pipeline was constructed pursuant to Public Service Commission Certificate of Site Compatibility for Transmission Facility Corridor #62 issued on March 11, 1992, and Public Service Commission Permit for the Construction of a Transmission Facility #72 issued on July 21, 1992. Upon completion of the pipeline HESS provided the Commission with a copy of the design specifications for the construction of the pipeline showing the location of the pipeline as built as required in the Findings of Fact, Conclusions of Law and Order dated July 21, 1992, as issued by the Commission in Case No. PU-476-92-138. Attached hereto is a system map showing the location of the actual pipeline route.

   a) Type and Capacity: The design specifications for the facility are as follows:

i) Product Type - natural gas
ii) Length of Facility in Miles - approximately 61
iii) Pipe Size - 10.75 inches O.D.
iv) Maximum Design Operating Pressure - 1440 pounds per square inch gage (psig)
v) Maximum Design Flow Rate - 65 million standard cubic feet per day (mmscfd)
vi) Compressor or pumping station specifications, including type, horse power, output pressure, and capacity –

(1) Tioga Compressor Station
(a) Type: 3 centrifugal
(b) Suction Pressure: 700 psig
(c) Discharge Pressure: 1300 psig
(d) Station Horsepower: 6750 hp
(e) Maximum Capacity: 99 mmcfd

(2) Cherry Creek Compressor Station
(a) Type: (2) reciprocating
(b) Suction Pressure: 875 psig
(c) Discharge Pressure: 1420 psig
(d) Station Horsepower: 1600 hp
(e) Maximum Capacity: 65 mmcfd

b) Minimum Cover Over Pipe - 48 inches, except in a situation where rock makes 48 inches impractical.

c) In-service date for the pipeline was December, 1992.

d) There is no projected retirement date during the next ten-year period for the pipeline facility.

2. HESS completed installation of three NGL Product sales pipelines approximately 3.6 miles from the Hess Tioga Gas Plant to the newly constructed Hess Tioga Rail Terminal west of the city of Tioga at an estimated cost of $33 million. The intent is to sell propane, butane, and natural gasoline liquid products by rail cars at the Tioga Rail Terminal now that the Tioga Gas Plant expansion is complete. This project was approved by the North Dakota Public Service Commission in Case #PU-11-104.

3. Hess has converted three existing pipeline segments, once used as gathering pipelines, into a crude oil transmission pipeline connecting the Ramburg Truck Facility ("RTF") to the Tioga Rail Terminal ("TRT"). The pipeline totals 10.2 miles in length and consists of 14" nominal diameter steel pipe. This project was approved by the North Dakota Public Service Commission in Case No. PU-12-683.

SECTION G: Proposed Transmission Facilities on Which Construction is Intended Within the Ensuing Five Years (Electric).

HESS has no proposed electric transmission facilities on which construction is intended within the ensuing five years.

SECTION H: Proposed Transmission Facilities on Which Construction is Intended Within the Ensuing Five Years (Pipeline).

1. Hess Corporation (Hess) is proposing to construct an approximately 25-mile-long pipeline system connecting Bakken production fields south of Lake Sakakawea to existing processing facilities north of the Lake. New pipeline construction will tie into the existing pipeline infrastructure to cross Lake Sakakawea. The new and repurposed pipeline system will transport crude oil as well as two 24-strand fiber optic cables from south of Lake Sakakawea in McKenzie County, North Dakota, to the Ramberg Truck Facility (crude oil).
   i) The proposed Hawkeye Pipeline System Project crosses lands managed by the U.S. Forest Service (USFS) and the U.S. Army Corps of Engineers (USACE), State of North Dakota, as well

as private lands. Pursuant to the Mineral Leasing Act of 1920, as amended (43 CFR Subpart 2884.21J1), when an applicant applies for a ROW that crosses lands administered by two or more Federal agencies, the BLM will process the application and issue all grants, temporary use permits, amendments, and assignments. As such, the BLM is the designated lead federal agency for issuing the ROW grant and preparation of the NEPA document, the Environmental Assessment (EA).

ii) Hess is currently preparing an EA with an anticipated Decision Record in late 2013. Additionally, a Biological Assessment/Biological Evaluation for compliance with Endangered Species Act (Section 7) and a preliminary Spill Risk Analysis suitable for NEPA is being prepared. BLM is managing tribal consultation in compliance with Section 106 of the National Historic Preservation Act of 1966.

iii) Hess will submit an application for a corridor certificate and route permit or a request for jurisdictional determination to the North Dakota Public Service Commission in the near future.

SECTION I: Proposed Transmission Facilities During the Next Ten-Year Time Period (Electric and Pipeline).

HESS has no proposed electric or pipeline transmission facilities proposed during the next ten-year time period other than what is mentioned in Section H.

SECTION J: Regional Coordination.

One of the purposes of the pipeline is to deliver gas into the existing pipeline facility of the Northern Border Pipeline Company for transportation of such gas to HESS's customers. However, HESS's pipeline is not part of a single regional plan.

SECTION K: Environmental Information.

The gas pipeline has been constructed in strict accordance with the requirements of the U.S. Department of Transportation Pipeline Safety Regulations found at CFR Title 49, Part 192, "Transportation of Natural and Other Gases by Pipeline: Minimum Federal Safety Standards," and ASME B31.8, "Gas Transmission and Distribution Piping Systems." The pipeline was hydrostatically tested in accordance with CFR Title 49, Part 192, Sub-part J to establish the maximum allowable operating pressure of 1440 psig.

HESS CORPORATION has also installed a fiber optic communications system which allows for 24-hour monitoring of the pipeline and compressor operations. The pipeline is also designed to accommodate the use of instrumented internal inspection devices that can be propelled through the pipeline by the flowing gas stream and can effectively detect and record the type and location of corrosion or other defects in the pipe wall. In conjunction HESS has in place a regular pipeline cathodic protection program.

Wooded areas and shelter belts that were removed have been replanted with approximately 300 new trees. This is two new trees for every one removed during construction.

HESS has made an agreement with the U.S. Fish and Wildlife Service for provisions relative to the rehabilitation of wooded draw habitat on U.S. Forest Service land as mitigation for habitat disturbed during the pipeline construction.

HESS's obligation to reclaim and maintain the right-of-way shall continue throughout the life of the pipeline facility.

SECTION L: Projected Demand for Service.

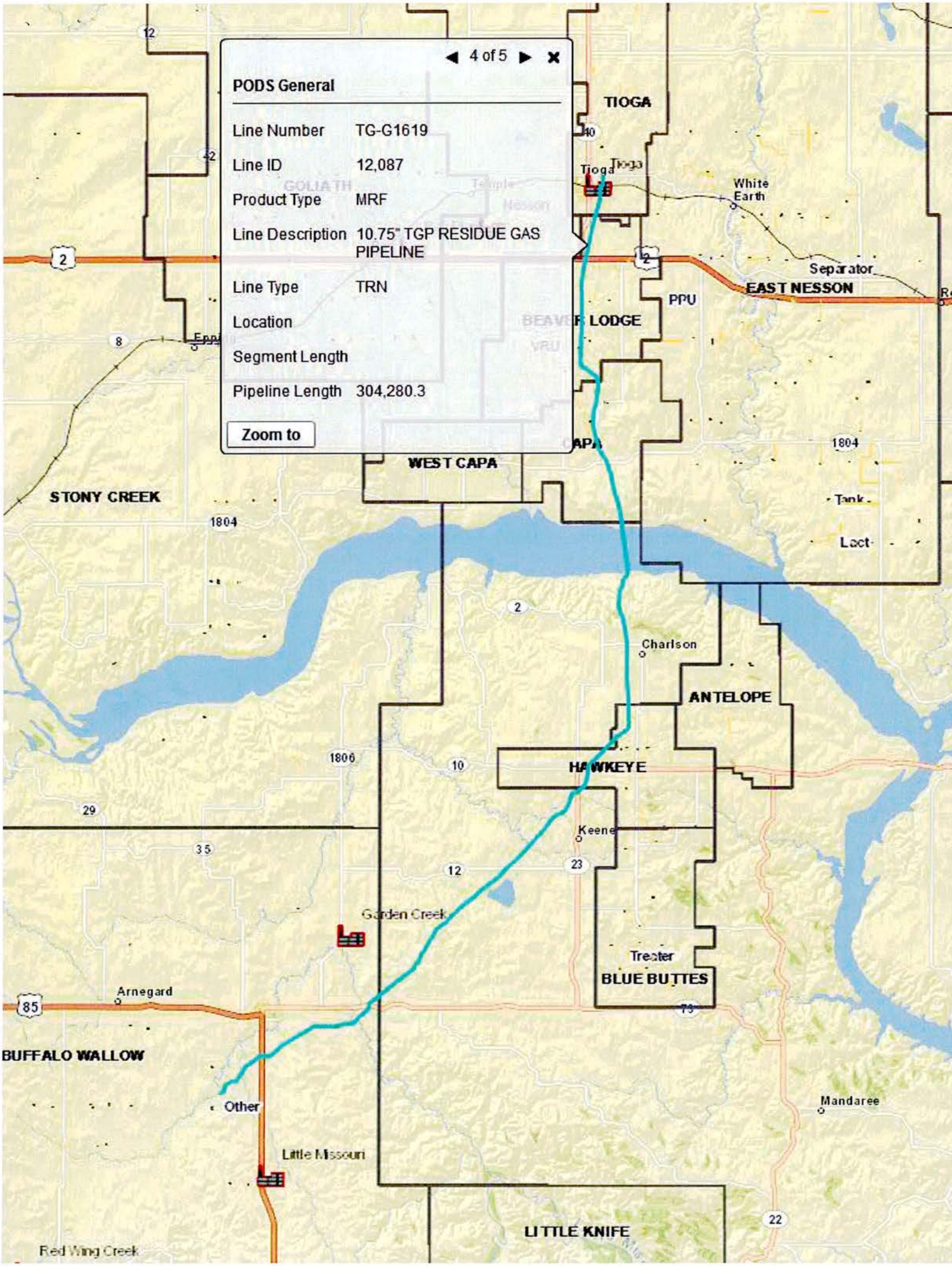
The projected future supplies of oil and gas entering these pipelines will be produced from (a) several fields located in Divide, Williams, Mountrail, McKenzie and Burke Counties, (b) the Winnipeg and Deadwood formations from certain wells to be located in the McKenzie and Williams Counties, and (c) the expansion of the plant and pipeline facilities in conjunction with the growth of the Bakken development taking place in North Dakota.

Respectfully submitted the day and year set forth above.

HESS CORPORATION
Tioga Office Complex
10384 68th St NW
Tioga, North Dakota 58852

By Dale Weathersby
Dale Weathersby

Enc.
cc: - County Auditors of McKenzie and Williams Counties
- State Agencies and Officers designated in § 69-06-01-05, ND Adm Code "Notice of Filing"
- Brent Lohnes, Director Operations - Minot, ND


4 of 5
PODS General
Line Number TG-G1619
Line ID 12,087
Product Type MRF
Line Description 10.75" TGP RESIDUE GAS PIPELINE
Line Type TRN
Location
Segment Length
Pipeline Length 304,280.3
Zoom to
TIOGA
Tioga
White Earth
Separator
EAST NESSON
PPU
LODGE
WEST CAPA
STONY CREEK
1804
Tank
Lact
Charlson
ANTELOPE
HAWKEYE
1806
10
29
35
Keene
12
23
Garden Creek
Treater
BLUE BUTTES
Arnegard
85
BUFFALO WALLOW
Other
Mandaree
Little Missouri
22
LITTLE KNIFE
Red Wing Creek
2
8
42

AFFIDAVIT OF SERVICE BY MAIL

STATE OF NORTH DAKOTA)
)SS.
COUNTY OF BURLEIGH)

Beth Wald, being first duly sworn on oath, deposes and says: That she is a citizen of the United States over the age of eighteen years and not a party to, nor interested in, the above entitled action.

That on the 30th day of June, 2014, this affiant did deposit in the United States post office at Bismarck, North Dakota, a true and correct copy of the following document:

Hess Corporation's 2014 Ten-Year Plan dated June 24, 2014, to the North Dakota Public Service Commission.

That a copy of said Ten-Year Plan with postage prepaid was mailed, directed to the persons to be served at their last known post office address as follows:

Linda Svihovec
MCKENZIE COUNTY AUDITOR
Box 543
Watford City, ND 58854

Beth M. Innis
WILLIAMS COUNTY AUDITOR
PO Box 2047
Williston, ND 58802

That notice of the filing of said Ten-Year Plan with postage prepaid was mailed, directed to the persons to be served at their last known post office address as follows:

Kyle Wanner, Director
NORTH DAKOTA STATE
AERONAUTICS COMMISSION
Box 5020
Bismarck, ND 58502

Doug Goehring, Commissioner
DEPARTMENT OF AGRICULTURE
Sixth Floor, State Capitol
600 E. Boulevard, Dept. 602
Bismarck, ND 58505-0020

Wayne Stenehjem, Attorney General
OFFICE OF THE ATTORNEY GENERAL
First Floor, State Capitol
600 E. Boulevard Ave., Dept. 125
Bismarck, ND 58505-0040

Al Anderson, Commissioner
DEPARTMENT OF COMMERCE
Division of Economic Development & Finance
Century Center
1600 East Century Avenue, Suite 2
P.O. Box 2057
Bismarck, ND 58502-2057

Jeff Engleson, Director
ENERGY DEVELOPMENT IMPACT OFFICE
1707 N. 9th St.
Box 5523
Bismarck, ND 58506-5523

Terry Steinwand, Director
GAME AND FISH DEPARTMENT
100 North Bismarck Expressway
Bismarck, ND 58501-5095

Honorable Jack Dalrymple
OFFICE OF THE GOVERNOR
First Floor, State Capitol
600 E. Boulevard Ave., Dept. 101
Bismarck, ND 58505-0001

Terry L. Dwelle, M.D.
State Health Officer
STATE DEPARTMENT OF HEALTH
State Capitol
600 E. Boulevard Avenue
Bismarck, ND 58505-0200

Merlan E. Paaverud, Jr., Director
STATE HISTORICAL SOCIETY OF NORTH DAKOTA
Heritage Center, Capitol Grounds
612 E. Boulevard Ave.
P.O. Box 1976
Bismarck, ND 58505-0830

Ms. Maggie Anderson
Executive Director
DEPARTMENT OF HUMAN SERVICES
Judicial Wing, State Capitol
600 E. Boulevard Avenue, Dept. 325
Bismarck, ND 58505-0250

Scott J. Davis, Executive Director
INDIAN AFFAIRS COMMISSION
1st Floor Judicial Wing, State Capitol
Room #117
600 E. Boulevard Ave.
Bismarck, ND 58505-0300

Edward Murphy
State Geologist
NORTH DAKOTA INDUSTRIAL COMMISSION
Geological Survey
1016 E. Calgary Avenue
Bismarck, ND 58503

Darren Brostrom, Interim Executive Director
JOB SERVICE NORTH DAKOTA
1000 East Divide, P.O. Box 5507
Bismarck, ND 58506-5507

Bonnie Storbakken, Commissioner
ND DEPT. OF LABOR DEPARTMENT
AND HUMAN RIGHTS
13th Floor, State Capitol
600 E. Boulevard, Dept. 406
Bismarck, ND 58505-0340

Lance Gaebe, Land Commissioner
DEPARTMENT OF TRUST LANDS
1707 N. 9th St.
P.O. Box 5523
Bismarck, ND 58506-5523

Mark Zimmerman, Director
PARKS AND RECREATION DEPARTMENT
1600 East Century Avenue, Suite 3
Bismarck, ND 58503-0649

Mr. Scott Hochhalter
Soil Conservation Specialist
SOIL CONSERVATION COMMITTEE
2718 Gateway Ave., Ste. 104
Bismarck, ND 58503-0585

Grant Levi
DEPARTMENT OF TRANSPORTATION
608 E. Boulevard Ave.
Bismarck, ND 58505-0700

Todd Sando, State Engineer
STATE WATER COMMISSION
900 East Boulevard, Dept. 770
State Office Building
Bismarck, ND 58505-0850

Commander
UNITED STATES DEPARTMENT OF DEFENSE
MINOT AIR FORCE BASE
201 Summit Drive
Minot, ND 58701

UNITED STATES FISH AND WILDLIFE SERVICE
3425 Miriam Avenue
Bismarck, ND 58501

UNITED STATES ARMY CORPS OF ENGINEERS
1513 South 12th Street
Bismarck, ND 58504

FEDERAL AVIATION ADMINISTRATION
Bismarck Airports District Office, BIS-ADO-600
2301 University Drive, Building 23B
Bismarck, ND 58504

NORTH DAKOTA TRANSMISSION AUTHORITY
c/o North Dakota Industrial Commission
600 E. Boulevard Ave., Dept. 405
State Capitol, 14th Floor
Bismarck, ND 58505-0840

NORTH DAKOTA PIPELINE AUTHORITY
c/o North Dakota Industrial Commission
600 E. Boulevard Ave., Dept. 405
State Capitol, 14th Floor
Bismarck, ND 58505-0840

MCKENZIE COUNTY COMMISSION
Box 543
Watford City, ND 58854

WILLIAMS COUNTY COMMISSION
PO Box 2047
Williston, ND 58802

That she knew the persons served to be the persons named in the papers served and the persons intended to be served.

Beth Wald

Subscribed and sworn to before me this 30th day of June, 2014.

Leslie Kriedeman

(SEAL)

LESLIE KRIEDEMAN
Notary Public
State of North Dakota
My Commission Expires September 17, 2019

Leslie Kriedeman, Notary Public
Burleigh County, North Dakota
My Commission Expires: