North Dakota Public Service Commission
Consolidated Application

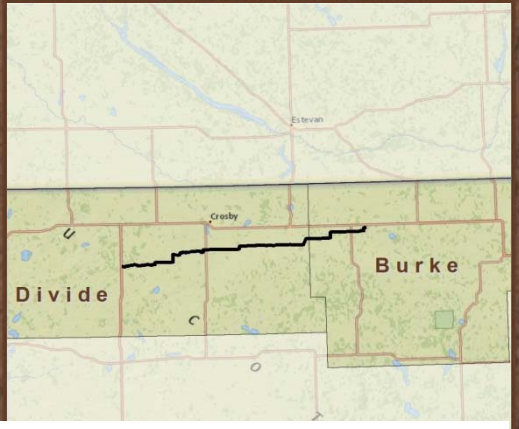
Certificate of Corridor Compatibility and Route Permit

Global Stampede Pipeline Project

Prepared for:
Meadowlark Midstream Company, LLC

Prepared by:
E3 Environmental, LLC

November 2014



E3 ENVIRONMENTAL
Enhancing Execution with Experience

North Dakota Public Service Commission

Certificate of Corridor Compatibility

Meadowlark Midstream Company, LLC

Global Stampede Pipeline Project

Prepared by:
E3 Environmental, LLC

November 2014

E3 ENVIRONMENTAL
Enhancing Execution with Experience

TABLE OF CONTENTS

APPENDICES

INTRODUCTION

Meadowlark Midstream Company, LLC (MMC) a wholly owned subsidiary of Summit Midstream Partners, LLC, owns and operates crude oil assets in North Dakota. MMC is proposing the Global Stampede Pipeline Project (Project). The Project will include certain receipt facilities within the existing Basin Transload Rail Facility (BTRF) near Columbus, ND, and the construction of the Stampede Pipeline (Pipeline) originating at the Divide Pump Station (DPS) and terminating at the BTRF. The BTRF is jointly owned by Basin Transload and Global Partners and is operated by Basin Transload. The proposed crude oil Pipeline will be ten inches in diameter, will be approximately 46 miles long, and will have a throughput capacity of approximately 50,000 barrels per day (bpd).

The proposed Project will also include the construction of one 400 barrel above ground tank at the existing BTRF to provide pressure relief for the Pipeline.

MMC 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, Chapter 49-22-08; and,
- PCS Administrative Code, Chapter 69-06-05, Certificate of Site or Corridor Compatibility.

SECTION 1: DESCRIPTION

1.1 TYPE AND SIZE OF FACILITY

1.1.1 TYPE

The proposed Project would result in a new crude oil transmission pipeline and expansion of the existing BTRF. The steel pipeline will meet U.S. Department of Transportation (DOT) regulations, specifically the design criteria outlined in 49 CFR 195.100, constructed per 49 CFR 195.200 operated and maintained per 49 CFR 195.400. The new tank will be constructed to meet DOT regulations and API 650 Standards.

1.1.2 SIZE

The Project pipeline specifications are the following:

- One ten inch Nominal Diameter Steel Pipe
  - ERW API 5L X42/52 PSL1/PSL2 DRL pipe
  - Wall Thickness of 0.365 inch
  - Pipeline casings installed at State and US Highway crossings and Railroad crossings
  - Maximum Operating Pressure: 1,480 pounds per square inch (psi)
  - Normal Operating Pressure: 500 psi
  - Maximum Throughput: 50,000 bpd
  - Normal Throughput: 35,000 bpd
  - Maximum Operating Temperature: 180 degrees Fahrenheit

1.1.3 LENGTH

The proposed Project is approximately 46 miles in length.

1.2 PURPOSE OF FACILITY

The purpose of the Project is to transport crude oil from the DPS east to the BTRF. From this location, the crude would be transported by rail to Global Partner's rail offloading terminal in Albany, New York for distribution to refineries along the East Coast of the United States. The additional aboveground tank at the BTRF will provide pressure relief for the pipeline. Crude oil is currently gathered by truck from within Divide County and is delivered to the BTRF. The pipeline would provide crude oil delivery from Divide County to the BTRF and subsequently would reduce or eliminate this truck transport.

1.3 LOCATION

The Project would be located in Burke and Divide Counties, North Dakota. The Project would result in a transmission pipeline originating at the DPS in Divide County, approximately ten miles southeast of Fortuna, North Dakota. From the DPS, the Pipeline will trend in an easterly direction to its terminus at the existing BTRF, located

approximately two miles southeast of Columbus, North Dakota. Please refer to the Project maps provided in Appendix B.

1.4 ABOVEGROUND FACILITIES

The proposed Project would include the construction of one (1) additional aboveground tank with a storage capacity of 400 barrels at the BTRF. The additional tank would provide pressure relief for the pipeline. Additionally, the proposed Pipeline would include seven (7) block valves, one (1) at each terminus and five (5) block valves located at intervals along the route. The valves will be actuated, fail-safe, automated and controlled by both the local actuation and by a 24-hour Control Center located in the City of The Woodlands, Texas. The Project will also include ancillary above ground facilities such as a check meter, pig launchers, custody transfer meter and pig receivers. A pig launcher and check meter would be constructed at the DPS and a pig receiver and custody transfer meter would be constructed at the BTRF. Additionally a pig launcher/receiver would be constructed at a mid-point along the line; this location would coincide with a block valve location. The pig launchers and receivers enable in-line inspection of the Pipeline for integrity management per DOT requirements and MMC standards. Please see Appendix A for engineering documents.

1.5 PROJECT SCHEDULE

1.5.1 CERTIFICATE OF CORRIDOR COMPATIBILITY

MMC seeks a Certificate of Corridor Compatibility on or before January 2015.

1.5.2 ROUTE PERMIT

MMC seeks a Route Permit on or before January 2015.

1.5.3 CONSTRUCTION SCHEDULE

MMC plans to commence construction activities as early as the first quarter of 2015. The construction activities would take approximately four to six months to complete. Commissioning and restoration activities would commence immediately after construction is complete.

SECTION 2: STUDIES

2.1 CORRIDOR

MMC 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.

MMC's process of selecting a corridor to site a route between two fixed assets was influenced by the opportunity to collocate with other utility corridors. Agencies and the public at large generally prefer the collocation of utilities within existing corridor.

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 proposed 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. The results of this 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 State Lands Department (NDSLD)
- North Dakota State Preservation Office (NDSHPO)
- North Dakota Department of Health (NDDoH)
- North Dakota PSC- Reclamation Division (PSC)

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 counties.

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

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. Desktop analysis identified 39 streams, 132 waterbodies (i.e. ponds) and approximately 865 wetland features within the Corridor. MMC commissioned field studies to augment the desktop analysis, the field study results are discussed in the Route Permit Application.

2.2.3 TREE/SAPLING/SHRUB ANALYSIS

The density of the woody cover in this region is generally sparse, and typically associated with significant topographic relief such as defined banks or incised drainage channels or agricultural windrows. MMC commissioned field studies to inventory the Project survey corridor, a typical 150-foot corridor centered upon the preferred alignment, woody vegetation. The results of these studies are documented in Appendix D; proposed mitigation measures are detailed in Section 5: Mitigative Measures of the Route Permit Application.

2.3 AGENCY CONSULTATIONS

2.3.1 U.S. FISH AND WILDLIFE SERVICE

The U.S. Fish and Wildlife Service (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 MMC, sent a Project consultation letter with maps of the Corridor on July 21, 2014. A response from the USFWS consultation 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 the critical habitats.

E3 reviewed USFWS published data and identified the following listed species and the potential for the species to occur within the Corridor.

- Whooping Crane (*Grus Americana*) - Endangered
- Gray wolf (*Canis lupus*) – Endangered
- Piping plover (*Charadrius melodus*) – Threatened
    - Federally designated critical habitat

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. Desktop screening identified potential foraging habitat for the whooping crane within the Corridor.

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. The Corridor does not provide suitable habitat or host known populations of the gray wolf. As such, the proposed Project will have no impact on the gray wolf.

Piping plover: The piping plover is 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 percent of the area. Current breeding range on the Northern Great Plains extends south along major prairie rivers including the Yellowstone and Missouri, and in alkali wetlands including those in northeastern Montana and North Dakota. The Project will intersect prairie pothole wetlands, some of which may be suitable alkali wetland habitat, particularly in low-water years. Wetland, waterbody and habitat surveys will be conducted for the Project and best management practices (BMPs) will be implemented to avoid impacts to the piping plover. This will be achieved by avoiding and minimizing impacts to potential habitat and by observing sensitive timing windows. The nearest federally designated critical habitat is Miller Lake located approximately 15 miles west of the Corridor. In addition, the Project is approximately 46 miles from the Missouri River and Lake Sakakawea. The proposed Project will not likely impact piping plovers or their designated critical habitat.

2.3.1.2 MIGRATORY BIRD TREATY ACT CONSULTATION

On July 21, 2014, E3, initiated consultations with the USFWS; the consultation addressed several topics, which fall under the purview of the USFWS including the Migratory Bird Treaty Act (MBTA). The management of MBTA concerns correspond with the regional timing associated with annual phenology of migratory species. In North Dakota, generally it is acknowledged MBTA species of concern may be present and active in North Dakota from February 1st through July 15th annually. Currently the proposed Project construction is scheduled to commence in early 2015 and reach completion late 2015. If construction were to take place during this interval, MBTA mitigation may be required. MMC will continue to consult with agencies as necessary regarding this subject and shall develop MBTA mitigation as appropriate.

2.3.1.3 BALD AND GOLDEN EAGLE PROTECTION ACT CONSULTATION

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.

On July 21, 2014, E3, on behalf of MMC, sent a Project consultation letter with maps of the Corridor to the USFWS, which addressed the topic of BGEA. To date, no response has been received from the USFWS regarding the BGEA. Refer to Appendix C for a copy of the correspondence.

2.3.1.4 U.S. FISH AND WILDLIFE SERVICE 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. Desktop efforts indicate there may be USFWS managed lands within the Corridor. On September 19, 2014, MMC contacted the USFWS's Lostwood Wetland Management District Complex to determine if any USFWS wetland easements would be crossed by the proposed Project. On September 25, 2014, the USFWS Lostwood Wetland Management District Complex responded and indicated the proposed pipeline crosses USFWS easement tracts. Approximately 40 USFWS wetland easements are located within the Corridor. Please see Appendix C for a record of this consultation, and Appendix B for mapped locations of these areas.

2.3.2 NORTH DAKOTA GAME AND FISH DEPARTMENT

The North Dakota Game and Fish Department (NDGFD) has oversight of the State's game species. On July 21, 2014, E3, initiated consultations with the NDGFD requesting information regarding the presence or absence of State Conservation Priority Species within the Corridor. The NDGFD provided a written response dated August 15, 2014. Refer to Appendix C for a copy of this correspondence.

The NDGFD's response identified that the Harris M. Baukol Wildlife Management Area is located within the Corridor and stated that construction activities within this management area would require a Special Use Permit. Additionally, the Department is concerned with the disturbance to native prairie and wooded draws. Avoidance of these areas is recommended, if avoidance cannot be achieved areas should be reclaimed to pre-project conditions.

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 July 21, 2014, E3, 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. The NDPRD response is pending. See Appendix C for a copy of the correspondence.

2.3.4 NORTH DAKOTA STATE LANDS DEPARTMENT

The NDSLD is in charge of managing surface acres and mineral interests held in trust for various schools and institutions. Based on review of publically available information, one state trust land is crossed by the Corridor.

On July 21, 2014, E3, initiated consultations with the NDSLD requesting comments regarding the presence of school trust lands within the Corridor; the NDSLD responded on July 23, 2014 stating that portions of tracts within the Corridor were mined for coal. The NDSLD recommended the Reclamation Division of the PSC be consulted to confirm the extent of which the sub-surface was affected by the coal mining. Refer to Appendix C for a copy of this correspondence.

On July 21, 2014, E3, initiated consultations with the NDSLD requesting comments regarding the presence or absence of state mineral trust lands within the Corridor. On July 31, 2014, the NDSLD requested the data be sent again in a different format. On August 1, 2014, E3 submitted the requested data to the NDSLD. The NDSLD response is pending. See Appendix C for a copy of the correspondence.

2.3.5 NORTH DAKOTA PSC-RECLAMATION DIVISION

Through the consultation process, the NDLSD identified portions of Section 16, Township 162N, Range 94W have been utilized for coal mining. The NDSLD recommended that MMC consult with the Reclamation Division of the PSC. MMC initiated this consultation on August 19, 2014. The Reclamation Division of the PSC responded on August 29, 2014 stating the Project route borders areas of previous mining activities and soil probing/geotechnical surveys are recommended. See Appendix C for a copy of this correspondence. MMC commissioned field studies as recommended and no concerns were identified regarding the stability of the survey area.

2.3.6 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; as such, the NDSHPO maintains records of all previously recorded cultural resources within the state.

E3 commissioned SWCA Environmental Consultants (SWCA) to conduct a Class I inventory of the Corridor. A Class I Cultural Resource Inventory was completed on June 11, 2014 and an addendum was competed on September 26, 2014. The Class I identified previously recorded cultural resources within the Corridor. The results of this Class I effort are documented in Appendix E. To augment this Class I effort a Class III Inventory was commissioned and the details of this effort are documented in Appendix E and are discussed in more detail in the Route Permit application.

2.3.7 NORTH DAKOTA DEPARTMENT OF HEALTH

The North Dakota Department of Health (NDDoH) administers various water quality regulatory programs. These programs include construction stormwater permitting, hydrostatic test water discharges and other water discharges.

2.3.7.1 NDDOH POLLUTION DISCHARGE ELIMINATION SYSTEM

The North Dakota Pollution Discharge Elimination System (NDPDES) is the regulatory program for water discharges such as construction stormwater, site dewatering, and hydrostatic water discharges. MMC would procure the following NDPDES permits from the NDDoH as described below.

Construction Stormwater: MMC would seek coverage under NDR10-0000 *Authorization to Discharge Under the North Dakota Pollutant Discharge Elimination System* general permit for construction activities. A Storm Water Pollution Prevention Plan (SWPPP) would be prepared and maintained on-site for the duration of the Project. MMC would properly implement the SWPPP, which would be designed to manage run-off and trench dewatering discharges in a manner that would minimize exposure to chemicals, waste and petroleum products, and to describe erosion control measures designed to minimize off-site transfer of sediments.

Hydrostatic test water discharges: MMC would seek coverage under NDG07-0000 *Authorization to Discharge Under the North Dakota Pollutant Discharge Elimination* general permit for various temporary discharges including both construction site dewatering and hydrostatic test water discharges.

SECTION 3: NEED FOR FACILITY

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

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. From March of 2007 to March of 2013, oil production in North Dakota has surged by 564 percent. In March of 2007, North Dakota produced 118,000 barrels of oil per day. That figure has increased to 783,000 barrels per day in March of 2013. In 2007, North Dakota accounted for roughly 2.5 percent of all the oil produced in the United States. In 2013, North Dakota accounted for roughly 11 percent of all the oil produced in the country.

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 proposed Project will provide firm, reliable service for 50,000 barrels of crude oil per day and provide a critical link between the DPS and the BTRF. From this location, the crude would be transported to Global Partner's rail offloading terminal in Albany, New York for distribution to refineries along East Coast of the United States.

SECTION 4: CORRIDOR LOCATION AND CRITERIA EVALUATION

The information presented in this section was developed to demonstrate conformation with the PSC's siting criteria for transmission facilities. MMC 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

MMC 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 MMC with the opportunity to utilize existing assets, and minimize landowner and environmental impacts.

MMC 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 which are discussed in detail in the 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

Construction of the proposed Project will provide firm, reliable service for 35,000 barrels of crude oil per day and provide a critical link between the DPS and the BTRF. MMC identified and evaluated several project alternatives; however, none of these alternatives effectively satisfied the Project objective. These alternatives included:

- No-Action Alternative;
- Trucking Alternative; and
- Rail 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. Overall, regional oil and gas production would continue to be constrained by the limited volume of product that could be shipped utilizing existing infrastructure. No action could resulting curtailment of crude oil production. For these reasons, MMC 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 proposed Project would be approximately 50,000 barrels or 1,575,000 gallons of crude oil. The average load for a truck carrying crude oil is approximately 178 barrels (7,500 gallons) per truck. Thus, it will require 281 trucks per day, an average of 11.7 trucks every hour for 24 hours a day to transport the volume of product the pipeline would transport to the BTRF. This level of truck activity is not logistically feasible; as it would cause significant amounts of heavy vehicle traffic for the area's 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, MMC rejected a *Trucking Alternative*.

4.2.1.3 Rail Alternative

A Rail Alternative was also evaluated as a surface transportation alternative. However, the lack of active railroad service within reasonable proximity to the DPS limited the viability of this alternative. Upon further analysis, this alternative was determined not feasible due to the associated environmental impacts and financial, logistic and time constraints necessary to acquire land and construct the requisite rail infrastructure. This alternative would also require a third party rail operator. For these reasons, MMC rejected a *Rail Alternative*.

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

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

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

MMC is aware of other future development plans within close proximity to the Project; however, the pipeline route has been designed to accommodate these developments.

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

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

4.3 EXCLUSION AREAS (NAC 69-06-08-02.1)

Exclusion areas are geographical areas that should be excluded from consideration when siting an energy transmission facility. A proposed corridor may contain exclusion areas, but exclusion areas may not encompass more than 50 percent of the

corridor width at any point, unless there is no reasonable alternative. The following table and text identify and discuss exclusion areas identified within the Corridor.

Exclusion Area	Within Corridor
Federal	
National Parks or Memorial Parks	No
Historic Sites, or Landmarks	No
Natural Landmarks or Monuments	No
Wilderness Areas	No
State	
Historic Sites, Monuments, or Historical Markers	No
Archaeological Sites	Yes
Parks	No
Nature Preserves	No
County	
Parks	No
Recreation Areas	No
Municipal Parks	No
Other	
Areas critical to the life stages of Threatened and Endangered animal or plant species	No
Areas where animal or plant species that are unique or rare to this state would be irreversibly damaged	No
Areas within 1,200 feet of a geographic center of an intercontinental ballistic missile (ICBM) launch or launch control facility.	No
Areas within 30 feet on either side of a direct line between ICBM launch or launch control facilities to avoid microwave interference.	No

4.3.1 FEDERAL RESOURCE REVIEW

MMC has initiated consultations with various federal and state agencies and conducted a comprehensive review of published information. MMC concluded no national or memorial parks, natural landmarks or monuments, or wilderness areas would be crossed or affected by the Project. Please refer to Section 2: Studies of this document for a comprehensive discussion of MMC's agency consultations and Appendix C for copies of the consultations.

4.3.2 STATE RESOURCE REVIEW

MMC confirmed through a combination of agency notifications, review of publicly available information and field studies the absence of state parks, historic sites, monuments, historical markers, or nature preserves within the proposed Corridor.

Please refer to Section 2: Studies of this document for a comprehensive discussion of MMC's agency consultations and Appendix C for copies of the consultations.

MMC commissioned a Class I Inventory of the Corridor. These efforts identified previously recorded historic properties and cultural resources. Please refer to Section 2: Studies of this document for a comprehensive discussion of MMC's related agency consultations, and Appendix E for the Cultural Resource Report. Mitigation details are discussed in Section 5: Mitigative Measures of the Route Permit Application.

4.3.3 COUNTY RESOURCE REVIEW

MMC 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. Please refer to Section 2: Studies of this document for a comprehensive discussion of MMC's consultations and Appendix C for documentation of agency consultations.

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

MMC conducted a comprehensive desktop review of the Corridor; these efforts were augmented with agency consultations and additional field surveys to confirm presence or absence of critical habitat.

Please refer to Appendix C for documentation of the agency consultations as well as Section 2: Route Analysis and Environmental Studies of the application for a Route Permit for details of the field studies.

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

MMC 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, MMC has confirmed the absence of protected species and/or their critical habitats. Please refer Appendix C for supporting documentation of agency consultations.

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

MMC conducted a review of publicly available information and concluded there are no ICBM launch or launch control facilities within the Corridor.

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

MMC conducted a review of publicly available information and concluded there are no ICBM launch or launch control facilities within the Corridor.

4.4 AVOIDANCE AREAS (NAC 69-06-08-02.2)

Avoidance areas are geographic areas that would 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, but may not encompass more than 50 percent 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
Federal	
Historic Districts	No
Wildlife Areas	Yes
Wild, Scenic or Recreational Rivers	No
Wildlife Refuges	No
Grasslands	No
State	
Wild, Scenic, or Recreational Rivers	No
Game Refuges or Game Management Areas	Yes
Forests or Forest Management Areas	No
Grasslands	No
Other	
Other Historic Resources not meeting Exclusion Areas criteria	No
Areas of Known Geologic Instability	No
Areas within 500-Feet of a Residence, School, or Place of Business	Yes
Reservoirs and Municipal Water Supplies	No
Water Sources for Organized Rural Water Districts	No
Irrigated Land (not applicable to underground facilities)	N/A
Areas of Recreational Significance which are not designated as Exclusion Areas	No

4.4.1 FEDERAL RESOURCE REVIEW

MMC conducted a comprehensive review of publicly available information, and agency consultations of the proposed Corridor. This review indicated the absence of designated or registered historic districts, refuges, grasslands, and wild, scenic or recreational rivers within the Corridor. However, the Divide County Waterfowl Production Area was identified within the Corridor. Refer to Appendix C for documentation of agency consultations.

4.4.2 STATE RESOURCE REVIEW

MMC conducted a review of publicly available information and initiated project specific agency consultations and through these efforts has concluded there are no designated or registered management areas, forests, forest management lands, grasslands or wild, scenic, or recreational rivers within the Corridor, however the NDGFD noted the Harris M. Baukol Wildlife Management Area is within the Corridor. Refer to Appendix C for documentation of agency consultations.

4.4.3 HISTORICAL RESOURCES NOT MEETING EXCLUSION AREA CRITERIA

MMC commissioned a Class I Cultural Resource Inventory of the Corridor. This study identified and confirmed the presence of historical resources within the corridor. Please refer to Appendix C for related agency consultations and Appendix E for the Cultural Resource Survey Report.

4.4.4 AREAS OF KNOWN GEOLOGIC INSTABILITY

The North Dakota Geological Survey (NDGS) landslide mapping data was consulted for information regarding areas of landslides near the Project area. No mapping has been done and no landslide data exists near the Project. Finally, North Dakota has not experienced an earthquake of sufficient magnitude to damage steel welded pipe or structural steel structures in recorded history.

Sinkholes are known to occur in the region, but these are related to subsurface mining activities as opposed to limestone dissolution. According to review of PSC abandoned mine data, five mines are located within the Corridor. MMC has engaged the PSC Reclamation Division to determine if subsurface mining activities have occurred within the Project Corridor. Refer to Appendix C and Route Application for a record of this communication.

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

MMC utilized aerial photography to identify structures located within 500 feet of the proposed pipeline alignment. Forty-three (43) occupied structures are located within Corridor. Refer to the Route Permit regarding occupied structures within 500 feet of the Route. MMC is in the process of obtaining landowner waivers from those occupied structures within 500 feet of the Route. Executed landowner waivers are located in Appendix G.

4.4.6 RESERVOIRS AND MUNICIPAL WATER SUPPLIES

MMC has confirmed the Corridor does not contain reservoirs or municipal source water protection areas used for community water supply sources. A number of wells were identified within the Corridor; these wells are used for domestic, stock or observation purposes. The maps in Appendix B depict the location of these resources.

4.4.7 WATER SOURCES FOR ORGANIZED RURAL WATER DISTRICTS

Desktop analysis confirmed the Corridor is located outside of any organized rural water district or association.

4.4.8 IRRIGATED LAND

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

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

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

4.5 SELECTION CRITERIA (NAC 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 proposed project. Through this process, MMC believes the Project would successfully avoid or minimize these effects to the maximum extent practicable.

4.5.1 AGRICULTURAL IMPACT

Agricultural Production: The Project will temporarily affect approximately 560 acres of private land in North Dakota. Once construction is complete, the land would be restored to its pre-construction contours and land use. MMC will provide settlements to landowners for crop loss resulting from Project construction. The expansion at the BTRF will not have an effect on agricultural projection, as it is located within the existing boundaries of the BTRF.

Family Farms and Ranches: The Project will temporarily affect approximately 560 acres of private land in North Dakota. Once construction is complete, the land would be restored to its pre-construction contours and land use. MMC will negotiate easements with all affected landowners. The Project will have no permanent impacts to lifestyle or farm/ranch operations once construction is completed.

Lands Suitable for Irrigation: This section is not applicable to buried pipelines (69-06-08-02.2h). The expansion at the BTRF will not affect lands suitable for irrigation as all ground disturbing/construction activities will occur within the boundaries of the existing facility.

Surface Drainage: Standard construction techniques would be employed; significant modifications to surface drainage patterns are not anticipated. Site grading will be necessary at the BTRF; however, site design will minimize runoff impacts to adjacent landowners. 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 would be restored, the local topography would be restored to its original contours, vegetation would be reestablished and impacts shall be minimal and temporary. BMPs would be implemented in accordance with the project-specific SWPPP, which would comply with the NDDoH Construction Stormwater General Permit requirements. The grading for the BTRF would occur to allow for the siting and construction of the pressure relief

tank. Permanent impacts to surface drainage would be minimized to the maximum extent possible. BTRF site drainage would be designed in a manner in which impacts to adjacent properties are not altered from pre-construction conditions.

Ground Water: Well data has been recorded by the State Water Commission for the Project area. Well data indicate groundwater in upland areas is located more than 14 feet below the surface. Typical subsurface excavations associated with the Project would not extend to more than 10 feet below the ground surface. At that depth, the Project would not intersect the groundwater table, nor would the Project alter recharge rates or the infiltration, permeability, or percolation of water into the groundwater reservoir. Additionally, construction would not affect the lateral movement and 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 proposed Project would 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 could cause temporary increases in the ambient sound environment in the areas immediately surrounding active construction. Once constructed and in-service, normal pipeline operations are not audible.

Construction of the proposed Project will be conducted during typical working hours and is expected to cause temporary increases in ambient sound within and adjacent to the Project area. 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.

Visual Effect on Adjacent Areas: The proposed Project would include the installation of a launcher or receiver at each of the Project terminuses as well as at the approximate mid-point of the pipeline. Additionally, the Project would include the installation of seven block valves, one at each terminus and five block valves located at intervals along the route. These are small aboveground features, which would be installed within the footprint of the maintained right-of-way (ROW) in locations approved by landowners. The visible piping and equipment are finished and maintained with a white painted surface.

One additional aboveground pressure relief tank, associated secondary containment, and facility fencing will be constructed at the existing BTRF. Other oil development is occurring in proximity to the BTRF, and as such, visual impacts associated with the addition of one tank is minimal in this landscape.

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. MMC commissioned field surveys to identify and record the locations of these resources along the proposed Route. Please refer to Section 2: Studies in this document for a comprehensive discussion of the field studies results, as well as Appendix C for copies of the consultations. Mitigation details are discussed in Section 5: Mitigative Measures of the Route Permit Application.

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

Human Health and Safety: MMC's corporate Health and Safety Policy meets or exceeds federal and state laws, rules and regulations, and is enforced equally with respect to both MMC and contractor employees. The implementation of this policy promotes a safe and healthy workplace during construction and operation of all MMC's assets.

The design of the Project has incorporated the use of block valves at regular intervals. The purpose of the block valve is to segment the system and allow for the isolation of select portions of the system to facilitate maintenance in a safe and controlled manner. Additionally, in the event of an abnormal operating condition, block valves can be closed as necessary to prevent an uncontrolled release of oil. Finally, the operation of the pipeline would 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 would occur. MMC does not anticipate species of special concern to experience direct impacts due to construction or operation of the proposed Project.

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

4.6 POLICY CRITERIA

4.6.1 POLICIES AND COMMITMENTS TO LIMIT ENVIRONMENTAL IMPACT

MMC would comply with requirements contained in the Corridor Compatibility Certificate and Route Permit. MMC would 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 MMC are

required to conduct their work in compliance with environmental conditions, permit authorizations, and applicable regulations, and would be held accountable for their actions in that regard. MMC 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.

4.6.2 LOCATION AND DESIGN

This Project will connect two existing facilities, the DPS and the BTRF. From this location, the crude would be transported to Global Partner's rail offloading terminal in Albany, New York for distribution to refineries along East Coast of the United States. Refer to Appendix B for project location maps.

The proposed Project would be constructed of carbon steel and will be a nominal 10.75-inch diameter pipe. The pipe installed would have a nominal wall thickness of 0.365 inches and manufactured to meet API Code 5L specification Grade B pipe. The maximum operating pressure (MOP) of the pipeline will be 1,480 psig.

The proposed pipeline will meet US Department of Transportation regulations, specifically the design criteria outlined in 49 CFR 195.100, constructed per 49 CFR 195.200 operated and maintained per 49 CFR 195.400.

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 be a contractor, supplying specialized skilled labor. The workforce is anticipated to reach a peak of approximately 100 personnel.

4.6.4 ECONOMIES OF CONSTRUCTION AND OPERATION

MMC would invest approximately $33 million in North Dakota to develop this Project, generating approximately $429,000 of additional ad valorem 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

Through its corporate presence in the region (local office in Stanley, ND), MMC 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 proposed Project would 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

MMC 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

MMC owns and operates the DPS. The Project will connect with the BTRF, a Global Partners asset.

4.6.9 MONITORING OF IMPACTS

MMC has operated pipeline gathering and associated facilities in the area since February of 2013. Through these operations, MMC has established and maintained positive landowner and community relationships throughout the region. MMC's operations reflect its commitment to corporate citizenship standards founded on integrity. MMC will monitor landowner concerns, if any, through its Land Department and will respond to all reasonable concerns. Similarly, MMC will monitor community concerns and will respond to all reasonable concerns brought to its attention by local community leaders. MMC is currently in the process of selecting a primary contractor for the construction of the Project and will coordinate with this contractor with respect to the oversight responsibilities for construction activities. Environmental responsibilities shall be coordinated in the same manner.

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

This Project will not be co-located with other utilities. Refer to Appendix B for project maps depicting the Project. However, the majority of the Project will parallel existing utility or road ROW.

4.6.11 OTHER EXISTING OR PROPOSED TRANSMISSION FACILITIES

Appendix F contains MMC's 10-Year Plan, which contains details regarding existing and planned MMC assets.

SECTION 5: MITIGATIVE MEASURES

5.1 LOCATION

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 meets the citing criteria, and provides MMC 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 would further minimize individual impacts to current land practices. All affected landowners would 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 would allow routing options that would 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 would effectively mitigate the impacts of construction along with the final approved route. Standard pipeline construction techniques would involve temporary impacts, but long term or permanent impacts would be avoided through implementation of modern construction techniques, adherence to permit requirements, and avoidance of sensitive features identified during routing studies. Permanent impacts during BTRF tank construction would be minimized to the maximum extent possible.

MMC 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 would allow MMC to draw upon existing pipeline and facility assets in the region.

5.2 CONSTRUCTION

The proposed construction of the Pipeline would 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 four to six months to complete. Construction techniques would 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 proposed Project would operate continuously, delivering crude oil from the DPS to the BTRF. 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 would conform to applicable DOT requirements, which include regular pipeline monitoring and periodic inspection; additionally, routine maintenance of the ROW will likely be required on a regular basis to remain in compliance.

SECTION 6: LIST OF PREPARERS

John Millar
Vice President-Liquids Group
Summit Midstream

Mr. Millar is Vice President, Liquids Group for Summit Midstream and is responsible for developing liquid pipeline commercial opportunities and for managing Summit's liquid pipeline assets. Prior to joining Summit Midstream, Mr. Millar was Vice President and General Manager of Genesis Energy, L.P.'s pipeline, terminal, and trucking businesses, responsible for improving safety, operating efficiency, and service quality and for developing growth projects involving liquid pipeline facilities, marine terminals, rail facilities, and truck stations. Prior to joining Genesis, Mr. Millar held numerous positions in engineering, project management, field operations, control center operations, joint ventures, and business development for Chevron Pipe Line Company, EOTT Energy, Unocal Corporation, and Enbridge Energy Partners. Mr. Millar has over 28 years of experience in nearly all aspects of the oil pipeline industry and holds BS and MS degrees in Civil Engineering from the University of California and an MBA from the University of Houston. Mr. Millar is a licensed Civil Engineer in the State of California.

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 15 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, in this role conducts, and coordinates field studies, agency consultations, mitigation and avoidance plans.

Katie Schmidt, EIT

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 8 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.

Chris Schmidt, GIT

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

B.S. in Environmental Geology and Geologist-In-Training Certification for Minnesota. Mr. Schmidt has over 3 years of environmental consulting experience. Mr. Schmidt has pursued a career focused on regulatory compliance and supports energy clients by providing regulatory review and permitting services. Mr. Schmidt's experience includes work supporting pipeline systems of natural gas, natural gas liquids, and petroleum throughout multiple states.

Dan Woodward, RPA
Senior Archaeologist
E3 Environmental, LLC, 871 Jefferson Ave St Paul, MN 55102

M.A. Anthropology (archaeology focus), California State University -- Fullerton; and B.A. History, University of Florida. Mr. Woodward is a secretary of the interior qualified archaeologist with 15 years of environmental consulting experience working with various energy assets and regulatory agencies. As a senior archaeologist, he has overseen all phases of archaeological fieldwork from class I record searches and class III intensive surveys to detailed excavations and archaeological damage assessments. He has authored dozens of cultural resource technical reports fulfilling NHPA and NEPA cultural resource requirements. Mr. Woodward has also coordinated with multiple Native American groups and has met with interested Tribal representatives in the field to address project concerns. Mr. Woodward has performed historic building analysis and authored built-environment technical reports. Mr. Woodward has also assisted with extensive paleontological fieldwork including paleontological surveys, monitoring, and salvage activities.

North Dakota Public Service Commission

Application for Route Permit

Meadowlark Midstream Company, LLC

Global Stampede Pipeline Project

Prepared by:
E3 Environmental, LLC

November 2014

E3 ENVIRONMENTAL
Enhancing Execution with Experience

TABLE OF CONTENTS

APPENDICES

INTRODUCTION

Meadowlark Midstream Company, LLC (MMC) a wholly owned subsidiary of Summit Midstream Partners, LLC, owns and operates crude oil assets in North Dakota. MMC is proposing the Stampede Pipeline Project (Project). The Project will include certain receipt facilities within the existing Basin Transload Rail Facility (BTRF) near Columbus, ND, and the construction of the Stampede Pipeline (Pipeline) originating at the Divide Pump Station (DPS) and terminating at the BTRF. The BTRF is jointly owned by Basin Transload and Global Partners and is operated by Basin Transload. The proposed crude oil Pipeline will be ten inches in diameter, will be approximately 46 miles long, and will have a throughput capacity of approximately 50,000 barrels per day (bpd).

The proposed Project will also include the construction of one 400 barrel above ground tank at the existing BTRF to provide pressure relief for the Pipeline.

MMC submits to the North Dakota Public Service Commission (PSC) 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, Chapter 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 proposed Project would result in a new crude oil transmission pipeline and expansion of the existing BTRF. The steel pipeline will meet U.S. Department of Transportation (DOT) regulations, specifically the design criteria outlined in 49 CFR 195.100, constructed per 49 CFR 195.200 operated and maintained per 49 CFR 195.400. The new tank would be constructed to meet DOT regulations and API 650 Standards

1.2 PURPOSE OF TRANSMISSION FACILITY

The purpose of the Project is to transport crude oil from the DPS east to the BTRF. From this location, the crude would be transported by rail to Global Partner's rail offloading terminal in Albany, New York for distribution to refineries along the East Coast of the United States. The additional aboveground tank at the BTRF will provide pressure relief for the pipeline. Crude oil is currently gathered by truck from within Divide County and is delivered to the BTRF. The pipeline would provide crude oil delivery from Divide County to the BTRF and subsequently would reduce or eliminate this truck transport.

MMC estimates the Project will cost approximately $33 million to develop.

1.1 LENGTH, SIZE AND DESIGN OF PIPELINE FACILITY

1.1.1 LENGTH OF FACILITY

The proposed Project is approximately 46 miles in length.

1.1.2 PIPE SIZE

The Project pipeline specifications are detailed below:

- One 10-inch Nominal Diameter Steel Pipe
- ERW API 5L X42/52 PSL1/PSL2 DRL pipe
- Wall Thickness of 0.365 inch
- Pipeline casings installed at State and US Highway crossings and Railroad crossings

1.1.3 OPERATING PRESSURE AND THROUGHPUT

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

- Maximum Operating Pressure: 1,480 pounds per square inch (psi).
- Normal Operating Pressure: 500 psi
- Maximum Throughput: 50,000 bpd
- Normal Throughput: 35,000 bpd

1.2 ABOVEGROUND FACILITIES

The proposed Project would include the construction of one (1) additional aboveground tank with a storage capacity of 400 barrels at the BTRF. The additional tank would provide pressure relief for the pipeline. Additionally, the proposed Pipeline would include seven (7) block valves, one (1) at each terminus and five (5) block valves located at intervals along the route. The valves will be actuated, fail-safe, automated and controlled by both the local actuation and by a 24-hour Control Center located in the City of The Woodlands, Texas. The Project will also include ancillary above ground facilities such as a check meter, pig launchers, custody transfer meter and pig receivers. A pig launcher and check meter would be constructed at the DPS and a pig receiver and custody transfer meter would be constructed at the BTRF. Additionally a pig launcher/receiver would be constructed at a mid-point along the line; this location would coincide with a block valve location. The pig launchers and receivers enable in-line inspection of the Pipeline for integrity management per DOT requirements and MMC standards. Please see Appendix A for engineering documents.

1.3 WIDTH OF RIGHT-OF-WAY

The Pipeline would be constructed utilizing a 110-foot construction right-of-way (ROW). MMC would maintain an average 25-foot permanent ROW along the entire length of the pipeline.

1.4 LOCATION

The Project would be located in Burke and Divide Counties, North Dakota. The Project would result in a transmission pipeline originating at the DPS in Divide County, approximately ten miles southeast of Fortuna, North Dakota. From the DPS the pipeline will extend in an easterly direction to its terminus at the existing BTRF, located two miles southeast of Columbus, North Dakota. Please refer to the project maps provided in Appendix B.

1.5 PROJECT SCHEDULE

1.5.1 ROUTE PERMIT

MMC is seeking a Route Permit on or before January 2015.

1.5.2 CERTIFICATE OF CORRIDOR COMPATIBILITY

MMC seeks a Certificate of Corridor Compatibility on or before January 2015.

1.5.3 CONSTRUCTION SCHEDULE

MMC plans to commence construction activities as early as the first quarter of 2015. The construction activities would take approximately four to six months to complete.

SECTION 2: ROUTE ANALYSIS AND ENVIRONMENTAL STUDIES

2.1 PIPELINE ROUTE

MMC has conducted a thorough analysis of the proposed 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, which was chosen utilizing web-based mapping tools, (i.e., one-half mile on either side of a proposed route). The purpose of this analysis was to confirm the proposed Project Corridor was suitable and it would cause minimal environmental impacts thus conforming to the PSC siting criteria.

In conjunction with these efforts, MMC studied routing alternatives and developed the proposed Project alignment (Route). MMC 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 MMC's route selection, the desktop studies from the Corridor were refined and augmented with field studies of the Route. Trained natural and cultural resource specialists conducted field studies.

The environmental survey corridor was a minimum of 150-feet centered on the proposed Route. Field crews performed comprehensive natural and cultural resource surveys on June 16-19, 2014 and September 30 through October 2, 2014. 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 results of these field surveys are summarized in the following sections; the full Natural Resources Report is contained in Appendix D and the Class I and Class III Cultural Resources Reports can be found in Appendix E.

2.2 ROUTE ALTERNATIVES

Construction of the proposed Project will provide firm, reliable service for 50,000 barrels of crude oil per day and provide a critical link between the DPS and the BTRF. MMC identified and evaluated several project alternatives; however, none of these alternatives effectively satisfied the Project objective. These alternatives included:

- No Action Alternative;
- Trucking Alternative
- Rail 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. Overall, regional oil and gas production would continue to be constrained by the limited volume of product

that could be shipped utilizing existing infrastructure. No action could resulting curtailment of crude oil production. For these reasons, MMC 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 proposed Project would be approximately 50,000 barrels or 1,575,000 gallons of crude oil. The average load for a truck carrying crude oil is approximately 178 barrels (5,600 gallons) per truck. Thus, it will require 281 trucks per day, an average of 11.7 trucks every hour for 24 hours a day to transport the volume of product the pipeline would transport to the Basin Transload Rail Facility. This level of truck activity is not logistically feasible; as it would cause significant amounts of heavy vehicle traffic for the area's 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, MMC rejected a *Trucking Alternative*.

Rail Alternative:

A Rail Alternative is a surface transportation alternative. However, the lack of active railroad service within reasonable proximity to the DPS limited the viability of this alternative. Upon further analysis, this alternative was determined not feasible due to the associated environmental impacts and financial, logistic and time constraints necessary to acquire land and construct the requisite rail infrastructure. This alternative would also require a third party rail operator. For these reasons, MMC rejected a *Rail Alternative*.

2.3 ENVIRONMENTAL SURVEY.

Field surveys were conducted on June 16-19 and September 30-October 2 of 2014. The survey corridor was typically a 150-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. These species have adverse ecological and economic impacts due to their ability to outcompete native plant species for habitat and resources. Field surveys identified six (6) areas of leafy spurge within the survey corridor totaling approximately 6.54 acres of which 4.82 acres occur within the construction ROW. MMC will implement the appropriate mitigation measures in these areas to avoid the spread of noxious weeds. Please see Appendix D for the complete Natural Resources Report and Section 5 Mitigative Measures in the document for the proposed mitigation procedures.

2.3.2 TREE/SAPLING/SHRUB SURVEY

During field survey, 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, 35 tree and shrub areas were located within the survey corridor. In total, 626 trees were identified within the 150-foot wide survey corridor; 251 of these features were located within the planned 110-foot wide construction ROW. Please 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) features. 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 efforts.

2.3.3.1 WETLAND SURVEY

Field surveys identified and recorded; 111 wetland features (a total of approximately 68.27 acres) within the survey corridor. MMC will implement appropriate mitigation measures at these features, which may include avoidance (e.g. workspace modification or horizontal directional drill) or use of construction mats and other best management practices (BMPs), to minimize impacts to these features. Please see Appendix B Project Maps, for the mapped location of each feature and Appendix D for the detailed Natural Resource Report.

2.3.3.2 WATERBODIES SURVEY

Seven (7) waterbodies were identified during field surveys, four intermittent streams and three permanent waterbodies. See Appendix B for the mapped location of each feature, Appendix D for the detailed Natural Resources Report, and Section 5: Mitigative Measures of this application for the proposed mitigation measures.

2.3.4 WILDLIFE INVENTORY

Approximately 160 wildlife species are resident or seasonal visitors to the Project area. These include common mammals (i.e., white-tailed deer, mule deer, raccoon and pronghorn antelope); various song birds (i.e., western meadowlark, LeConte's sparrow, horned lark); raptors (i.e., 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. Piping plovers were observed during field surveys and nesting behavior was noted. No other threatened or endangered species or their critical habitat were observed by field biologists. Appendix D contains the Natural Resources Report, which outlines the results of these field efforts.

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 maintain 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 July 21, 2014, E3 Environmental, LLC (E3) requested a USFWS review of the Project, requesting information relating to the presence or absence of threatened and endangered species within the project area. USFWS response is pending.

MMC commissioned field studies to confirm the presence or absence of these species and/or their critical habitats along the proposed pipeline Route. The results of this assessment are provided below; refer to Appendix D, which contains the Natural Resources Report, which outlines the results of these field efforts.

Whooping Crane: The Aransas Wood Buffalo Population of whooping cranes engages in semi-annual migration through North Dakota. During migration, the species is most closely associated with larger wetland complexes for roosting habitat, typically using adjacent uplands to forage. Suitable foraging habitat (i.e., cultivated cropland and wetlands) was observed within the survey corridor. Project activities are scheduled to begin prior to the spring migration window. During migration, it is expected that construction activities will deter the crane from the Project area. The proposed Project is not likely to impact the whooping crane. Please refer to Appendix C for related agency consultations, Appendix D for the detailed Natural Resources Report, and Section 5: Mitigative Measures in this document for proposed mitigation measures.

Piping Plover: Field studies of the survey corridor identified areas of potentially suitable piping plover habitat; plover nesting behavior was also observed during field survey. The piping plover will have completed its nesting season prior to the commencement of construction activities. Active construction should deter the plover from the Project area. Due to the construction schedule and Project location the Project may, but is not likely to impact the piping plover. Please refer to Appendix C for related agency consultations, Appendix D for the detailed Natural Resource Report, and Section 5: Mitigative Measures in this document for proposed mitigation measures.

Bald Eagle: Field studies confirmed the absence of nesting or roosting habitat within 0.5 mile of the centerline of the survey corridor. Refer to Section 5 for mitigation measures should a bald eagle be observed during construction.

Golden Eagle: Field studies confirmed the absence of nesting or roosting habitat within 0.5 mile of the centerline of the survey corridor. Refer to Section 5 for mitigation measures should a golden eagle be observed during construction.

2.3.5 NORTH DAKOTA STATE HISTORIC PRESERVATION OFFICE

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

E3 commissioned SWCA Environmental Consultants (SWCA) to conduct a Class I of the Corridor. The Class I effort was completed on June 11, 2014 and identified ten previously recorded cultural resources within the Corridor (32BK12, 32BKX776, 32DVX206, 32DVX214, 32DVX219, 32DVX220, 32DVX243, 32DVX244, 32DVX246, and 32DVX247). All ten previously recorded cultural resources remain unevaluated regarding their eligibility for inclusion into the National Register of Historic Places (NHRP) and no further work is recommended for these resources.

The ensuing Class III Cultural Resource Inventory of the survey corridor was completed on June 16-19, 2014 by SWCA. During the inventory, 14 new cultural resources were recorded (32BK68, 32BK155, 32BK156, 32DV141, 32DV142, 32DV143, 32BK157, 32DV144, 32DV145, 32BKX1003, 32DVX432, 32BKX1004, 32DVX433, and 32DVX434). The newly recorded resources are all historic, and consist of a newly recorded segment of a previously recorded railroad site (32BK68); two homestead and cultural material scatter sites (32BK155 and 32DV143); a building site (32DV142); five cultural material scatter sites (32BK156, 32BK157, 32DV141, 32DV144, and 32DV145); four farm equipment isolated finds (32BKX1003, 32BKX1004, 32DVX432, and 32DVX434); and one wagon isolated find (32DVX433). Of these resources, 32BK68 is recommended as eligible for the NRHP, therefore this site would be avoided via horizontal directional drilling underneath the site. The remaining 13 newly recorded sites are recommended not eligible for the NRHP and therefore no further work is necessary. Appendix E contains the Cultural Resources Report.

On August 26, 2014, E3 on behalf of MMC submitted SWCA's Cultural Resource Report. The SHPO responded on August 29, 2014 providing concurrence with SWCA's recommendation of *No Significant Sites Affected* for the Project. Please refer to Appendix C for related agency consultations, and Appendix E for the Cultural Resources Reports.

E3 commissioned SWCA to conduct an additional Class I and Class III Cultural Resource Inventory to accommodate Project adjustments that placed the centerline outside of the previously inventoried survey corridor. The Class I was completed on September 26, 2014 and identified an additional 15 previously recorded cultural resources within the adjusted survey corridor. Fourteen of the sites were newly recorded sites from the June 2014 Class III survey conducted by SWCA, and one site (32DVX207) is unevaluated for inclusion on the NRPH. The additional Class III inventory was completed September 30, 2014 and October 1-2, 2014. At this time, SWCA revisited eligible site 32BK68 and recorded one new cultural resource (32DVX435). Site 32DVX435 is recommended as not eligible for the NRHP, and therefore no further work is necessary. The Addendum Cultural Resources Report

was submitted to the SHPO for review on October 22, 2014. The SHPO responded on November 4, 2014 providing concurrence with SWCA's recommendation of *No Significant Sites Affected* for the Project. A record of this communication can be found in Appendix C and the Addendum Cultural Resources Report can be found in Appendix E.

2.3.6 U.S. FISH AND WILDLIFE SERVICE MANAGED LANDS

MMC coordinated with the USFWS Lostwood Wetland Management District Complex to determine if any USFWS wetland easements would be crossed by the proposed Project. On September 25, 2014, the USFWS Lostwood Wetland Management District Complex responded and indicated the proposed Pipeline would cross USFWS easement tracks. Approximately 14 USFWS wetland easements and subsequently17 wetland basins would be crossed by the Project. Please see Appendix C for a record of this consultation. The proposed mitigation is detailed in Section 5: Mitigative Measures of the Route Permit application.

SECTION 3: NEED FOR FACILITY

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

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. From March of 2007 to March of 2013, oil production in North Dakota has surged by 564 percent. In March of 2007, North Dakota produced 118,000 barrels of oil per day. That figure has increased to 783,000 barrels per day in March of 2013. In 2007, North Dakota accounted for roughly 2.5 percent of all the oil produced in the United States. In 2013, North Dakota accounted for roughly 11 percent of all the oil produced in the country.

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 proposed Project would provide firm, reliable service of 35,000 bpd of crude and would provide a critical link between the DPS and the BTRF. From this location, the crude would be transported to Global Partner's rail offloading terminal in Albany, New York for distribution to refineries along East Coast of the United States.

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:

Route planning between the existing DPS and the BTRF 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 were identification of existing utility corridors for collocation, and acquisition of pipeline ROW from area landowners. The majority of the proposed Project would parallel existing roadways, existing easements and utility corridors.

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, and full reports are provided in Appendices D and E. 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 would 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. MMC will mitigate these temporary impacts to the maximum extent possible.

The Project would be constructed in compliance with 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:

MMC 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:

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

4.1.6 DIRECT AND INDIRECT ECONOMIC IMPACTS OF THE PROPOSED FACILITY:

MMC will invest approximately $33 million in North Dakota to develop this Project, generating approximately $429,000 of additional ad valorem tax revenues annually. Once constructed and in-service, the continued costs of maintenance and operation of the proposed Project are minimal. While the pipeline itself will not generate any direct tariff revenues for the state of North Dakota, it is estimated the gross product value produced and transported through the Project will be in excess of $100 million annually, generating significant producer, royalty and state tax revenues in the most efficient and minimally intrusive way possible.

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:

MMC is aware of other future development plans within close proximity to the Project; however, the pipeline route has been designed to accommodate these developments.

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

MMC commissioned Class I and Class III cultural resource inventories. MMC developed mitigation plans for registered or eligible sites that encroach on the proposed construction corridor. The proposed mitigation measures are detailed in Section 5 of this document. 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 within 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. Please see Section 2 for comprehensive discussion of MMC's effort to identify sensitive environmental resources within the proposed Route and Section 5 for a comprehensive discussion of proposed mitigation. MMC 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 would not result in any impact to listed or sensitive species or their habitats. Please 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:

MMC provided Project specific consultations to various federal, state and local agencies; through this consultations process, these agencies have the opportunity to identify possible sensitive environmental resources within the Route and any related agency concerns. A summary of these concerns is 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.

- USFWS: The survey corridor crosses USFWS wetland easements and wetland basins. Measures should be taken to avoid impacts to these features.
- ND Department of Trust Lands: Coal was mined along portions of the proposed pipeline tract. The agency recommended consulting with the Reclamation Division of the ND PSC to the extent of the surface impacted by the coal mining. A response from the ND PSC was received on August 26, 2014.
- ND PSC Reclamation Division: The Reclamation Division suggests that since the Project borders areas of previous mining activity soil probing/geotechnical testing be done to determine the limits of the mine disturbance in that area.
- NDGFD: The Department's primary concern is with the disturbance to native prairie and wooded draws associated with construction of the Pipeline and associated access roads. Avoidance of these areas is recommended, if avoidance cannot be achieved areas should be reclaimed to pre-project conditions. Additionally, if the Harris M. Baukol Wildlife Management area will crossed by construction activities a special use permit will be required. Avoidance of this Wildlife Area is recommended, if avoidance cannot be achieved a special use permit should be obtained from the Wildlife Resource Management Supervisor.

MMC incorporated this feedback into the Route selection process, and as appropriate, into field survey protocols. If field studies confirmed the presence of these items, MMC refined the proposed alignment or developed mitigation strategies to avoid or minimize direct impacts. Further discussion on agency coordination can be found in the Section

2 of the Certificate of Corridor Compatibility application and discussions of avoidance and mitigation measures are found in Section 5 of this document. Please see Appendix C for complete federal and state agency consultations. Detailed survey results can be found in Appendix D and E.

4.2 EXCLUSION AREAS (NAC 69-06-08-02.1)

Exclusion areas are geographical areas that should be excluded in the consideration of a route for a transmission facility. The following table and text identify and discuss exclusion areas identified along the proposed Route.

Exclusion Area	Crossed by Proposed Route
Federal	
National Parks or Memorial Parks	No
Historic Sites or Landmarks	No
Natural Landmarks or Monuments	No
Wilderness Areas	No
State	
Historic Sites, Monuments, or Historical Markers;	No
Archaeological Sites	Yes
Parks	No
Nature Preserves	No
County	
Parks	No
Recreation Areas	No
Municipal Parks	No
Other	
Areas Critical to the Life Stages of Threatened or Endangered Animal or Plant Species	No
Areas where Animal or Plant Species that are Unique or Rare to this State would be Irreversibly Damaged	No
Areas within 1,200 feet of a geographic center of an intercontinental ballistic missile (ICBM) launch or launch control facility.	No
Areas within 30 feet on either side of a direct line between (ICBM) launch or launch control facilities to avoid microwave interference.	No

4.2.1 FEDERAL RESOURCE REVIEW

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

4.2.2 STATE RESOURCE REVIEW

MMC confirmed through a combination of agency consultations, review of publicly available information and field studies the absence of state parks, historic sites, monuments, historical markers, or nature preserves within the proposed Route. Please refer to Section 2: Studies of this document for a comprehensive discussion of the results of agency consultations and field studies conducted for this project.

4.2.3 COUNTY RESOURCE REVIEW

Through a combination of agency consultations and review of publicly available information, MMC confirmed the absence of county parks or recreation areas, and municipal parks, or parks owned by other subdivisions of government bodies within the proposed Route. Please refer to Section 2: Studies of this document for a comprehensive discussion of MMC's agency consultations and Appendix C for documentation of agency correspondence.

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

MMC 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 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. Appendix D contains the complete Natural Resource Survey Report.

4.2.5 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 proposed Project would 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.

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

MMC conducted a review of publicly available information and concluded there are no ICBM launch or launch control facilities within 1,200 feet of the Route.

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

MMC conducted a review of publicly available information and concluded there are no ICBM launch or launch control facilities within 30 feet of the Route.

4.3 AVOIDANCE AREAS (NAC 69-06-08-02.2)

Avoidance areas are geographical areas that shall not be considered in the routing of a transmission facility unless, under the circumstances, it is shown there is no reasonable alternative. The following table and text identify and discuss avoidance areas crossed by the proposed Route.

Avoidance Area	Crossed by Proposed Route
Federal	
Historic Districts	No
Wildlife Areas	No
Wild, Scenic or Recreational Rivers	No
Wildlife Refuges	No
Grasslands	No
State	
Wild, Scenic or Recreational Rivers	No
Game Refuges or Game Management Areas	No
Forests or Forest Management Lands	No
Grasslands	No
Other	
Historic Resources not meeting Exclusion Areas criteria	No
Areas of Known Geologic Instability	No
Areas within 500-Feet of a Residence, School, or Place of Business	Yes
Reservoirs and Municipal Water Supplies	No
Water Sources for Organized Rural Water Districts	No
Irrigated Land (not applicable to underground facilities)	N/A
Areas of Recreational Significance which are not designated as Exclusion Areas	No

4.3.1 FEDERAL RESOURCE REVIEW

MMC conducted 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 RESOURCE REVIEW

MMC 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 HISTORICAL RESOURCES NOT MEETING EXCLUSION AREA CRITERIA

MMC conducted a review of publicly available resources along with field surveys and concluded there is one historical resources within the survey corridor that meet the exclusion area criteria. Avoidance of this site will be achieved by horizontal directional drill of the historical railroad feature. Refer to Section 5 of this document for additional mitigative measures, Appendix C for agency consultations and Appendix E for the complete Cultural Resources Report.

4.3.4 AREAS OF KNOWN GEOLOGIC INSTABILITY

The North Dakota Geological Survey (NDGS) landslide mapping data was consulted for information regarding areas of landslides near the Project. No mapping has been done and no landslide data exists near the Project. Finally, 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. Based on coordination with the PSC the Route borders areas of previous mining activity and the PSC recommend soil probing/geotechnical surveys be conducted to confirm areas of mining disturbances. Refer to Appendix C for agency consultations. MMC has commissioned the recommended studies.

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

MMC utilized aerial photography to identify structures located within 500 feet of the proposed pipeline alignment. Seven (7) occupied structures are located within 500 feet of the Project. MMC is in the process of obtaining landowner waivers from those residences within 500 feet of the Project. Executed landowner waivers can be found in Appendix G.

4.3.6 RESERVOIRS AND MUNICIPAL WATER SUPPLIES

MMC has confirmed the survey corridor does not contain reservoirs or municipal source water protection areas for community water supply sources. While a number of wells were identified within the Corridor, these wells are used for either local domestic, stock, or irrigation purposes. The maps in Appendix B depict the location of these resources.

4.3.7 WATER SOURCES FOR ORGANIZED RURAL WATER DISTRICTS

Desktop analysis confirmed the Route is located outside of any organized rural water district or association. There are no documented source water protection areas for

community and non-community water supplies within the proposed Corridor. While a number of wells were identified within the Corridor, these wells are used for either local domestic, stock, or irrigation purposes. The maps in Appendix B depict the location of these resources.

4.3.8 IRRIGATED LAND

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

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

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

4.4 SELECTION CRITERIA (NAC 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 proposed project. Through this process, MMC believes the Project would successfully avoid or minimize these effects to the maximum extent practicable.

4.4.1 AGRICULTURAL IMPACTS

Agricultural Production: The Project will temporarily affect approximately 560 acres of private land in North Dakota. Once construction is complete, the land will be restored to its pre-construction contours and land use. MMC will provide settlements to landowners for crop loss resulting from Project construction. The expansion at the BTRF will not have a significant effect on agricultural projection, as it is located in an area previously developed for oil production.

Family Farms and Ranches: The Project will temporarily affect approximately 560 acres of private land in North Dakota. Once construction is complete, the land will be restored to its pre-construction contours and land use. MMC will negotiate easements with all affected landowners. The Project will have no permanent impacts to lifestyle or farm/ranch operations once construction is completed.

The location of pipeline markers is defined under 49 CFR 195 for pipelines. MMC 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 by or cause damage to landowner or county equipment.

Lands Suitable for Irrigation: This section is not applicable to buried pipelines (69-06-08-02.2h). The expansion at the BTRF will not affect lands suitable for irrigation as all ground disturbing/construction activities will occur within the boundaries of the existing facility.

Surface Drainage: Standard construction techniques would be employed; significant modifications to surface drainage patterns are not anticipated. Site grading would be

necessary at the BTRF; however, site design would minimize runoff impacts to adjacent landowners. Care would be taken throughout the construction process to minimize environmental impacts, including modification of drainage patterns. During restoration, those areas that were disturbed during construction would be restored, the local topography shall be restored to its original contours, vegetation shall be reestablished, and impacts shall be minimal and temporary. BMPs would be implemented in accordance with the project-specific Stormwater Pollution Prevention Plan (SWPPP), which would comply with the NDDoH Construction Stormwater General Permit requirements. The grading for the BTRF will occur to allow for the siting and construction of the pressure tank. Permanent impacts to surface drainage would be minimized to the maximum extent possible. BTRF site drainage would be designed in a manner in which impacts to adjacent properties are not altered from pre-construction conditions.

Ground Water: Well data has been recorded by the State Water Commission for the Project. Well data indicate groundwater in upland areas is located more than 14 feet below the surface. Typical subsurface excavations associated with the Project will not extend to more than ten 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 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 proposed Project would 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 could cause temporary increases in the ambient sound environment in the areas immediately surrounding active construction. Once constructed and in-service, normal pipeline operations are not audible.

Construction of the proposed 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.

Visual Effect on Adjacent Areas:

The proposed Project would include the installation of launchers or receivers at each of the Project terminuses as well as at a mid-way point along the Route. Additionally, the Project will include the installation of seven (7) block valves, one at each terminus and five (5) block valves located at intervals along the route. These are small

aboveground features, which would be installed within the footprint of the maintained ROW in locations approved by landowners. The visible piping and equipment are finished and maintained with a white painted surface.

One additional aboveground pressure relief tank, associated secondary containment, and facility fencing would be constructed at the existing BTRF. Other oil development is occurring in proximity to the BTRF, and as such, visual impacts associated with the addition of one tank is minimal in this landscape.

No other permanent aboveground features are proposed as a part of the Project.

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

Wetlands, Woodlands and Wooded Areas: MMC commissioned field surveys to identify and record the locations of these resources along the proposed Route. Please refer to Section 2: Studies in this document for a comprehensive discussion of the field studies results, as well as Appendices C for copies of related correspondence. Mitigation details are discussed in Section 5: Mitigative Measures of the Route Permit Application.

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

Human Health and Safety: MMC's corporate Health and Safety Policy meets or exceeds federal and state laws, rules and regulations, and is enforced equally with respect to both MMC and contractor employees. The implementation of this policy promotes a safe and healthy workplace during construction and operation of all MMC's assets.

The design of the Project has incorporated the use of block valves at regular intervals. The purpose of the block valve is to segment the system and allow for the isolation of select portions of the system to facilitate maintenance in a safe and controlled manner. Additionally, in the event of an abnormal operating condition, block valves can be closed as necessary to prevent an uncontrolled release of NGLs. Finally, the operation of the pipeline would 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 would not be permanently displaced by the Project and no measurable impact to the viability of these populations will occur. MMC does not anticipate species of special concern to experience direct impacts due to construction or operation of the proposed Project.

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

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

4.5.1 POLICIES AND COMMITMENTS TO LIMIT ENVIRONMENTAL IMPACT

MMC will comply with requirements contained in the Corridor Compatibility Certificate and Route Permit. MMC 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 MMC are required to conduct their work in compliance with environmental conditions, permit authorizations, and applicable regulations, and will be held accountable for their actions in that regard. MMC 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.

4.5.2 LOCATION AND DESIGN

This Project will connect two existing facilities, the DPS and the BTRF. From this location, the crude would be transported via rail to Global Partner's rail offloading terminal in Albany, New York for distribution to refineries along East Coast of the United States. Refer to Appendix B for project location maps.

The proposed pipeline would be constructed of carbon steel and will be a nominal 10-inch outside diameter pipe. The pipe installed will have a nominal wall thickness of 0.365 inches and manufactured to meet API Code 5L specification Grade X42 or X52 pipe. The maximum operating pressure (MOP) of the pipeline will be 1,480 psig.

The proposed Pipeline will meet US Department of Transportation regulations, specifically the design criteria outlined in 49 CFR 195.100, constructed per 49 CFR 195.200 operated and maintained per 49 CFR 195.400.

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 be supplying specialized skilled labor. MMC will draw upon the local labor force to supply as appropriate. The workforce is anticipated to reach a peak of approximately 100 personnel.

4.5.4 ECONOMIES OF CONSTRUCTION AND OPERATION

MMC would invest approximately $33 million in North Dakota to develop this Project, generating approximately $429,000 of additional ad valorem tax revenues annually. Once constructed and in-service, the continued costs of maintenance and operation of the proposed pipeline are minimal. While the Global Stampede Pipeline itself will not generate any direct tariff revenues, it is estimated the gross crude oil product value produced at the Plant and transported through the Project will be in excess of $100 million annually, generating significant producer, royalty and state tax revenues in the most efficient and minimally intrusive way possible.

4.5.5 USE OF CITIZEN COORDINATING COMMITTEES

MMC 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, MMC has maintained several grass roots communication channels to inform local residents regarding the developments associated with the Project. MMC will continue to maintain contact with local government officials. Through this contact, project related information will be exchanged and should concerns arise, MMC 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 proposed Project will interconnect with existing facilities. The products currently handled, transferred, and shipped at these facilities are currently delivered to markets located in and out of the state.

4.5.7 LABOR RELATIONS

MMC 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

Basin Transload and Global Partners operate the rail terminal and MMC will coordinate pipeline deliveries with them on a daily basis.

4.5.9 MONITORING OF IMPACTS

MMC has operated pipeline gathering and associated facilities in the area since February of 2013. Through these operations, MMC has established and maintained positive landowner and community relationships throughout the region. MMC's operations reflect its commitment to corporate citizenship standards founded on integrity. MMC will monitor landowner concerns, if any, through its Land Department and will respond to all reasonable concerns. Similarly, MMC will monitor community concerns and will respond to all reasonable concerns brought to its attention by local community leaders.

4.5.10 UTILIZATION OF EXISTING AND PROPOSED ROW AND CORRIDORS

This Project will not be co-located with other utilities; however, the Pipeline will parallel existing utility and road corridors. Refer to Appendix B for project maps depicting the Project.

4.5.11 OTHER EXISTING OR PROPOSED TRANSMISSION FACILITIES

Appendix F contains MMC's 10-Year Plan, which contains details regarding existing and planned MMC assets.

SECTION 5: MITIGATIVE MEASURES

5.1 LOCATION

The proposed Project is a new approximately 46 mile; ten inch diameter crude pipeline originating ten miles southeast of Fortuna, North Dakota at Meadowlark Midstream Company's DPS and will terminate at the BTRF approximately two miles southeast of Columbus, North Dakota. Please refer to the Project maps provided in Appendix B.

Trees and shrubs: MMC 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 would 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 would be based upon actual impacts due to construction, shall meet the 2:1 ratio specified, and shall be fully documented.

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

Migratory Bird Treaty Act: The commonly observed timeframe for migration of protected species in North Dakota is February 15 to July 15. Construction activities for the propose project are planned to be initiated in early 2015 and continue into late 2015. Based on the Project's schedule, construction activities may occur during the recognized migration/breeding season. MMC will develop and implement a mitigation plan which may include conducting survey for nesting birds prior to the commencement of ground disturbing activities and implementing avoidance and monitoring measures of any active nests.

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, 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 May. Construction activities for the proposed Project are scheduled to begin in early 2015, which should largely mitigate impacts to this species. Additionally, to mitigate any adverse effects on migratory cranes, MMC will suspend heavy equipment operations when whooping crane(s) are found within 0.5 mile (line of sight) of the construction corridor. Suspended activities would resume

in the absence of whooping cranes. Please see Appendix C for MMC Project notification to the USFWS.

Piping Plover: The piping plover is federally listed as a threatened species and is present in North Dakota along the shorelines of alkaline lakes, large reservoir beaches, river islands and alkai wetlands. Field surveys identified piping plovers and nesting behavior near wetlands. The piping plover nesting season is from early May to the end of August. Project construction is planned to commence in early 2015, and this schedule would mitigate impacts to the plover during its typical nesting season. If plovers are encountered MMC would suspend heavy equipment operations and cordon off a 100-foot avoidance zone. Construction activities would not commence in this area until appropriate agency coordination has occurred. Please see Appendix C for MMC project notification to the USFWS and Appendix D for the Natural Resource Report.

Bald and Golden Eagle: Field surveys conducted in April of 2014 confirmed the absence of nests or nesting activities where habitat was suitable along the Route. If bald or golden eagles are observed within 0.5 mile (line of sight) of the Project, MMC would suspend heavy equipment operations until the eagles have left the area. MMC would work with the USFWS as necessary if an eagle nest is identified within 0.5 mile of the proposed Route.

Cultural Resources: On August 29, 2014, MMC received concurrence of *No Significant Sites Affected* for the Project from the SHPO, provided there are no changes to the nature or location of the proposed Project. On November 4, 2014, MMC received an additional concurrence of *No Significant Sites Affected* for the Project from the SHPO regarding the Addendum Cultural Resource Report. Resources identified during field surveys are summarized below. Refer to Appendix C for a complete record of this correspondence.

32BK68: This site is a newly recorded segment of the previously recorded 32BK68. 32BK68 is a segment of the Great Northern Railroad, which is owned and operated by Burlington Northern Santa Fe (BNSF). Segments of 32BK68 were recorded in 2003, 2011, 2012. In 2001, this site was recommended eligible for listing on the NRHP. Therefore, MMC would horizontal directional drill beneath the site to avoid impacts.

Noxious Weeds: Field surveys identified approximately 6.54 acres of leafy spurge within the survey corridor. MMC will advise contractors of these locations. Equipment leaving infested areas would be inspected visually prior to leaving the area, vegetation and soils shall be cleaned from vehicles and equipment. 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 proposed construction of the Pipeline would 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 four to six months to complete. Construction techniques would 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 would immediately follow pipeline construction. Final grading would restore the original contours of the land. Disturbed areas would be prepared for re-seeding and restoration would be coordinated to meet landowner specifications.

5.3 OPERATION

Once put into service, the proposed Project would operate continuously, delivering crude oil from the DPS to the BTRF. 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 would conform to applicable DOT requirements, which include regular pipeline monitoring and periodic inspection; additionally, routine maintenance of the ROW would likely be required on a regular basis to remain in compliance.

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

6.1 PIPELINE CONSTRUCTION

Construction would be an assembly-line process and would 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 would require approximately four to six months to complete from start to finish, except when weather-related delays affect the schedule. However, construction activity at any location would not continual but occurs in distinct phases with several days or weeks between each phase. For example, clearing and grading may require 10 hours to progress for one mile along the pipeline ROW, but trenching may not follow in the area for several weeks. During the interim, activity in the area may be completely lacking or limited to occasional vehicular or pedestrian traffic.

Surveying and Staking: Prior to construction activities, MMC would stake the centerline and 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 boundaries and other environmentally sensitive areas also would be marked or fenced for protection at this time.

Clearing and Grading: Prior to clearing, landowner fences would be braced and cut, and temporary gates and fences would be installed to control livestock where necessary. A clearing crew would 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 would be graded, where necessary, to provide a reasonably level work surface and to segregate topsoil. Topsoil would 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 two and nine inches deep with the deepest topsoil in valleys and the thinnest topsoil on the hillsides and hilltops. The topsoil depth and the layer removed would be determined in the field; upon completion of pipeline construction, the trench would be backfilled and topsoil would to 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 would 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 would be returned to the original location and preconstruction contours reestablished during restoration.

Concurrent with grading, erosion and sediment control devices would be installed as required by state stormwater permit conditions. Waterbodies may be bored using horizontal directional drilling (HDD) methods to place pipe under the waterbody without disturbing it. The pipeline would be placed such that adequate cover from the bottom of the waterbody would be in place. This would be individual to the waterbody but would be no closer than five feet to the bottom of the waterbody. Construction mats would also be installed across saturated wetlands to prevent rutting as equipment traveled the ROW. Erosion and sediment control devices, which may include silt fences, straw wattles, straw bales and road access pads, would 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 would be returned to the original grade and the topsoil would be redistributed over the work area.

Trenching: The trench would be excavated by using backhoes to a depth that provides sufficient cover over the pipeline after backfilling. The bottom width of the trench would be sufficient to accommodate the ten inch diameter pipeline. Typically, the trench would be excavated to a depth of about five feet deep to allow for a minimum of four feet of cover after construction. In cultivated areas, the depth of cover would be sufficient and safely below the maximum tillage depth. Additional cover requirements may be applicable at public road crossings.

Trench spoil would be stored adjacent to but would not be mixed with topsoil on the non-working side of the ROW. In some cases, however, where sufficient space would 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 (e.g., joints) would 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" would be used.

After the pipe sections are bent, the joints would be welded together into sections and placed on temporary supports. Welding would comply with requirements listed in Title 49 CFR Part 195 and API Standard 1104 *Welding of Pipelines and Related Facilities*. Each weld would be tested by using radiographic non-destructive examination to ensure no defective welds were present and MMC engineering standards were met.

Welds that do not meet standards and specifications would be removed and/or repaired.

A third-party contractor certified in non-destructive inspection would be used and inspections would be performed as outlined in Title 49 CFR Part 195. After the welds were approved, a protective epoxy coating would be applied to the welded joints. The pipeline would subsequently be electronically and visually inspected for defects in the epoxy coating. Damage to or defects in the coating would be repaired prior to lowering-in the pipeline. Cathodic protection systems would also be directly bonded to the pipe at that time.

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

If the trench bottom were obscured by water, the trench would be dewatered. Where dewatering may be required, MMC would 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 would be installed to prevent 'piping' from occurring along the pipe in the trench after the area was backfilled.

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

Hydrostatic Testing: MMC would hydrostatically test the pipeline. Hydrostatic testing would conform to DOT standards and would establish the maximum operating pressure (MOP) for the pipeline when it was operational. Testing involves installation of test headers, which control the pressure applied. The test headers would 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 hour period, without a significant change in pressure. Once testing was completed, the test water would be evacuated; the line is dried, and prepared for commissioning. MMC would either procure discharge permit(s) from the NDDOH and the ensuing discharge would conform 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 would be removed and the final pipeline tie-ins would be made. After final tie-ins were complete, the tie-in welds were inspected and the line was sufficiently dried, the pipeline would 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 would be

cleaned and dried using mechanical devices; the line would be purged of air and then loaded with product.

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

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

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

Every reasonable effort would be made to complete final cleanup (including final grading and installation of erosion control devices) in accordance with landowner requests or permit conditions within 21 days of backfilling.

Markers showing the location of the pipeline would 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 would also be installed.

The horizontal directional drilling bore method involves setting a horizontal drill rig at one or both ends of the bore area. If the drill rig was located on or near the stream bank, erosion countermeasures would be installed to minimize bank disturbance and prevent further erosion during the drilling operation. The drill bores underneath the waterbody followed by a casing pipe, which provides drilling fluid to dissipate heat and remove soil spoils. The main pipe, known as the string pipe, would be installed inside the casing pipe once the bore has been completed. The string pipe would then be connected to the main pipeline.

Following installation of the casing and string pipes, the stream bank would be restored as necessary. MMC would compact the banks and install erosion and sediment control blankets on the banks after seeding to prevent scour and a discharge of sediment to the waterbody. In addition, sediment control barriers would be installed on the top of the banks to prevent sediment generated from the ROW from entering the waterbody. These barriers would remain in place until the ROW approaches were adequately vegetated.

MMC is proposing to cross flowing waterbodies using methods, which would minimize the length of time necessary to install the pipes and restore the stream bank, as well

as to prevent sediment from entering the waterbody during construction to reduce the impacts on the waterbody. For all ephemeral, intermittent and perennial crossings, MMC would implement the following mitigative measures:

- Temporary extra workspaces would be located at least 50 feet from the edges of the waterbody, unless a ten foot setback was identified for waterbodies located in actively cultivated agricultural fields.
- Temporary extra workspaces would be limited to the minimum size needed to construct the waterbody crossing.
- Riparian vegetation would be preserved by limiting clearing of vegetation between temporary extra workspace areas and waterbody edges;
- Temporary sediment and erosion control devices would be installed across the width of the ROW after clearing but before ground disturbance. These devices would remain in place throughout construction until stream banks and adjacent upland areas were stabilized.
- Trench spoil placement would be restricted to at least ten feet from the water's edge on the ROW, or in temporary extra workspace areas.
- Waterbody buffers would be maintained (e.g., temporary extra workspace area setbacks, refueling restrictions) in the field with signs until construction, related ground-disturbing activities were complete.
- The use of equipment operating in the waterbody would be limited to that needed to construct the crossing.
- Construction would be completed across minor waterbodies (i.e., less than or equal to ten feet wide) within a single 24-hour time period.
- Storage and refueling activities would be restricted near surface waters and procedures in the Spill Prevention, Containment and Countermeasure (SPCC) Plan would be promptly implemented if a spill or leak occurs during construction.
- Bank stabilization and re-establishment of streambed and bank contours would be required after construction.
- A permanent slope breaker would be installed across the ROW at the base of slopes greater than five percent that are less than 50 feet from the water's edge.

Wetland Restoration: Following pipeline installation, the trench would be backfilled with the material excavated and, to the maximum extent possible, restored to pre-construction contours. Replacing the wetland soil and restoring pre-construction hydrology would promote the rapid re-establishment of hydrophytic vegetation.

MMC would also take precautionary measures outside wetland boundaries to prevent construction in uplands from having an impact on wetlands. These measures include:

- Installing sediment barriers across the entire construction ROW immediately upslope of the wetland boundary where necessary to prevent sediment flow into the wetlands.
- Installing sediment barriers along the edge of the construction work area where wetlands are adjacent to the construction ROW and the ground surface slopes toward the wetland.

Following backfilling, topsoil segregated before trenching would be returned to the area from which it was stripped. If timber mats or riprap were used, MMC would remove the supports from the wetland. No lime, mulch or fertilizer would be used in wetlands, but MMC would apply annual ryegrass in wetlands without standing water.

All materials used for equipment crossings in wetlands would be removed in their entirety following construction, and the area would be restored and stabilized according to the relevant permit authorizations.

Agricultural Land Restoration: Extensive portions of the Project would involve heavy construction through agricultural areas. These areas consist of active croplands predominately used to grow durum, hard red spring wheat, red winter wheat, barley, sunflowers and canola. Additionally, agricultural lands are used as range or pasture land used for livestock production. MMC would utilize the following general construction methods in agricultural areas, consistent with the requirements of landowners:

- Prior to construction, landowners would be contacted and irrigation facilities, and wells, waterlines and other and livestock watering systems would be located.
- Water flow would be maintained in supply systems unless shutoff was coordinated with the affected parties.
- Existing fences would be cut and braced along the ROW, and temporary gates and fences, if necessary, would 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, MMC would remove the topsoil removal and segregate the soil from subsoil.
- MMC would decompact the travel lane on the ROW if requested by the landowner.
- On all actively cultivated lands free of shallow bedrock, the trench would be excavated to sufficient depth to allow a minimum of four feet of soil cover between the top of the pipe and the final land surface after backfilling.
- Restoration and revegetation practices (i.e., seeding) would comply with the requirements outlined in the landowner line list.
- MMC would not plant an annual cover crop on actively cultivated land unless requested by the landowner.

- Weed-free mulch would be used on steep slopes to control erosion unless the landowner requests mulch not be applied. Mulch would be crimped into the soil.
- Earthen diversion berms would be constructed to reduce runoff on steep slopes only when the landowner approves.
- No erosion control fabric would be used in rangeland without having landowner approval.
- Fences and gates would be replaced in accordance with landowner agreements.
- Private roads would be restored to equal pre-construction condition.
- MMC would respond promptly to landowner concerns following construction to mitigate areas of subsidence and erosion problems should they occur.
- MMC would require the contractor to clean thoroughly the equipment and materials (e.g., timber mates, bridges, etc.) at the contractor yard prior to mobilization to the ROW to prevent spread of nuisance weeds.

6.2 BASIN TRANSLOAD RAIL FACILITY EXPANSION

No construction-related activities would take place outside the footprint of MMC's properties at the existing BTRF. As such, no surveying, staking or clearing would be necessary. The construction activities would include grading, tie-in and commissioning, and clean/final restoration activities.

Grading: The storage tank site would be graded, where necessary, providing a reasonably level work surface. Where steep slopes or side slopes are encountered, the construction contractor may grade the slope to reduce the grade, or in areas of side slopes, two-tone the area to create level working surface.

Concurrent with grading, erosion and sediment control devices would be installed as required by state stormwater permit conditions. Erosion and sediment control devices, which may include silt fences, straw wattles, straw bales and road access pads, would be installed where necessary to prevent soil and sediment from leaving the construction work area.

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

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

Every reasonable effort would be made to complete final cleanup (including final grading and installation of erosion control devices) in accordance with landowner requests or permit conditions within 21 days of completion.

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 will be conducted of courthouse records for the purpose of identifying the current landowner. MMC 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. MMC, at all times, negotiates in good faith and necessary easement conditions and restrictions are presented and discussed. All fee land easements for the proposed Route have been acquired at this time for the portion of the route located in North Dakota.

7.2 COMPENSATION POLICY

MMC'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

John Millar

Vice President-Liquids Group
Summit Midstream

Mr. Millar is Vice President, Liquids Group for Summit Midstream and is responsible for developing liquid pipeline commercial opportunities and for managing Summit's liquid pipeline assets. Prior to joining Summit Midstream, Mr. Millar was Vice President and General Manager of Genesis Energy, L.P.'s pipeline, terminal, and trucking businesses, responsible for improving safety, operating efficiency, and service quality and for developing growth projects involving liquid pipeline facilities, marine terminals, rail facilities, and truck stations. Prior to joining Genesis, Mr. Millar held numerous positions in engineering, project management, field operations, control center operations, joint ventures, and business development for Chevron Pipe Line Company, EOTT Energy, Unocal Corporation, and Enbridge Energy Partners. Mr. Millar has over 28 years of experience in nearly all aspects of the oil pipeline industry and holds BS and MS degrees in Civil Engineering from the University of California and an MBA from the University of Houston. Mr. Millar is a licensed Civil Engineer in the State of California.

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 15 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, 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 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 8 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.

Chris Schmidt, GIT

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

B.S. in Environmental Geology and Geologist-In-Training Certification for Minnesota. Mr. Schmidt has over 3 years of environmental consulting experience. Mr. Schmidt has pursued a career focused on regulatory compliance and supports energy clients by providing regulatory review and permitting services. Mr. Schmidt's experience includes work supporting pipeline systems of natural gas, natural gas liquids, and petroleum throughout multiple states.

Dan Woodward, RPA

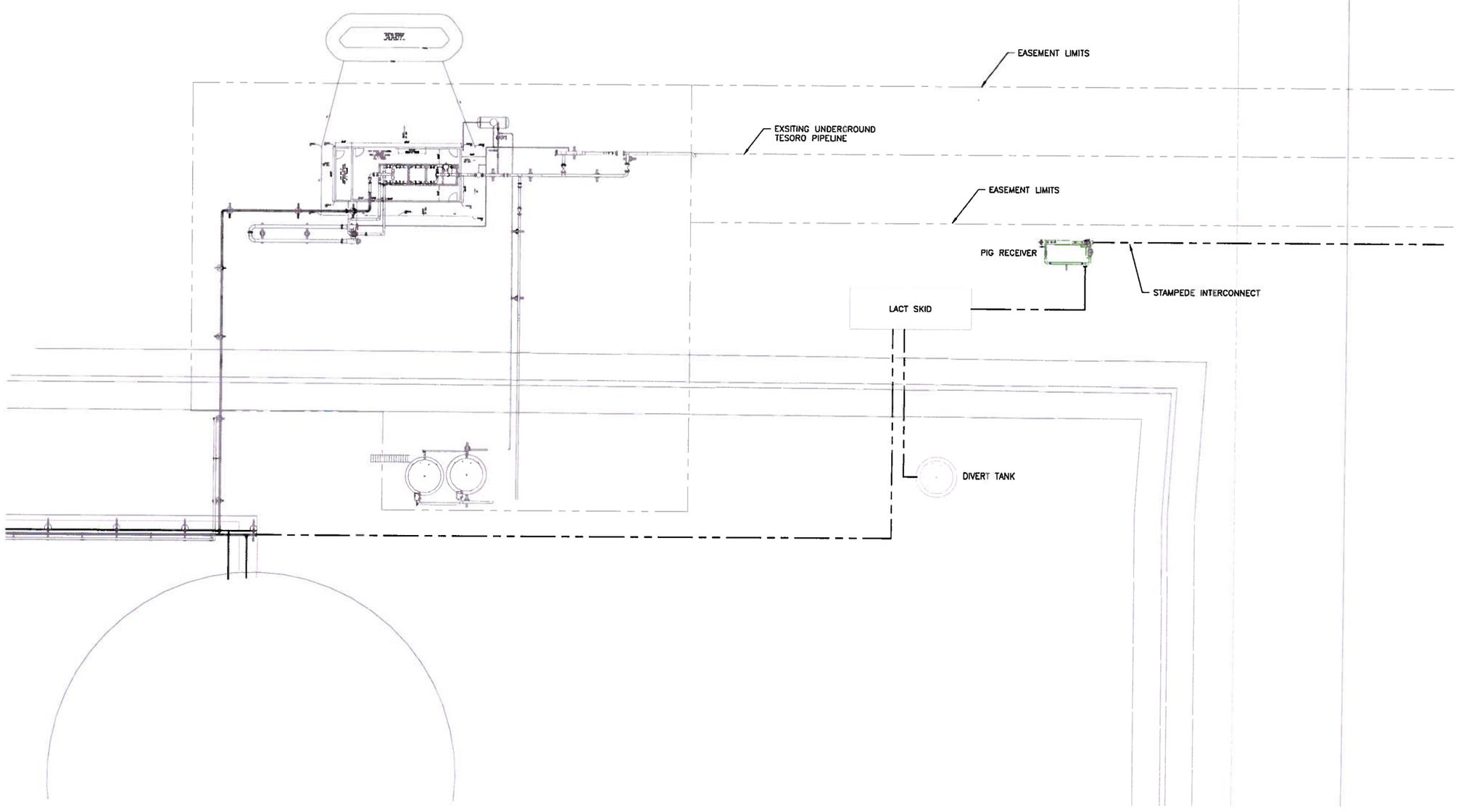
Senior Archaeologist
E3 Environmental, LLC, 871 Jefferson Ave St Paul, MN 55102

M.A. Anthropology (archaeology focus), California State University -- Fullerton; and B.A. History, University of Florida. Mr. Woodward is a secretary of the interior qualified archaeologist with 15 years of environmental consulting experience working with various energy assets and regulatory agencies. As a senior archaeologist, he has overseen all phases of archaeological fieldwork from class I record searches and class III intensive surveys to detailed excavations and archaeological damage assessments. He has authored dozens of cultural resource technical reports fulfilling NHPA and NEPA cultural resource requirements. Mr. Woodward has also coordinated with multiple Native American groups and has met with interested Tribal representatives in the field to address project concerns. Mr. Woodward has performed historic building analysis and authored built-environment technical reports. Mr. Woodward has also assisted with extensive paleontological fieldwork including paleontological surveys, monitoring, and salvage activities.

Appendix A

Engineering Documents

PLANT NORTH



GRAPHIC SCALE
30 0 30 40
(IN FEET)
1 inch = 20 ft.

Harris Group Inc.
ENERGY 61448

NOTES:

REV	DESCRIPTION	DATE	BY	APPROVED
A	ISSUED FOR REVIEW	07/24/14	JJB	

DRAWING REVISION

DRAWING NUMBER | DESCRIPTION
REFERENCE DRAWINGS

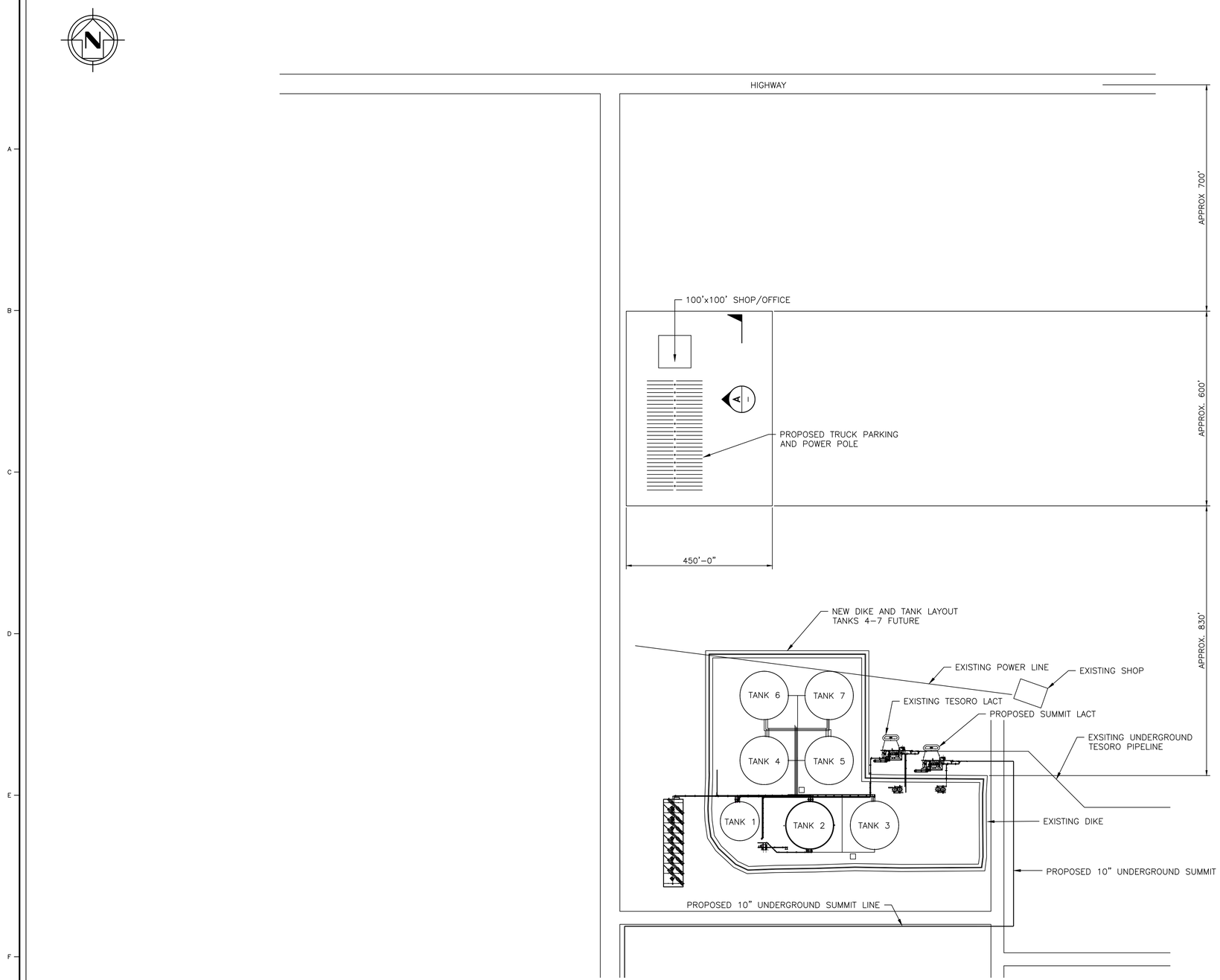
CONFIDENTIAL

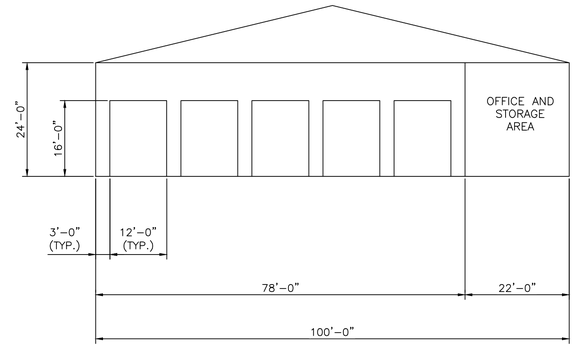
SUMMIT MIDSTREAM

DRAWN BY JJB	DATE 07/23/14
CHECKED BY	DATE
ENGINEERED BY	DATE
APPROVED BY	DATE
APPROVED BY	DATE

STAMPEDE OIL TERMINAL
PIPING
GENERAL ARRANGEMENT

CAD FILE	SCALE	DRAWING NUMBER	REV
SK-100.DWG	1"=20'-0"	SK100	0





A – SHOP/OFFICE BUILDING LOOKING EAST

1/16"=1'-0"

DWG. NO.	REFERENCE DRAWINGS	REV	DESCRIPTION	DATE	DESIGNER	CHECKED	ENGINEER	PROJ MGR
		P-A	PROGRESS PRINT	5-7-14	TAB			GSK

PROGRESS PRINT

Progress Print is intended for general concept and reference only, all dimensions and annotation shown are for reference only. This drawing has not been checked.

KESTREL ENGINEERING GROUP

DWG CREATED: 03/26/14	BY: TAB
PROJECT NO: 13-350	SCALE: AS NOTED

PROJECT:

BASIN TRANSLOAD

STAMPEDE, NORTH DAKOTA

DWG NAME:

STAMPEDE TRANSLOAD FACILITY
GENERAL ARRANGEMENT
TANK AND PIPING ARRANGEMENT

DRAWING NUMBER	SHEET COUNT	REVISION
13350-G-100	– OF –	P-A

Appendix B

Project Maps

Document Path: P:\SummitGlobalStampede_2014\MXDs\GlobalStampede_OverviewMap_Topo.mxd

Date: 11/4/2014

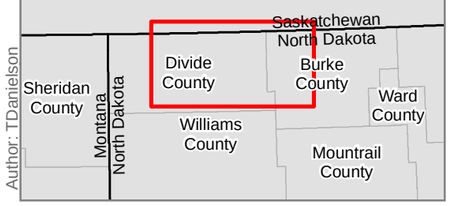
Author: TDanielson

Divide Pump Station
Pig Launcher and Meter Skid

Basin Transload Rail Facility
Pig Receiver and Custody Transfer Meter

Ambrose
Crosby
Noonan
Columbus
Larson

1
5
10
15
20
25
30
35
40
45



Milepost
Block Valve
Pipeline
Corridor (1 Mile)
Federal Land
State Land

N

0 2.25 4.5 9 Miles

1:200,000

Map not to scale, for environmental review purposes only.

E3 Environmental
Enhancing Execution with Experience

Meadowlark Midstream Company, LLC

Global Stampede Pipeline Project

Topo Overview Map

Divide and Burke Counties, ND

Divide Pump Station
Pig Launcher and Meter Skid

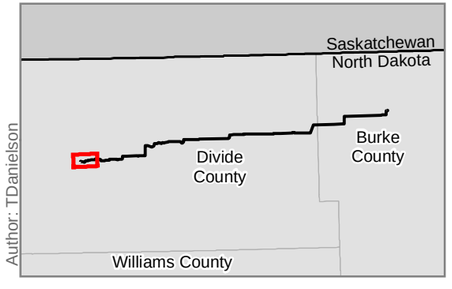
AWET48
AWV15
AWET47
AWET46
AWET45
AWET46
AWET44

0
1
2

Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_11x17_NaturalResource_Aerial.mxd

Date: 11/3/2014

Author: TDanielson



Milepost
Block Valve
Centerline
Survey Corridor
Corridor (1 mile)

Survey Data
Nest
Stream
Noxious Weed
Waterbody
Woody Vegetation
Wetland

Criteria Data
Occupied Structure
Occupied Structure w/in 500ft of Alignment
NDWC Well

E3 Environmental
Enhancing Execution with Experience

N

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline Project

Siting Criteria
Natural Resource - Aerial Map

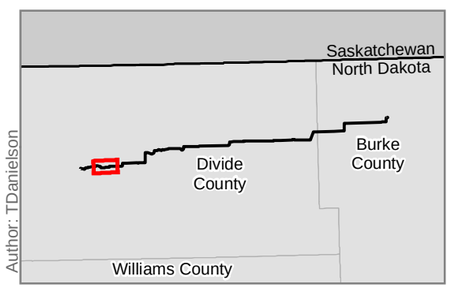
Page 1 of 16

Burke and Divide Counties, North Dakota

Document Path: P:\SummitGlobalStampede_2014MXDs\GlobalStampede_11x17_NaturalResource_Aerial.mxd

Date: 11/3/2014

Author: TDanielson



- Milepost
- Block Valve
- Centerline
- Survey Corridor
- Corridor (1 mile)

Survey Data

- Nest
- Stream
- Noxious Weed
- Waterbody
- Woody Vegetation
- Wetland

Criteria Data

- Occupied Structure
- Occupied Structure w/in 500ft of Alignment
- NDWC Well

E3 Environmental — Enhancing Execution with Experience

N

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline Project

Siting Criteria

Natural Resource - Aerial Map

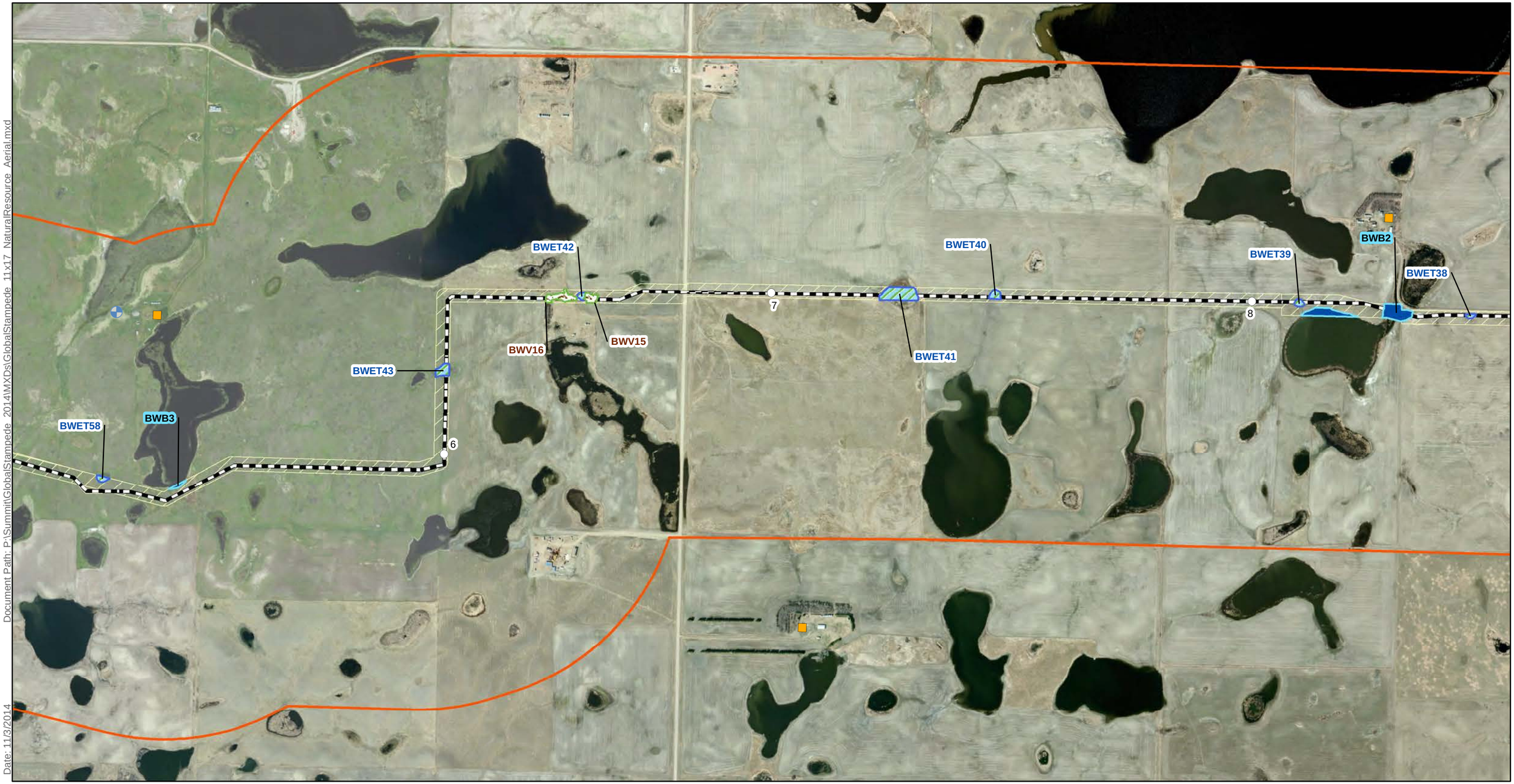
Page 2 of 16

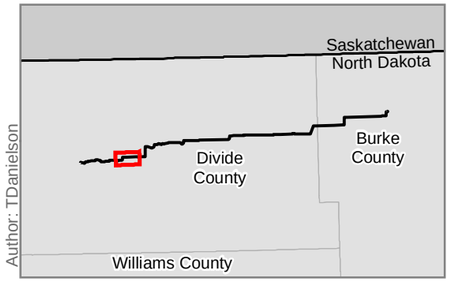
Burke and Divide Counties, North Dakota

Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_11x17_NaturalResource_Aerial.mxd

Date: 11/3/2014

Author: TDanielson





- Milepost
- Block Valve
- Centerline
- Survey Corridor
- Corridor (1 mile)

Survey Data

- Nest
- Stream
- Noxious Weed
- Waterbody
- Woody Vegetation
- Wetland

Criteria Data

- Occupied Structure
- Occupied Structure w/in 500ft of Alignment
- NDWC Well

E3 Environmental — Enhancing Execution with Experience

N

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline Project

Siting Criteria

Natural Resource - Aerial Map

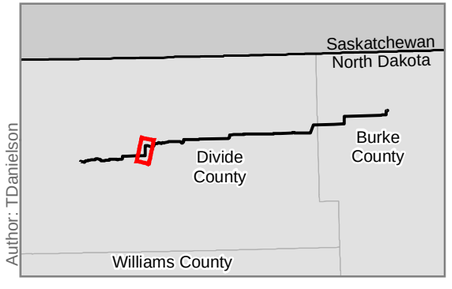
Page 3 of 16

Burke and Divide Counties, North Dakota

Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_11x17_NaturalResource_Aerial.mxd

Date: 11/3/2014

Author: TDanielson



- Milepost
- Block Valve
- Centerline
- Survey Corridor
- Corridor (1 mile)

Survey Data

- Nest
- Stream
- Noxious Weed
- Waterbody
- Woody Vegetation
- Wetland

Criteria Data

- Occupied Structure
- Occupied Structure w/in 500ft of Alignment
- NDWC Well

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.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline Project

Siting Criteria

Natural Resource - Aerial Map

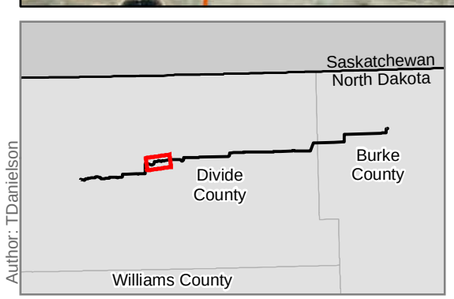
Page 4 of 16

Burke and Divide Counties, North Dakota

Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_11x17_NaturalResource_Aerial.mxd

Date: 11/3/2014

Author: TDanielson



- Milepost
- Block Valve
- Centerline
- Survey Corridor
- Corridor (1 mile)

Survey Data

- Nest
- Stream
- Noxious Weed
- Waterbody
- Woody Vegetation
- Wetland

Criteria Data

- Occupied Structure
- Occupied Structure w/in 500ft of Alignment
- NDWC Well

E3 Environmental — Enhancing Execution with Experience

N

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline Project

Siting Criteria

Natural Resource - Aerial Map

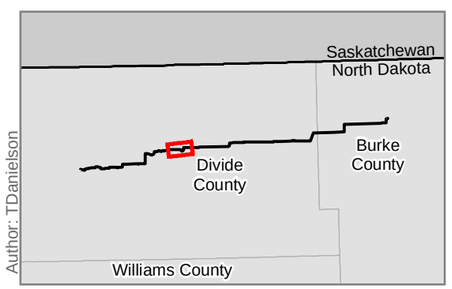
Page 5 of 16

Burke and Divide Counties, North Dakota

Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_11x17_NaturalResource_Aerial.mxd

Date: 11/3/2014

Author: TDanielson



- Milepost
- Block Valve
- Centerline
- Survey Corridor
- Corridor (1 mile)

Survey Data

- Nest
- Stream
- Noxious Weed
- Waterbody
- Woody Vegetation
- Wetland

Criteria Data

- Occupied Structure
- Occupied Structure w/in 500ft of Alignment
- NDWC Well

E3 Environmental
Enhancing Execution with Experience

N

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline Project

Siting Criteria

Natural Resource - Aerial Map

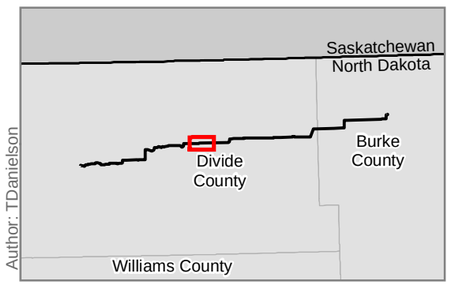
Page 6 of 16

Burke and Divide Counties, North Dakota

Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_11x17_NaturalResource_Aerial.mxd

Date: 11/3/2014

Author: TDanielson



- Milepost
- Block Valve
- Centerline
- Survey Corridor
- Corridor (1 mile)

Survey Data

- Nest
- Stream
- Noxious Weed
- Waterbody
- Woody Vegetation
- Wetland

Criteria Data

- Occupied Structure
- Occupied Structure w/in 500ft of Alignment
- NDWC Well

E3 Environmental — Enhancing Execution with Experience

N

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

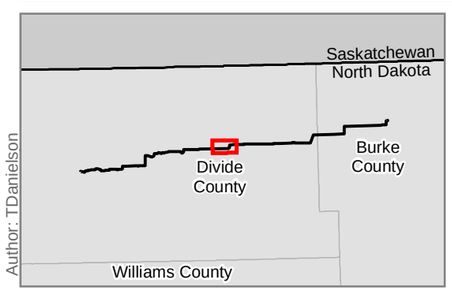
Global Stampede Pipeline Project

Siting Criteria

Natural Resource - Aerial Map

Page 7 of 16

Burke and Divide Counties, North Dakota



- Milepost
- Block Valve
- Centerline
- Survey Corridor
- Corridor (1 mile)

Survey Data
- Nest
- Stream
- Noxious Weed
- Waterbody
- Woody Vegetation
- Wetland

Criteria Data
- Occupied Structure
- Occupied Structure w/in 500ft of Alignment
- NDWC Well

E3 Environmental — Enhancing Execution with Experience

N

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

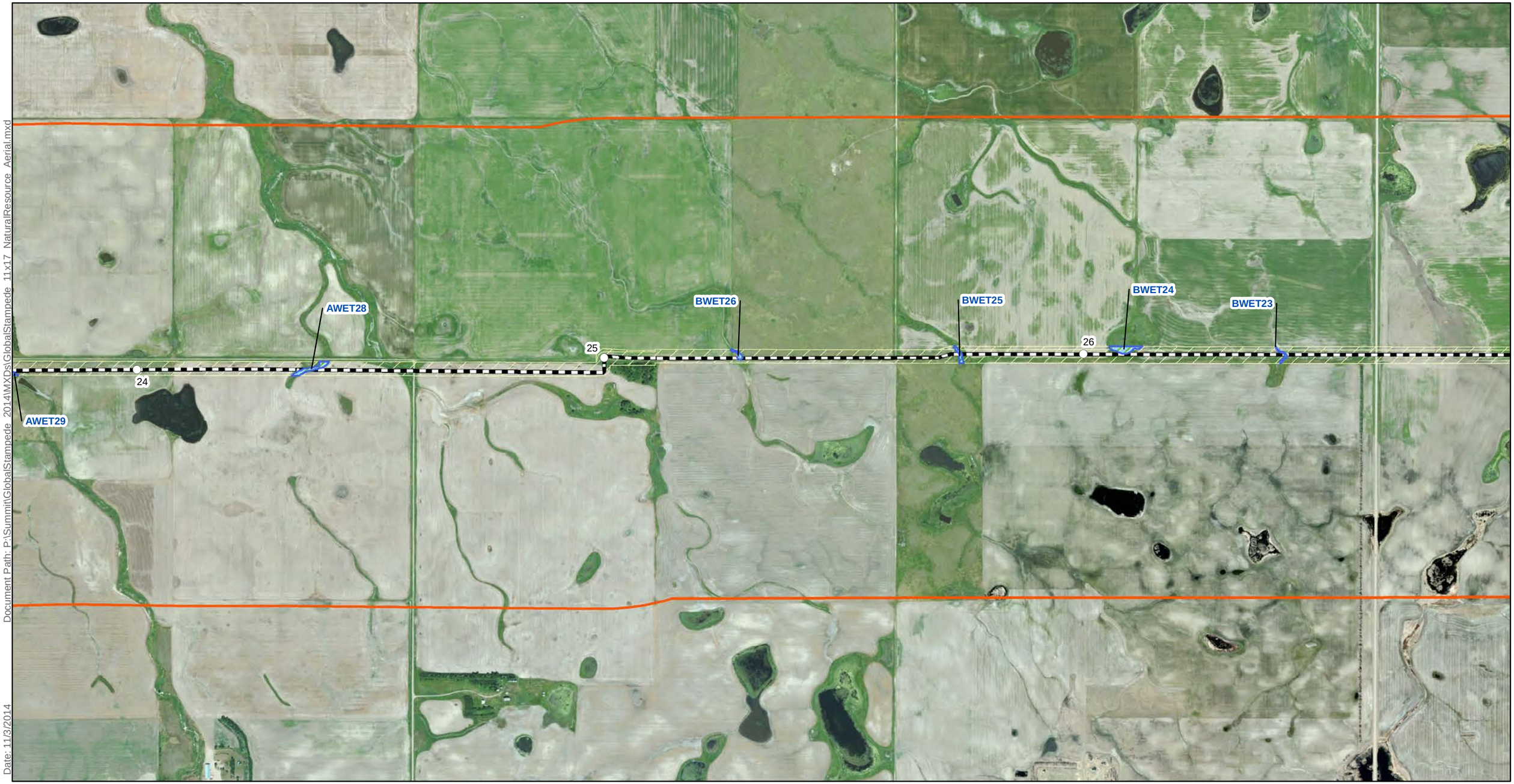
Global Stampede Pipeline Project

Siting Criteria

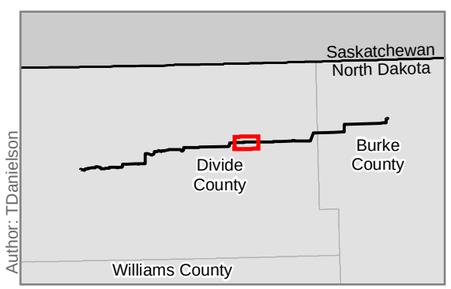
Natural Resource - Aerial Map

Page 8 of 16

Burke and Divide Counties, North Dakota



Author: TDanielson
Date: 11/3/2014
Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_11x17_NaturalResource_Aerial.mxd



- Milepost
- Block Valve
- Centerline
- Survey Corridor
- Corridor (1 mile)

Survey Data

- Nest
- Stream
- Noxious Weed
- Waterbody
- Woody Vegetation
- Wetland

Criteria Data

- Occupied Structure
- Occupied Structure w/in 500ft of Alignment
- NDWC Well

E3 Environmental — Enhancing Execution with Experience

N

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline Project

Siting Criteria

Natural Resource - Aerial Map

Burke and Divide Counties, North Dakota

Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_11x17_NaturalResource_Aerial.mxd

Date: 11/3/2014

Author: TDanielson

27

28

29

AWET27

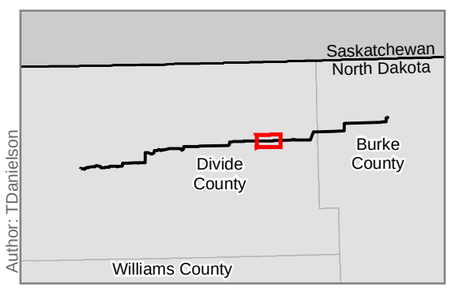
AWET26

AWET25

AWET25

AWV12

AWV11



- Milepost
- Block Valve
- Centerline
- Survey Corridor
- Corridor (1 mile)

Survey Data

- Nest
- Stream
- Noxious Weed
- Waterbody
- Woody Vegetation
- Wetland

Criteria Data

- Occupied Structure
- Occupied Structure w/in 500ft of Alignment
- NDWC Well

E3 Environmental
Enhancing Execution with Experience

N

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

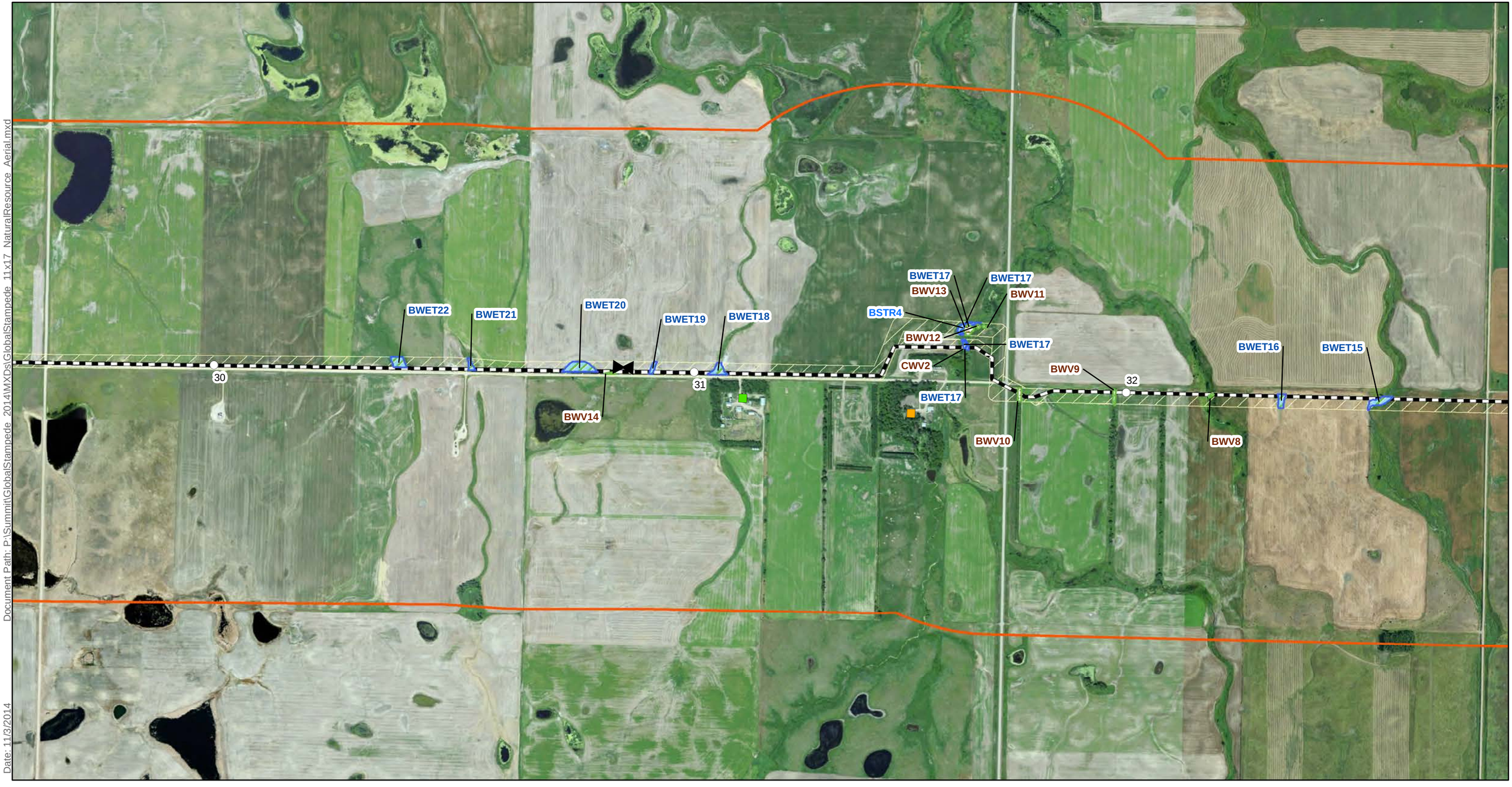
Global Stampede Pipeline Project

Siting Criteria

Natural Resource - Aerial Map

Page 10 of 16

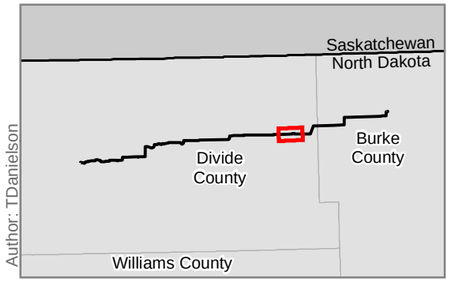
Burke and Divide Counties, North Dakota



Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_11x17_NaturalResource_Aerial.mxd

Date: 11/3/2014

Author: TDanielson



- Milepost
- Block Valve
- Centerline
- Survey Corridor
- Corridor (1 mile)

Survey Data

- Nest
- Stream
- Noxious Weed
- Waterbody
- Woody Vegetation
- Wetland

Criteria Data

- Occupied Structure
- Occupied Structure w/in 500ft of Alignment
- NDWC Well

E3 Environmental — Enhancing Execution with Experience

N

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline Project

Siting Criteria

Natural Resource - Aerial Map

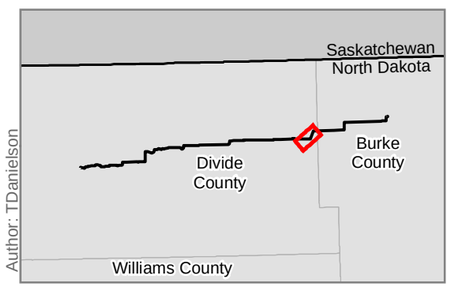
Page 11 of 16

Burke and Divide Counties, North Dakota

Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_11x17_NaturalResource_Aerial.mxd

Date: 11/3/2014

Author: TDanielson



- Milepost
- Block Valve
- Centerline
- Survey Corridor
- Corridor (1 mile)

Survey Data

- Nest
- Stream
- Noxious Weed
- Waterbody
- Woody Vegetation
- Wetland

Criteria Data

- Occupied Structure
- Occupied Structure w/in 500ft of Alignment
- NDWC Well

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.

Meadowlark Midstream Company, LLC

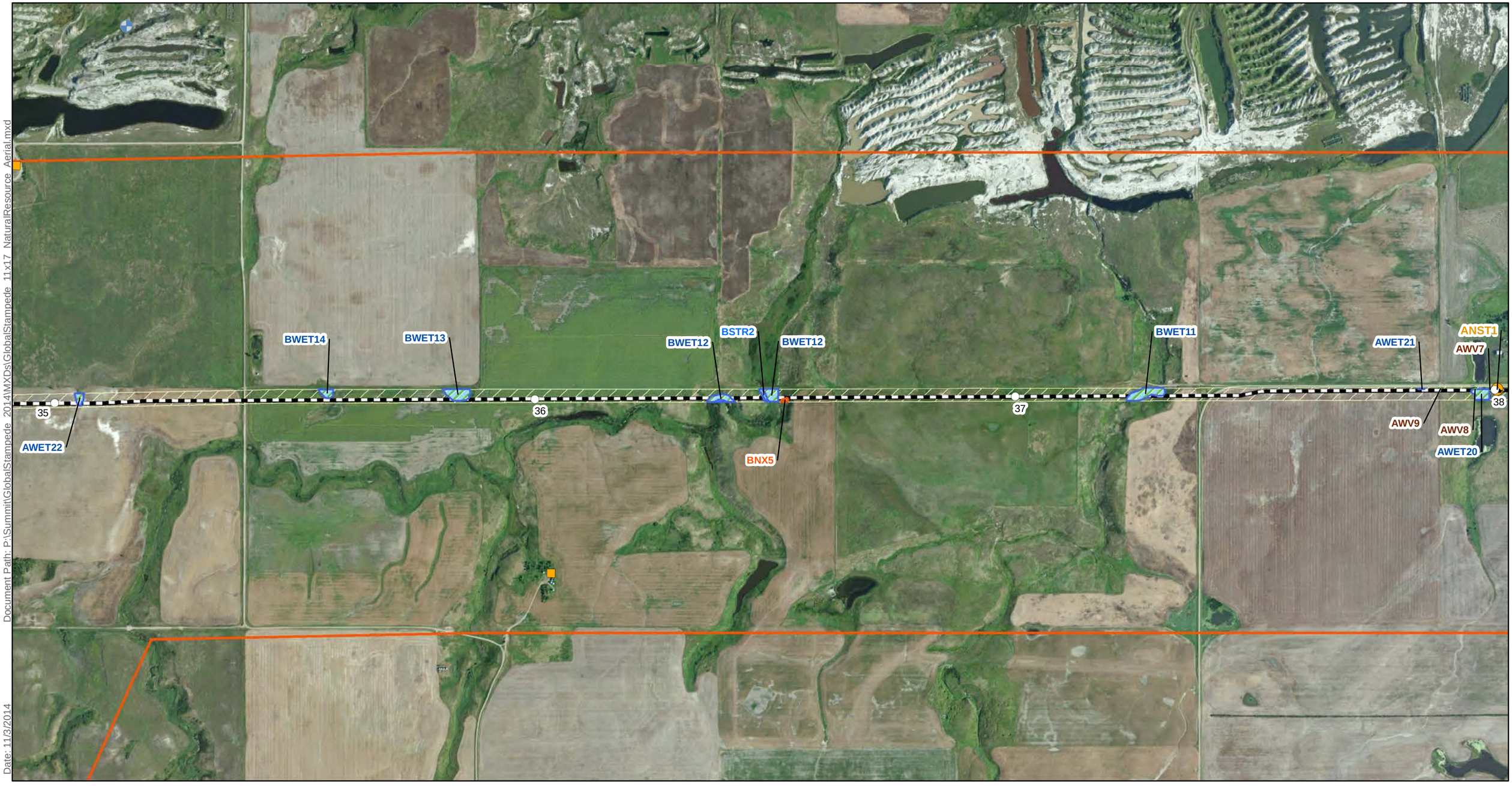
Global Stampede Pipeline Project

Siting Criteria

Natural Resource - Aerial Map

Page 12 of 16

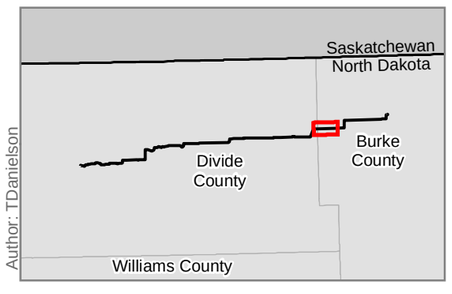
Burke and Divide Counties, North Dakota



Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_11x17_NaturalResource_Aerial.mxd

Date: 11/3/2014

Author: TDanielson



- Milepost
- Block Valve
- Centerline
- Survey Corridor
- Corridor (1 mile)

Survey Data

- Nest
- Stream
- Noxious Weed
- Waterbody
- Woody Vegetation
- Wetland

Criteria Data

- Occupied Structure
- Occupied Structure w/in 500ft of Alignment
- NDWC Well

E3 Environmental
Enhancing Execution with Experience

N

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline Project

Siting Criteria

Natural Resource - Aerial Map

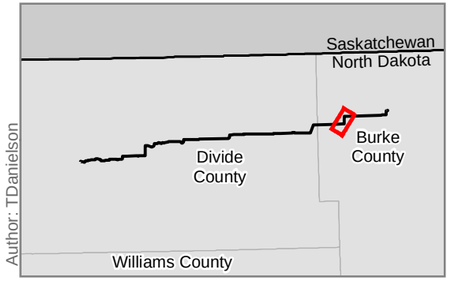
Page 13 of 16

Burke and Divide Counties, North Dakota

Document Path: P:\Summit\GlobalStampede\2014MXDs\GlobalStampede_11x17_NaturalResource_Aerial.mxd

Date: 11/3/2014

Author: TDanielson



- Milepost
- Block Valve
- Centerline
- Survey Corridor
- Corridor (1 mile)

Survey Data

- Nest
- Stream
- Noxious Weed
- Waterbody
- Woody Vegetation
- Wetland

Criteria Data

- Occupied Structure
- Occupied Structure w/in 500ft of Alignment
- NDWC Well

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.

Meadowlark Midstream Company, LLC

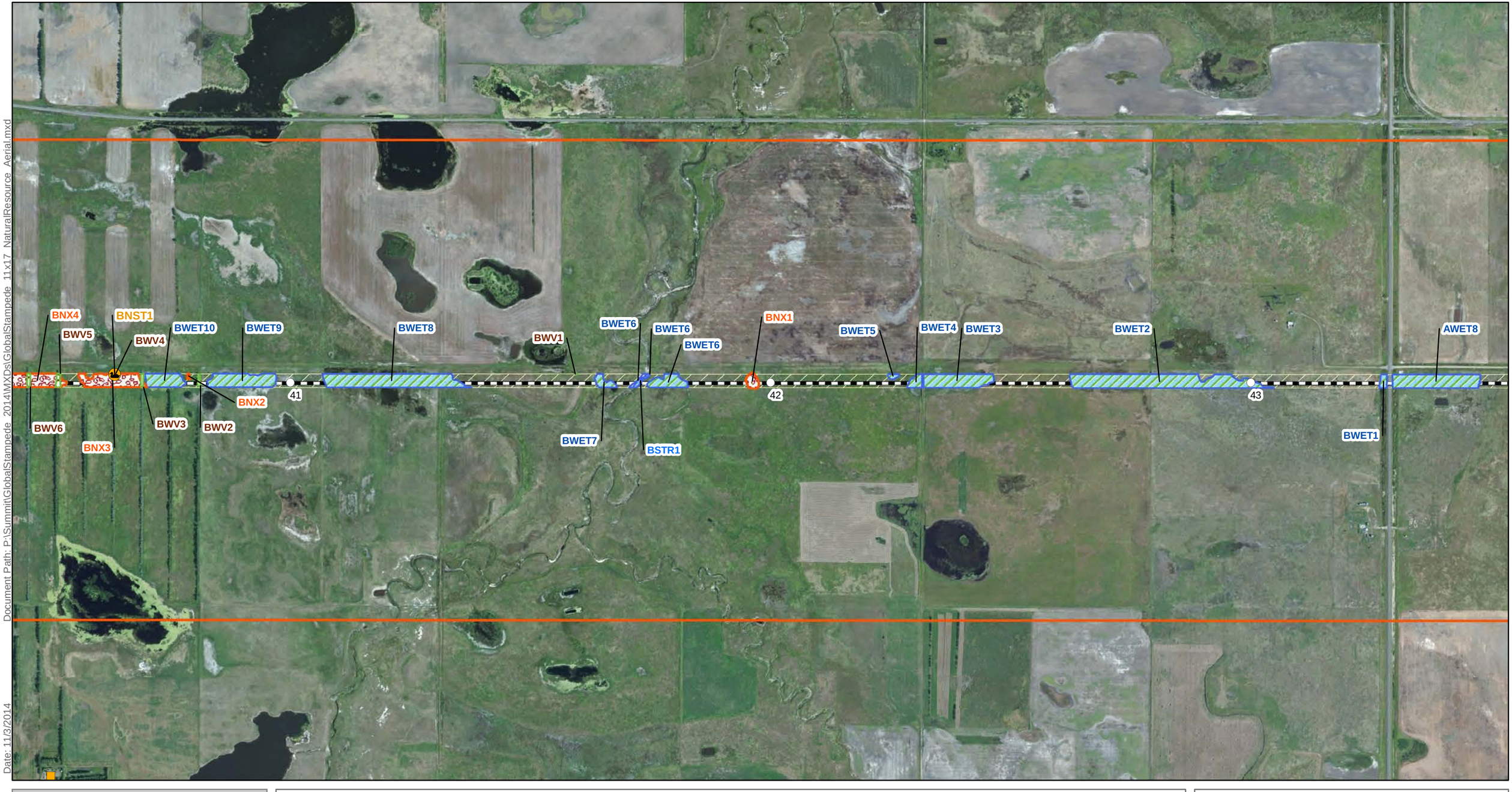
Global Stampede Pipeline Project

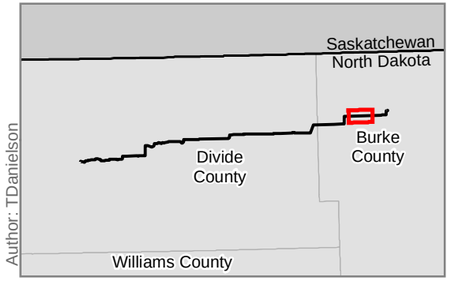
Siting Criteria

Natural Resource - Aerial Map

Page 14 of 16

Burke and Divide Counties, North Dakota





- Milepost
- Block Valve
- Centerline
- Survey Corridor
- Corridor (1 mile)

Survey Data

- Nest
- Stream
- Noxious Weed
- Waterbody
- Woody Vegetation
- Wetland

Criteria Data

- Occupied Structure
- Occupied Structure w/in 500ft of Alignment
- NDWC Well

E3 Environmental — Enhancing Execution with Experience

N

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline Project

Siting Criteria

Natural Resource - Aerial Map

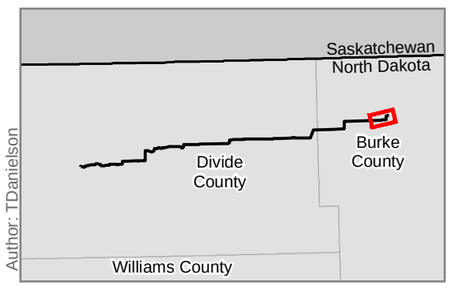
Page 15 of 16

Burke and Divide Counties, North Dakota

Basin Transload Rail Facility
Pig Receiver and Custody Transfer Meter

AWET8
AWET7
ANX1
44
AWET6
CWV1
AWV3
AWET3
45
AWV1
AWV2
AWET5
AWET4
AWET2
AWET1
BWET48
BWET47
46
BWET46
BWET46
BWET46

Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_11x17_NaturalResource_Aerial.mxd
Date: 11/3/2014
Author: TDanielson



Milepost
Block Valve
Centerline
Survey Corridor
Corridor (1 mile)

Survey Data
Nest
Stream
Noxious Weed
Waterbody
Woody Vegetation
Wetland

Criteria Data
Occupied Structure
Occupied Structure w/in 500ft of Alignment
NDWC Well

E3 Environmental
Enhancing Execution with Experience

N

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline Project

Siting Criteria
Natural Resource - Aerial Map

Burke and Divide Counties, North Dakota

Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_11x17_NaturalResourceTopo.mxd

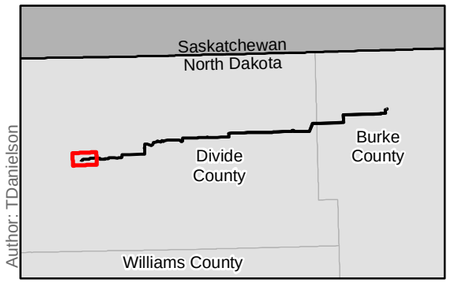
Date: 11/3/2014

Author: TDanielson

ND Surface Trust Land

Divide Pump Station
Pig Launcher and Meter Skid

Storage Bin



- Milepost
- Block Valve
- Centerline
- Survey Corridor
- Corridor (1 mile)

Criteria Data

- Federal Land
- State Land
- PLOTS Land
- North Dakota Mineral Trust Lands
- NHD Waterway
- NWI Wetland
- NHD Waterbody
- Abandoned Mines
- USFWS Wetland Basin

E3 Environmental
Enhancing Execution with Experience

N

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline Project

Siting Criteria

Natural Resource - Topo Map

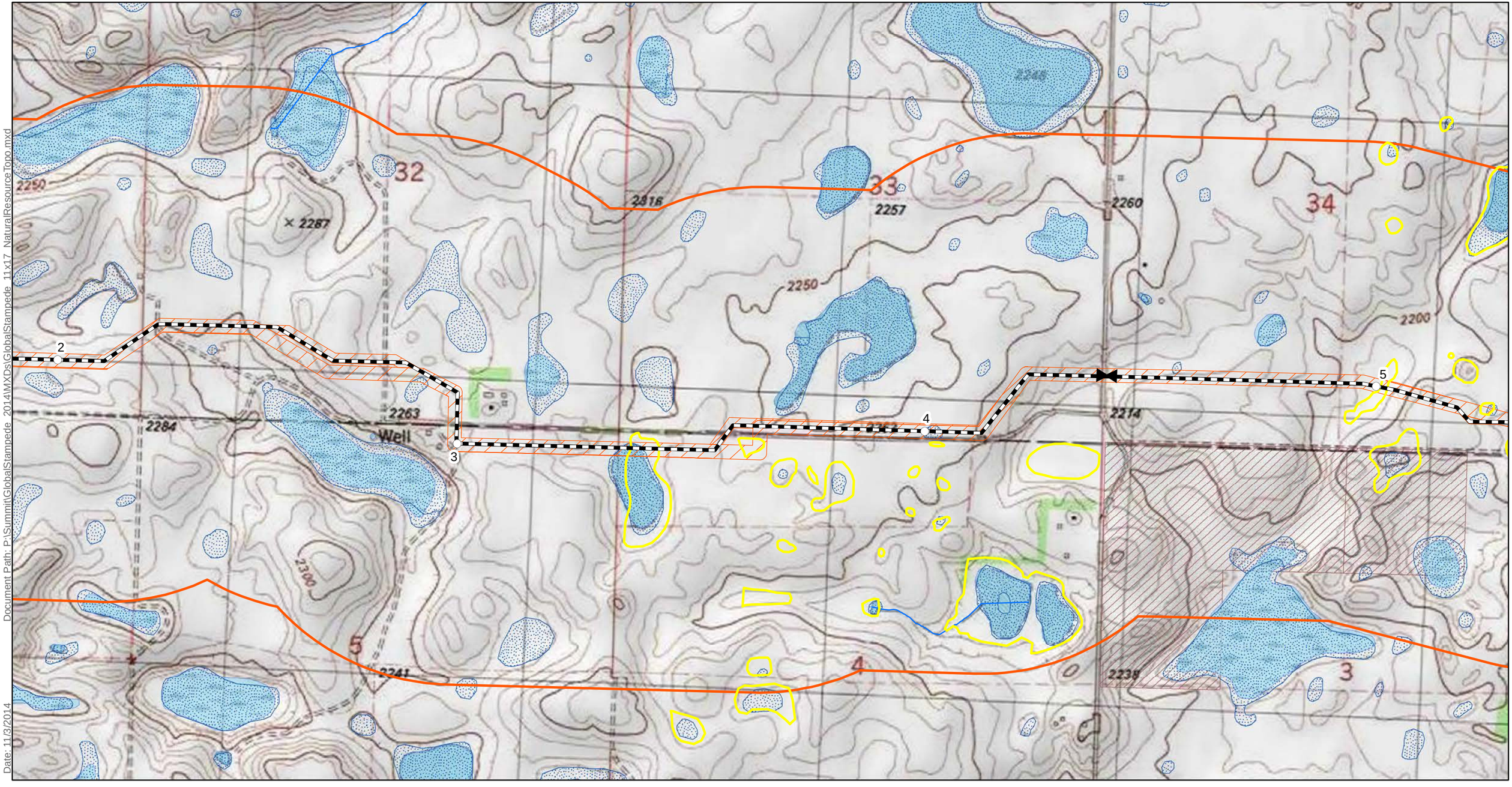
Page 1 of 16

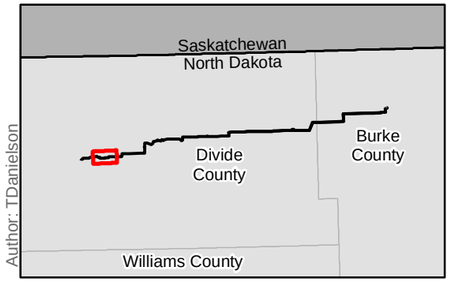
Burke and Divide Counties, North Dakota

Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_11x17_NaturalResourceTopo.mxd

Date: 11/3/2014

Author: TDanielson





- Milepost
- Block Valve
- Centerline
- Survey Corridor
- Corridor (1 mile)

Criteria Data

- Federal Land
- State Land
- PLOTS Land
- North Dakota Mineral Trust Lands
- NHD Waterway
- NWI Wetland
- NHD Waterbody
- Abandoned Mines
- USFWS Wetland Basin

E3 Environmental
Enhancing Execution with Experience

N

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline Project

Siting Criteria

Natural Resource - Topo Map

Page 2 of 16

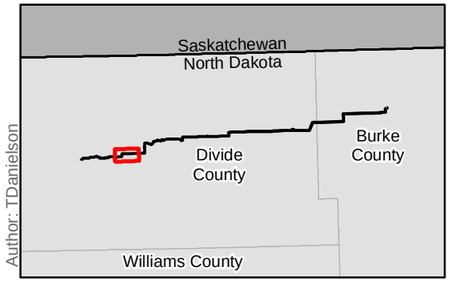
Burke and Divide Counties, North Dakota

Divide County
Waterfowl
Production Area

Document Path: P:\Summit\Global\Stampede_2014\MXDs\Global\Stampede_11x17_NaturalResourceTopo.mxd

Date: 11/3/2014

Author: TDanielson



Criteria Data

- Milepost
- Block Valve
- Centerline
- Survey Corridor
- Corridor (1 mile)
- Federal Land
- State Land
- PLOTS Land
- North Dakota Mineral Trust Lands
- NHD Waterway
- NWI Wetland
- NHD Waterbody
- Abandoned Mines
- USFWS Wetland Basin

E3 Environmental
Enhancing Execution with Experience

N

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline Project

Siting Criteria

Natural Resource - Topo Map

Page 3 of 16

Burke and Divide Counties, North Dakota

Divide County Waterfowl Production Area

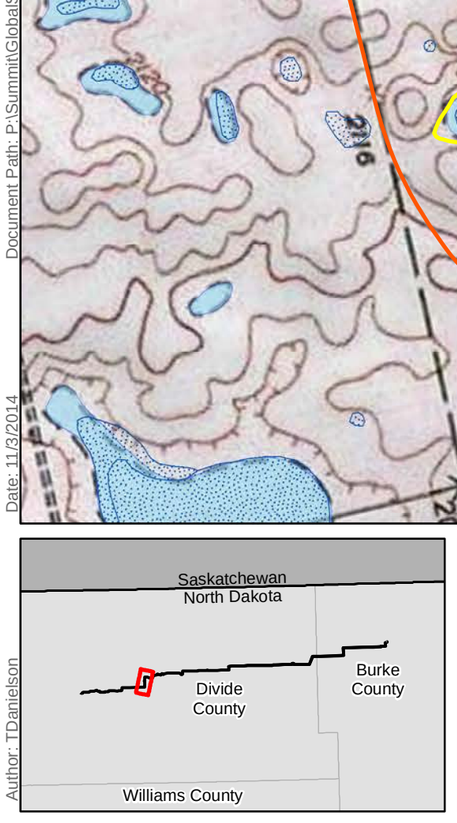
9

10

11

Troy Ch

BM 2113



Criteria Data

- Milepost
- Block Valve
- Centerline
- Survey Corridor
- Corridor (1 mile)
- Federal Land
- State Land
- PLOTS Land
- North Dakota Mineral Trust Lands
- NHD Waterway
- NWI Wetland
- NHD Waterbody
- Abandoned Mines
- USFWS Wetland Basin

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.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline Project

Siting Criteria

Natural Resource - Topo Map

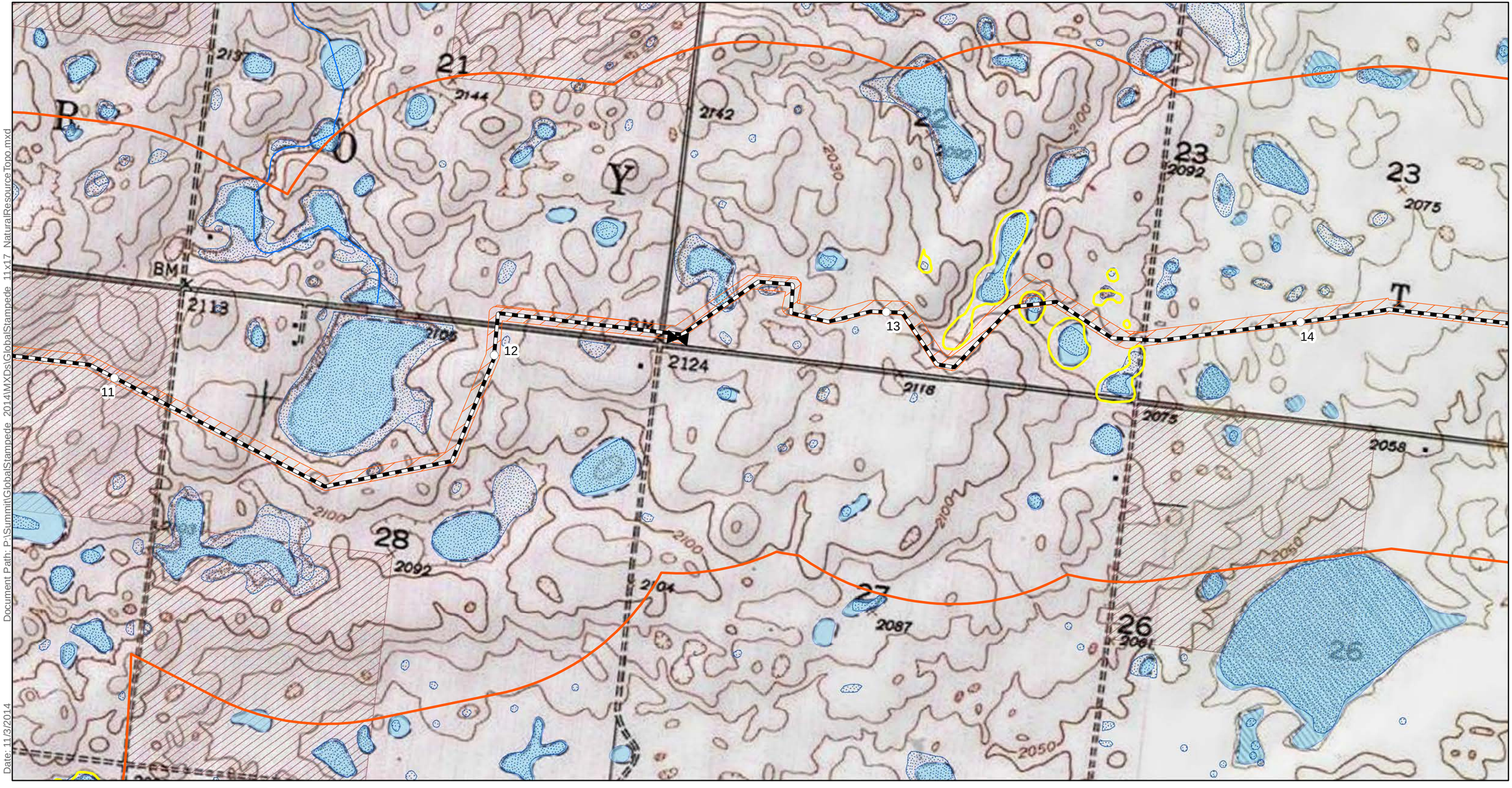
Page 4 of 16

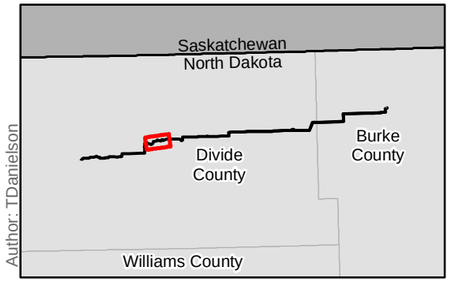
Burke and Divide Counties, North Dakota

Author: TDanielson

Date: 11/3/2014

Document Path: P:\SummitGlobal\GlobalStampede_2014\MXDs\GlobalStampede_11x17_NaturalResourceTopo.mxd





Milepost
Block Valve
Centerline
Survey Corridor
Corridor (1 mile)

Criteria Data

Federal Land
State Land
PLOTS Land
North Dakota Mineral Trust Lands
NHD Waterway
NWI Wetland
NHD Waterbody
Abandoned Mines
USFWS Wetland Basin

E3 Environmental
Enhancing Execution with Experience

N

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

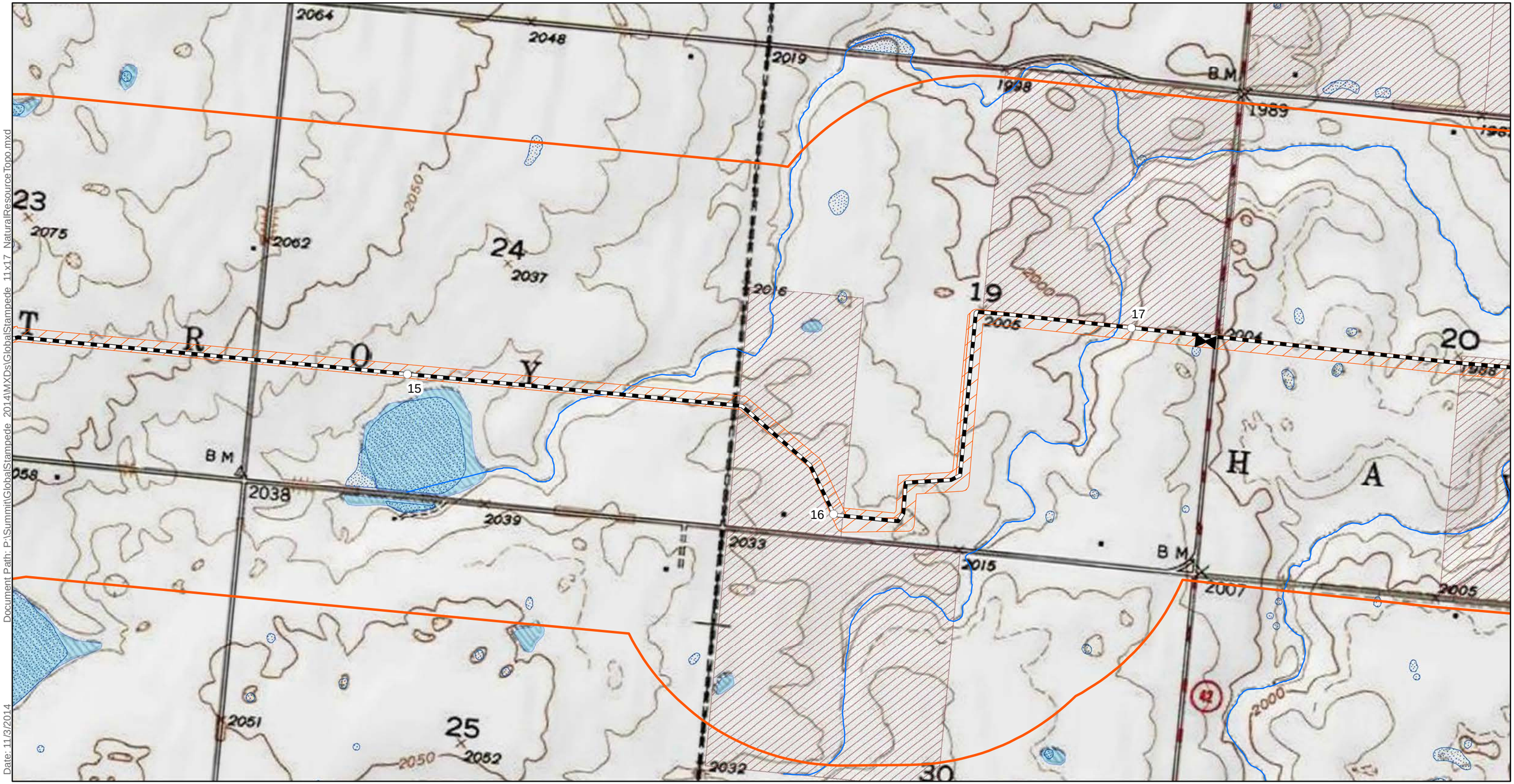
Meadowlark Midstream Company, LLC

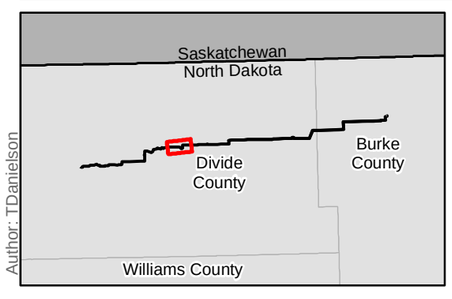
Global Stampede Pipeline Project

Siting Criteria
Natural Resource - Topo Map

Burke and Divide Counties, North Dakota

Author: TDanielson Date: 11/3/2014 Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_11x17_NaturalResourceTopo.mxd





- Milepost
- Block Valve
- Centerline
- Survey Corridor
- Corridor (1 mile)

Criteria Data

- Federal Land
- State Land
- PLOTS Land
- North Dakota Mineral Trust Lands
- NHD Waterway
- NWI Wetland
- NHD Waterbody
- Abandoned Mines
- USFWS Wetland Basin

E3 Environmental — Enhancing Execution with Experience

N

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline Project

Siting Criteria

Natural Resource - Topo Map

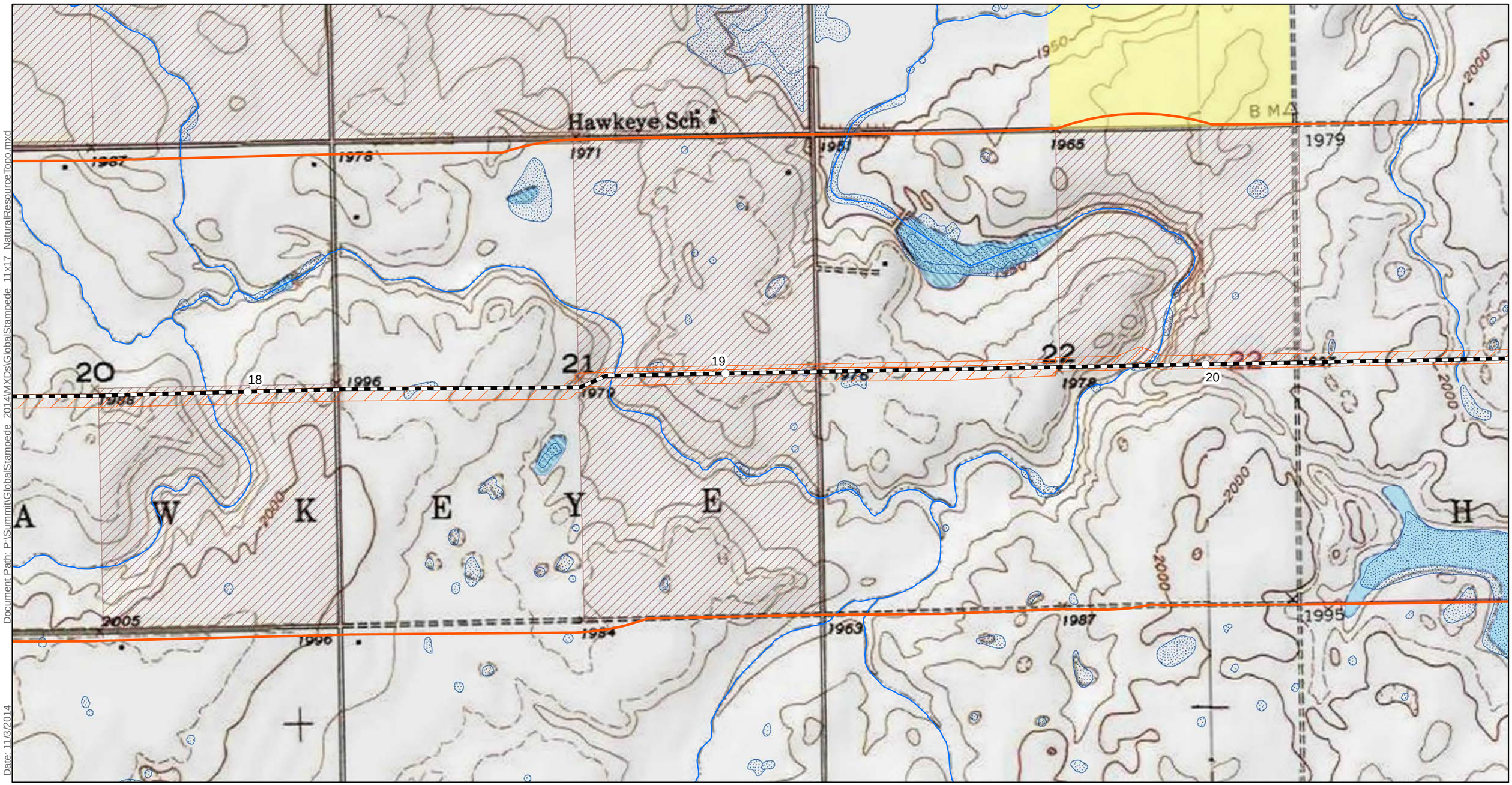
Page 6 of 16

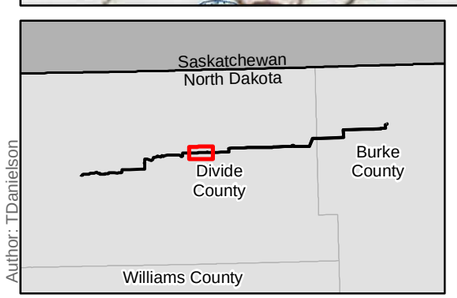
Burke and Divide Counties, North Dakota

Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_11x17_NaturalResourceTopo.mxd

Date: 11/3/2014

Author: TDanielson





Milepost
Block Valve
Centerline
Survey Corridor
Corridor (1 mile)

Criteria Data

Federal Land
State Land
PLOTS Land
North Dakota Mineral Trust Lands
NHD Waterway

NWI Wetland
NHD Waterbody
Abandoned Mines
USFWS Wetland Basin

E3 Environmental
Enhancing Execution with Experience

N

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

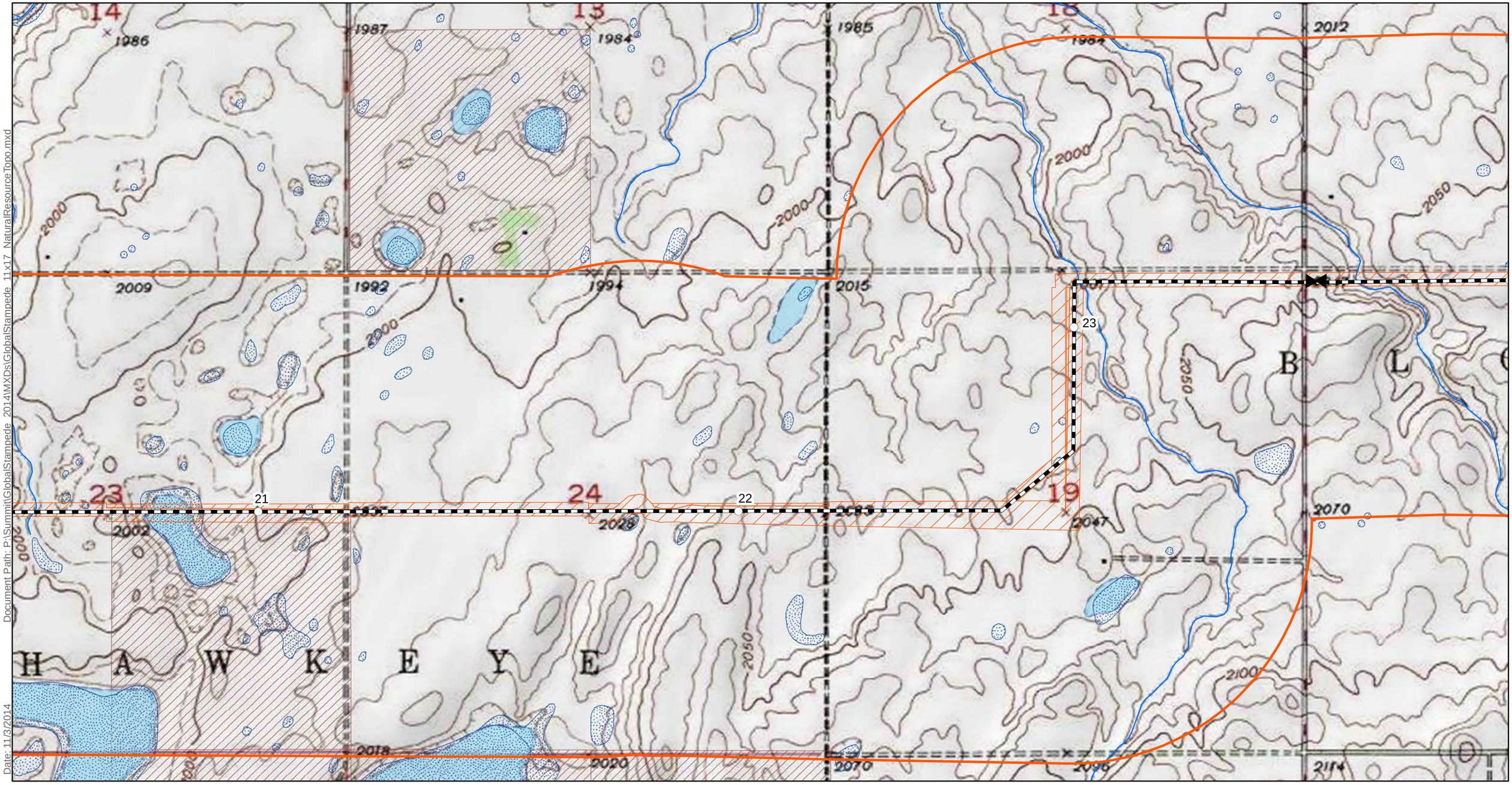
Global Stampede Pipeline Project

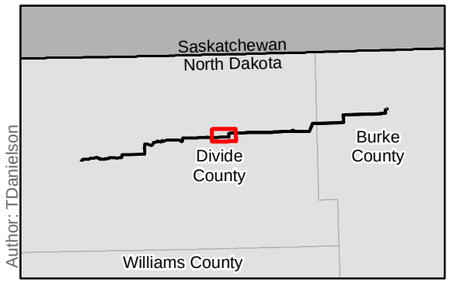
Siting Criteria

Natural Resource - Topo Map

Page 7 of 16

Burke and Divide Counties, North Dakota





Milepost
Block Valve
Centerline
Survey Corridor
Corridor (1 mile)

Criteria Data

Federal Land
State Land
PLOTS Land
North Dakota Mineral Trust Lands
NHD Waterway
NWI Wetland
NHD Waterbody
Abandoned Mines
USFWS Wetland Basin

E3 Environmental
Enhancing Execution with Experience

N

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

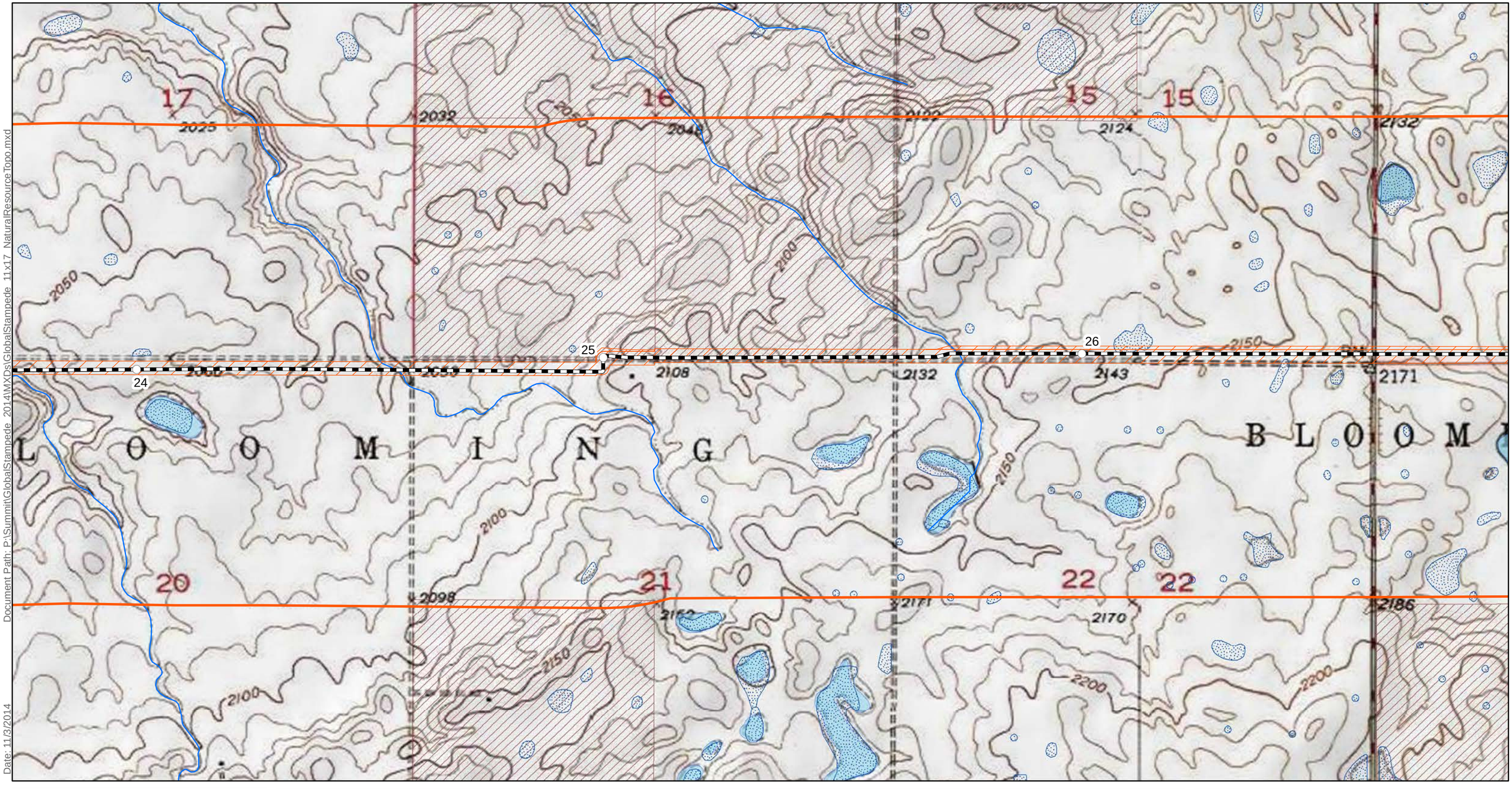
Meadowlark Midstream Company, LLC

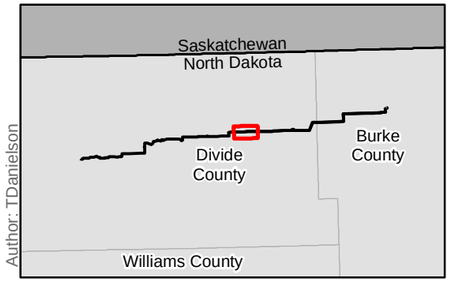
Global Stampede Pipeline Project

Siting Criteria
Natural Resource - Topo Map

Burke and Divide Counties, North Dakota

Author: TDanielson
Date: 11/3/2014
Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_11x17_NaturalResourceTopo.mxd





Milepost
Block Valve
Centerline
Survey Corridor
Corridor (1 mile)

Criteria Data

Federal Land
State Land
PLOTS Land
North Dakota Mineral Trust Lands
NHD Waterway
NWI Wetland
NHD Waterbody
Abandoned Mines
USFWS Wetland Basin

E3 Environmental
Enhancing Execution with Experience

N

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline Project

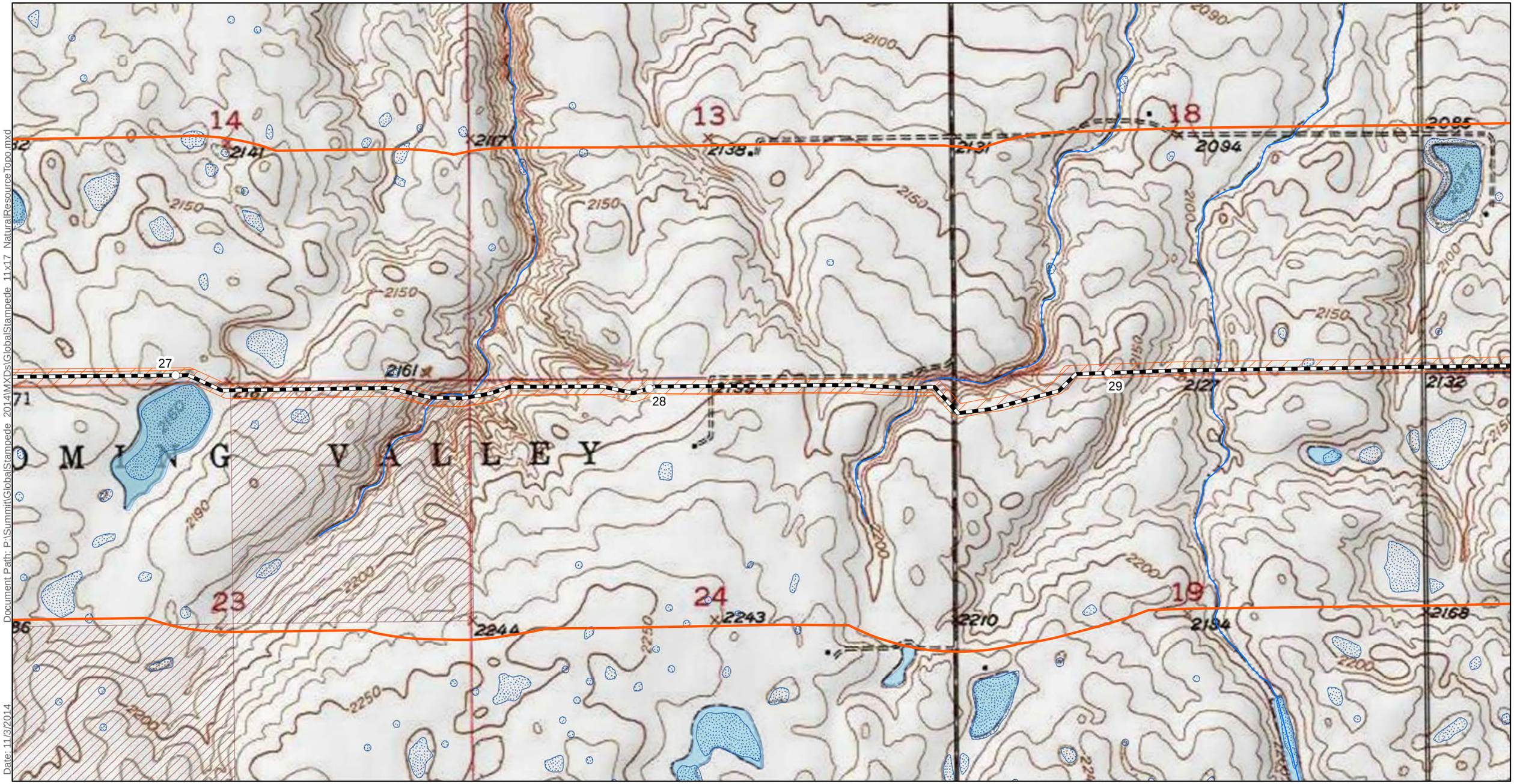
Siting Criteria
Natural Resource - Topo Map

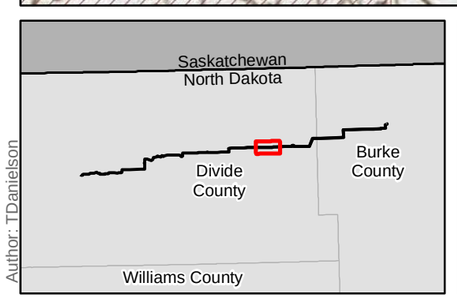
Burke and Divide Counties, North Dakota

Document Path: P:\SummitGlobal\Stampede_2014\MXDs\GlobalStampede_11x17_NaturalResourceTopo.mxd

Date: 11/3/2014

Author: TDanielson





Milepost
Block Valve
Centerline
Survey Corridor
Corridor (1 mile)

Criteria Data

Federal Land
State Land
PLOTS Land
North Dakota Mineral Trust Lands
NHD Waterway
NWI Wetland
NHD Waterbody
Abandoned Mines
USFWS Wetland Basin

E3 Environmental
Enhancing Execution with Experience

N

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline Project

Siting Criteria

Natural Resource - Topo Map

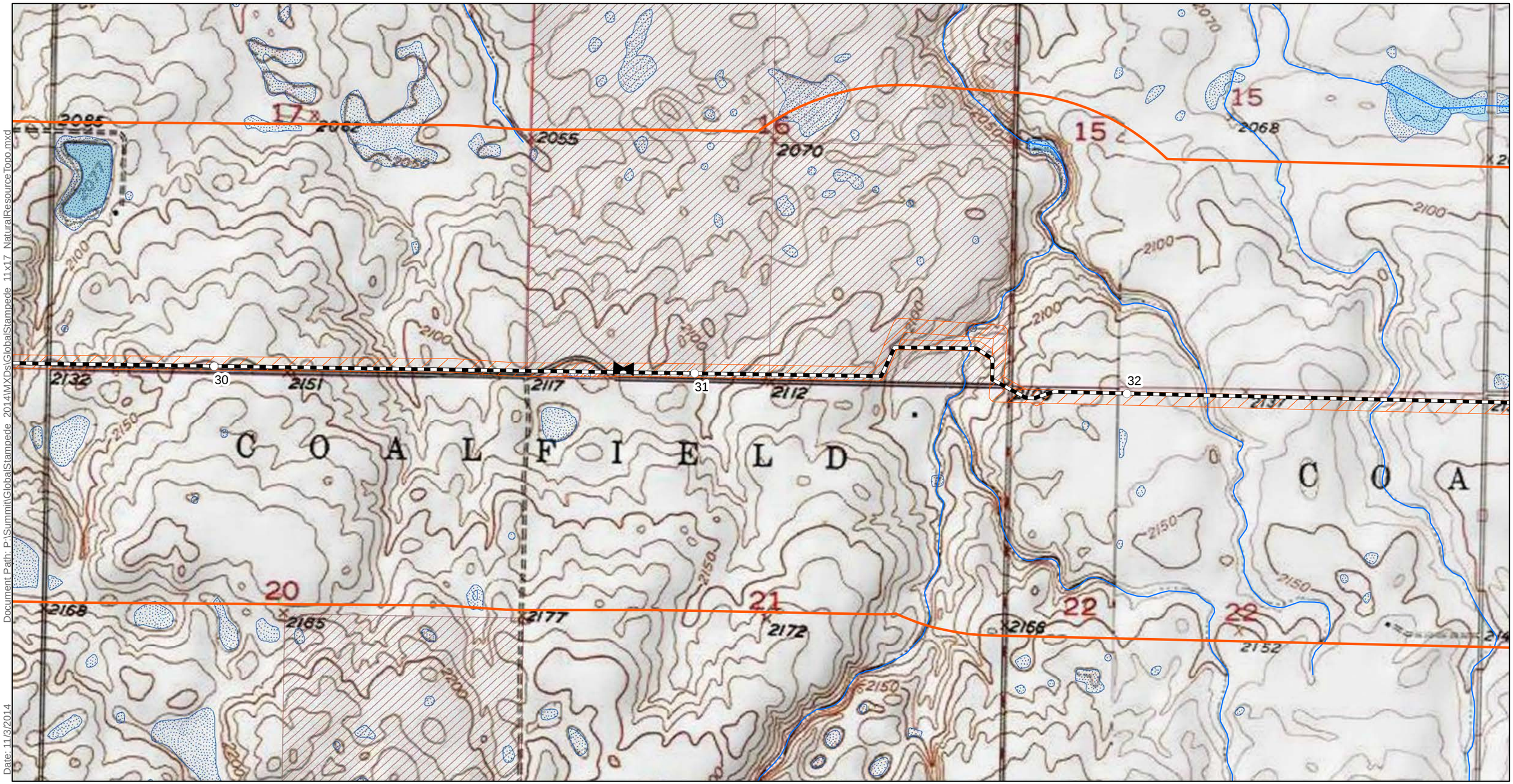
Page 10 of 16

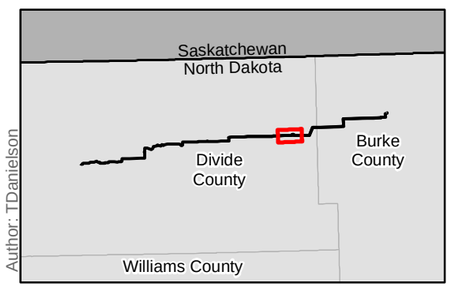
Burke and Divide Counties, North Dakota

Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_11x17_NaturalResourceTopo.mxd

Date: 11/3/2014

Author: TDanielson





Milepost
Block Valve
Centerline
Survey Corridor
Corridor (1 mile)

Criteria Data

Federal Land
State Land
PLOTS Land
North Dakota Mineral Trust Lands
NHD Waterway
NWI Wetland
NHD Waterbody
Abandoned Mines
USFWS Wetland Basin

E3 Environmental
Enhancing Execution with Experience

N

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

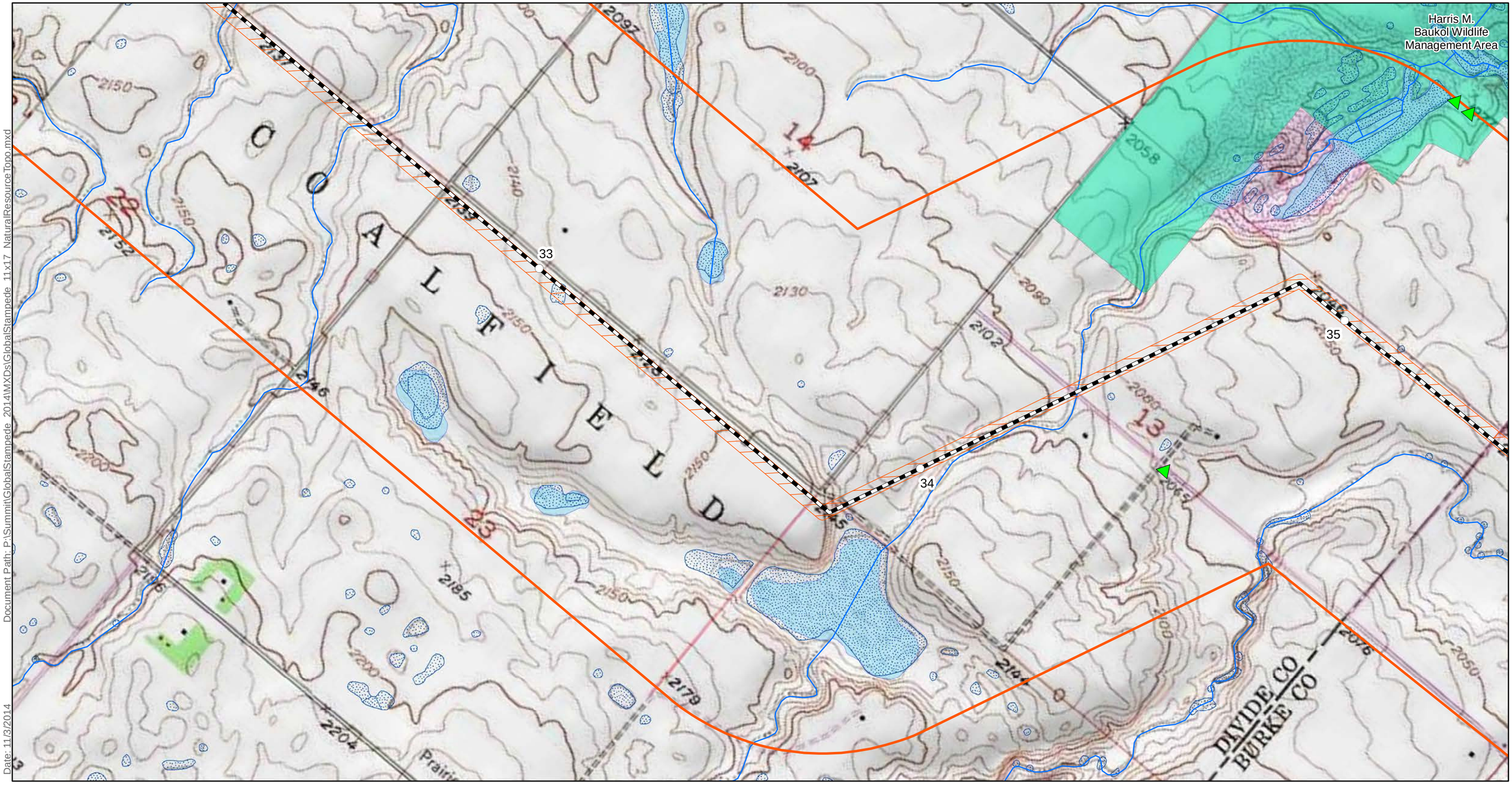
Global Stampede Pipeline Project

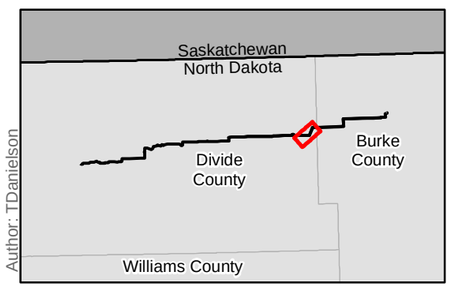
Siting Criteria

Natural Resource - Topo Map

Page 11 of 16

Burke and Divide Counties, North Dakota





Criteria Data

- Milepost
- Block Valve
- Centerline
- Survey Corridor
- Corridor (1 mile)
- Federal Land
- State Land
- PLOTS Land
- North Dakota Mineral Trust Lands
- NHD Waterway
- NWI Wetland
- NHD Waterbody
- Abandoned Mines
- USFWS Wetland Basin

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.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline Project

Siting Criteria

Natural Resource - Topo Map

Page 12 of 16

Burke and Divide Counties, North Dakota

Harris M. Baukol Wildlife Management Area

STRIP MINE

Strip Mine

Strip Mine

2000

1989

1975

2000

2000

1950

1990

1970

BM

2012

School No 1

1987

2046

2001

2001

35

36

37

38

2050

2030

2010

2000

2050

2050

West Branch Short Creek

18

17

16

2065

2076

2040

1995

2006

2050

2070

2100

DIVIDE CO

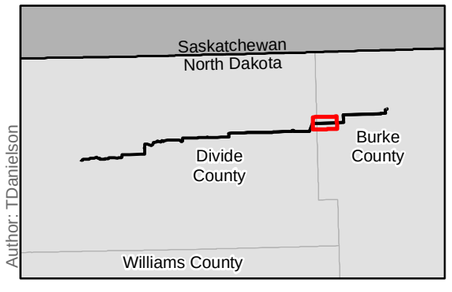
BURKE CO

ND Surface Trust Land

Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_11x17_NaturalResourceTopo.mxd

Date: 11/3/2014

Author: TDanielson



Milepost

Block Valve

Centerline

Survey Corridor

Corridor (1 mile)

Criteria Data

Federal Land

State Land

PLOTS Land

North Dakota Mineral Trust Lands

NHD Waterway

NWI Wetland

NHD Waterbody

Abandoned Mines

USFWS Wetland Basin

E3 Environmental
Enhancing Execution with Experience

N

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

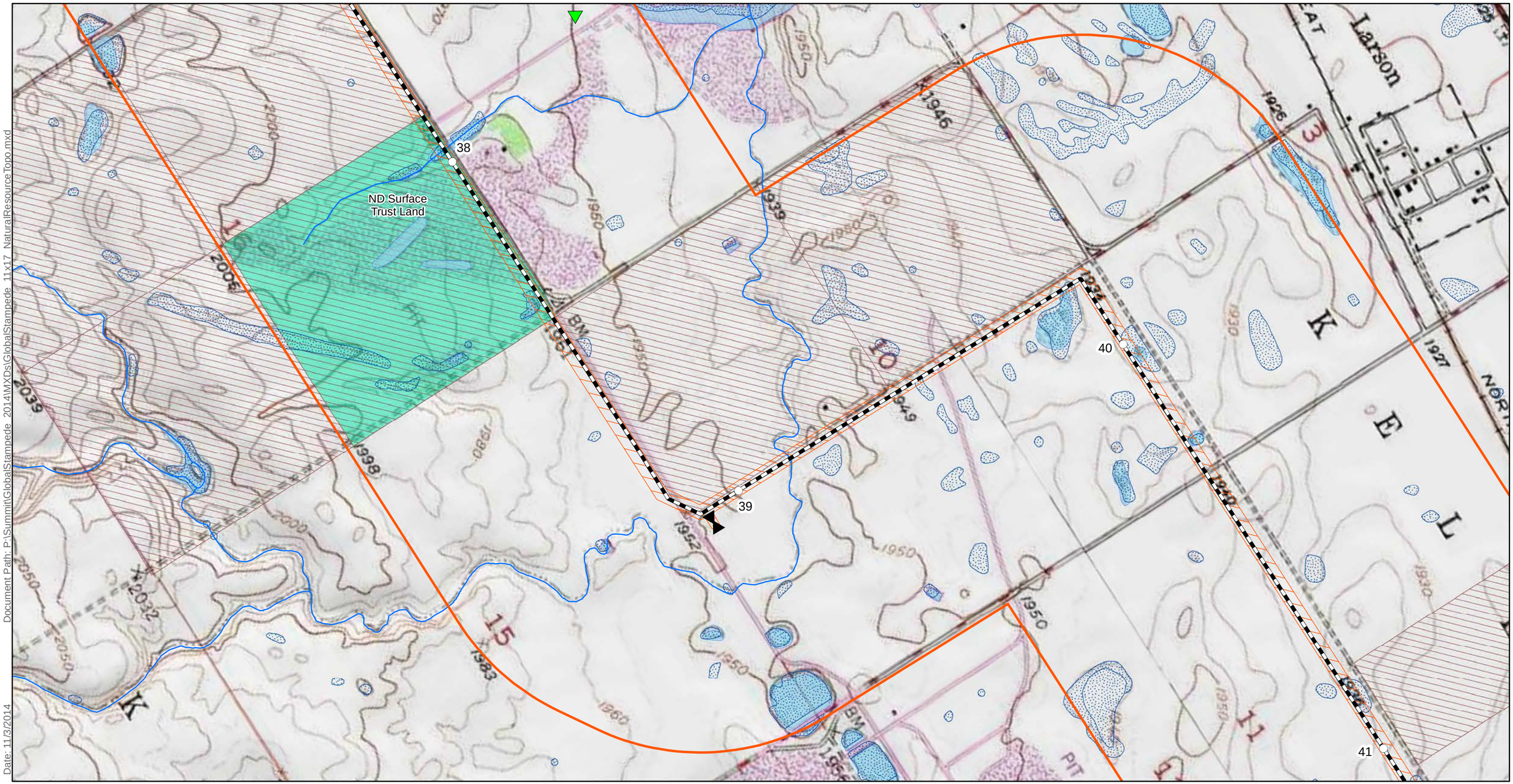
Global Stampede Pipeline Project

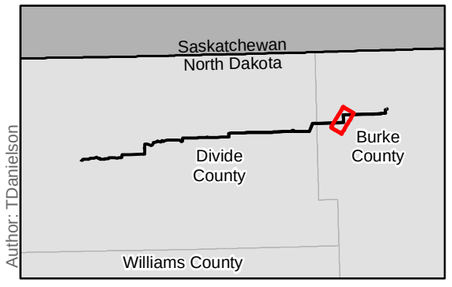
Siting Criteria

Natural Resource - Topo Map

Page 13 of 16

Burke and Divide Counties, North Dakota





Milepost
Block Valve
Centerline
Survey Corridor
Corridor (1 mile)

Criteria Data

Federal Land
State Land
PLOTS Land
North Dakota Mineral Trust Lands
NHD Waterway
NWI Wetland
NHD Waterbody
Abandoned Mines
USFWS Wetland Basin

E3 Environmental
Enhancing Execution with Experience

0 500 1,000 2,000 Feet

1:12,000

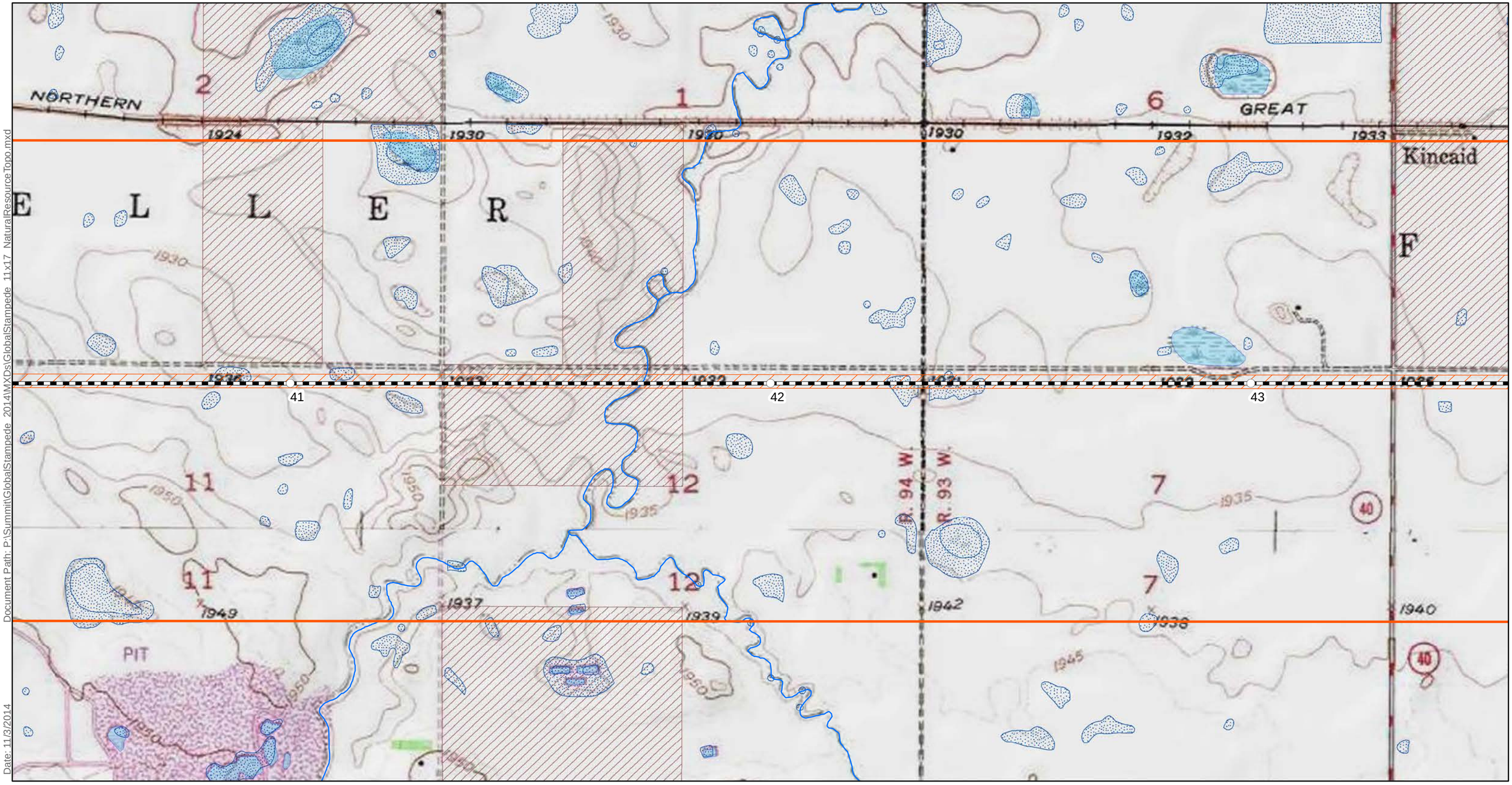
Map not to scale, for environmental review purposes only.

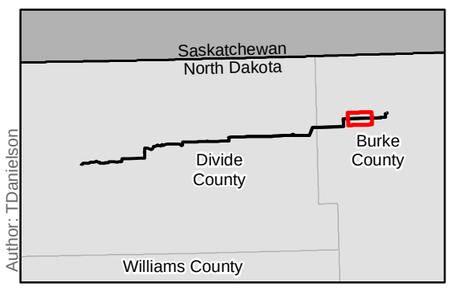
Meadowlark Midstream Company, LLC

Global Stampede Pipeline Project

Siting Criteria
Natural Resource - Topo Map

Burke and Divide Counties, North Dakota





Milepost
Block Valve
Centerline
Survey Corridor
Corridor (1 mile)

Criteria Data

Federal Land
State Land
PLOTS Land
North Dakota Mineral Trust Lands
NHD Waterway
NWI Wetland
NHD Waterbody
Abandoned Mines
USFWS Wetland Basin

E3 Environmental
Enhancing Execution with Experience

N

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline Project

Siting Criteria

Natural Resource - Topo Map

Page 15 of 16

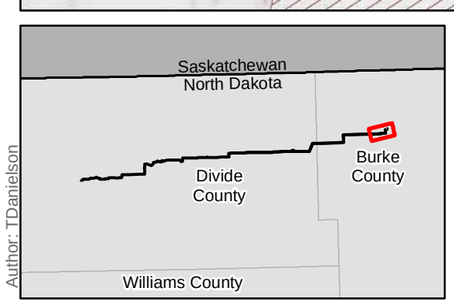
Burke and Divide Counties, North Dakota

Basin Transload Rail Facility
Pig Receiver and Custody Transfer Meter

46

44

45



Criteria Data

- Milepost
- Block Valve
- Centerline
- Survey Corridor
- Corridor (1 mile)
- Federal Land
- State Land
- PLOTS Land
- North Dakota Mineral Trust Lands
- NHD Waterway
- NWI Wetland
- NHD Waterbody
- Abandoned Mines
- USFWS Wetland Basin

E3 Environmental
Enhancing Execution with Experience

N

0 500 1,000 2,000 Feet

1:12,000

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline Project

Siting Criteria
Natural Resource - Topo Map
Page 16 of 16
Burke and Divide Counties, North Dakota

Author: TDanielson
Date: 11/3/2014
Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_11x17_NaturalResourceTopo.mxd

Appendix C

Consultations

U.S. Fish and Wildlife Service

Consultation

Chris Schmidt

From: Katie Schmidt
Sent: Wednesday, October 15, 2014 12:53 PM
To: Heidi Riddle
Cc: Chris Schmidt
Subject: RE: Global Stampede
Attachments: USFWS_Wetland Easement Consultation_Global Stampede_20141001.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Attached.

Let me know if you require any additional information.

Katie

Katie Schmidt, EIT
Senior Consultant
E3 Environmental, LLC
kschmidt@go2e3.com
O: 651.282.0652
M: 651.216.6881

From: Heidi Riddle [mailto:heidi_riddle@fws.gov]
Sent: Wednesday, October 15, 2014 12:04 PM
To: Katie Schmidt
Cc: Chris Schmidt
Subject: RE: Global Stampede

Katie,

Would you please provide the response from the District for our files?

Thanks,
Heidi

From: Katie Schmidt [mailto:KSchmidt@go2e3.com]
Sent: Wednesday, October 15, 2014 9:52 AM
To: Heidi Riddle
Cc: Chris Schmidt
Subject: RE: Global Stampede

Heidi,

Good morning. We received a response from the Lostwood Wetland Management District Complex, however a response from your office would be great. We have coordinated with the Lostwood office to avoid impacts to lands under their jurisdiction.

Let me know if you have any further questions or concerns.

Thanks-Katie

Katie Schmidt, EIT
Senior Consultant
E3 Environmental, LLC
kschmidt@go2e3.com
O: 651.282.0652
M: 651.216.6881

From: Heidi Riddle [mailto:heidi_riddle@fws.gov]
Sent: Monday, October 6, 2014 5:35 PM
To: Katie Schmidt
Subject: Global Stampede

Hi Katie,

Can you give me a status update on the Global Stampede project? Are you requesting a response from the Service?

Thank you,
Heidi

Heidi Riddle
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
3425 Miriam Ave
Bismarck, ND 58501
701-355-8503

United States Department of the Interior
FISH AND WILDLIFE SERVICE

Lostwood Wetland Management District Complex
8315 Hwy 8
Kenmare, ND 58746
Refuges: Lostwood
Wetland Districts: Crosby, Lostwood

September 25, 2014

Attn: Stoney Goodman
Summit Midstream Partners
999 18th St., Suite 3400S
Denver, CO 80202

Dear Mr. Goodman:

This letter is in reference to Meadowlark Midstream Company, LLC proposed Stampede pipeline in Section 4, T. 161 N., R. 99 W., Sections 31, 34, 35, 36 T.162 N. 99 W., Sections 22, 31, 32 T. 162 N. R. 98 W. Divide County, North Dakota. Mr. Darren Wheeling of the U.S. Fish and Wildlife Service (Service) received GIS shape files for the pipeline from Mr. Stoney Goodman of Summit Midstream Partners on September 19th, 2014. The pipeline crosses Service wetland easement tracts. Darren Wheeling reviewed the survey information and found that the pipeline route is in an area in which no wetland basins will be impacted directly by either avoiding altogether or boring under the wetland basins. In addition to avoiding wetland basins with access roads and all machinery, the Service recommends that either straw wattles or silt fence be used on the upslope of all wetland basins.

Please notify the Crosby Wetland Management District Office 48 hours before planned excavation of the Stampede Pipeline.

This letter does not supersede any required permits from landowners, local, state, and federal entities.

Please be advised of other federal laws including the Endangered Species Act (ESA), the Migratory Bird Treaty Act (MBTA), the National Wildlife Refuge System Improvement Act and the Bald and Golden Eagle Protection Act (BGEPA) when planning your proposal. The ESA, MBTA, and BGEPA prohibit the unauthorized take of federally-listed threatened and endangered species, all migratory birds, and bald and golden eagles, respectively. You must ensure that your activities do not violate these laws. The best way to do that is through early coordination of your plans with the Ecological Services office for North Dakota. Please contact the acting ND field supervisor, Mr. Scott Larson, 420 South Garfield Ave., Pierre SD 57501; by phone 605-224-8693 x224, or email at Scott_larson@fws.gov. Additional information on these wildlife resources and potential

impacts and requirements for oil and gas development is available at website www.fws.gov/northdakotafieldoffice/.

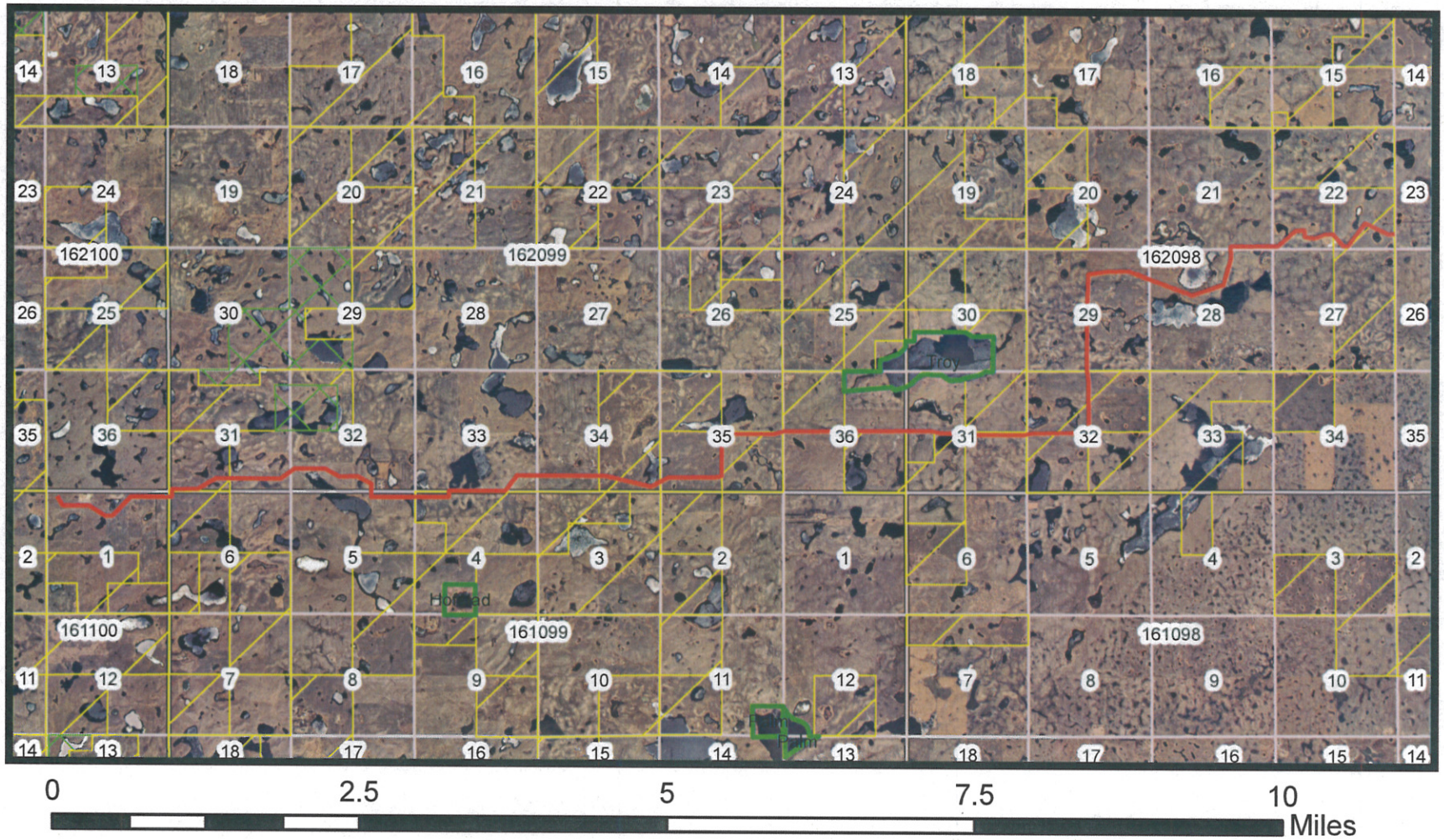
If you have any questions please contact Darren Wheeling or myself at Lostwood Wetland Management District Complex, telephone 701-965-6488, from 7 a.m. to 4:30 p.m. Thank you for your cooperation.

Sincerely,

David Gillund
Project Leader

Enclosure: Stampede Pipeline Maps

Stampede Pipeline



FWS INTEREST TYPE

OIL & GAS INTEREST

Stampede Pipeline

Wetland Easement

Grassland and Wetland Easement

Waterfowl Production Area

N
W
E
S

Disclaimer: The ONLY purpose of this map is to aid in the siting of oil and/or gas facilities. THIS MAP IS NOT AN OFFICIAL MAP OF U.S. FISH AND WILDLIFE SERVICE PROTECTED WETLANDS AND IS NOT INTENDED TO BE USED FOR ANY OTHER PURPOSE BESIDES THE PLANNING AND SITING OF OIL AND/OR GAS FACILITIES.

Aerial Photography: 2012
Map Prepared: 9/22/2014

Stampede Pipeline

Divide County
T. 161 N. R. 99 W.
Section 4, N1/2

0 0.25 0.5 0.75 1 Miles

Stampede Pipeline

Approximate Wetland Location

Wetland Easement

Grassland and Wetland Easement

Waterfowl Production Area

N
W E
S

Aerial Photography: 2012
Map Prepared: 9/22/2014

Disclaimer: The ONLY purpose of this map is to aid in the siting of oil and/or gas facilities. THIS MAP IS NOT AN OFFICIAL MAP OF U.S. FISH AND WILDLIFE SERVICE PROTECTED WETLANDS AND IS NOT INTENDED TO BE USED FOR ANY OTHER PURPOSE BESIDES THE PLANNING AND SITING OF OIL AND/OR GAS FACILITIES.

Stampede Pipeline

Divide County
T. 162 N. R. 99 W.
Section 31, S1/2

0 0.25 0.5 0.75 1 Miles

Stampede Pipeline

Approximate Wetland Location

Wetland Easement

Grassland and Wetland Easement

Waterfowl Production Area

N
W E
S

Aerial Photography: 2012
Map Prepared: 9/22/2014

Disclaimer: The ONLY purpose of this map is to aid in the siting of oil and/or gas facilities. THIS MAP IS NOT AN OFFICIAL MAP OF U.S. FISH AND WILDLIFE SERVICE PROTECTED WETLANDS AND IS NOT INTENDED TO BE USED FOR ANY OTHER PURPOSE BESIDES THE PLANNING AND SITING OF OIL AND/OR GAS FACILITIES.

Stampede Pipeline

Divide County
T. 162 N. R. 99 W.
Section 34, S1/2

0 0.25 0.5 0.75 1 Miles

Stampede Pipeline

Approximate Wetland Location

Wetland Easement

Grassland and Wetland Easement

Waterfowl Production Area

N W E S

Aerial Photography: 2012
Map Prepared: 9/22/2014

Disclaimer: The ONLY purpose of this map is to aid in the siting of oil and/or gas facilities. THIS MAP IS NOT AN OFFICIAL MAP OF U.S. FISH AND WILDLIFE SERVICE PROTECTED WETLANDS AND IS NOT INTENDED TO BE USED FOR ANY OTHER PURPOSE BESIDES THE PLANNING AND SITING OF OIL AND/OR GAS FACILITIES.

Stampede Pipeline

Divide County
T. 162 N. R. 99 W.
Section 35, S1/2

0 0.25 0.5 0.75 1 Miles

Stampede Pipeline

Approximate Wetland Location

Wetland Easement

Grassland and Wetland Easement

Waterfowl Production Area

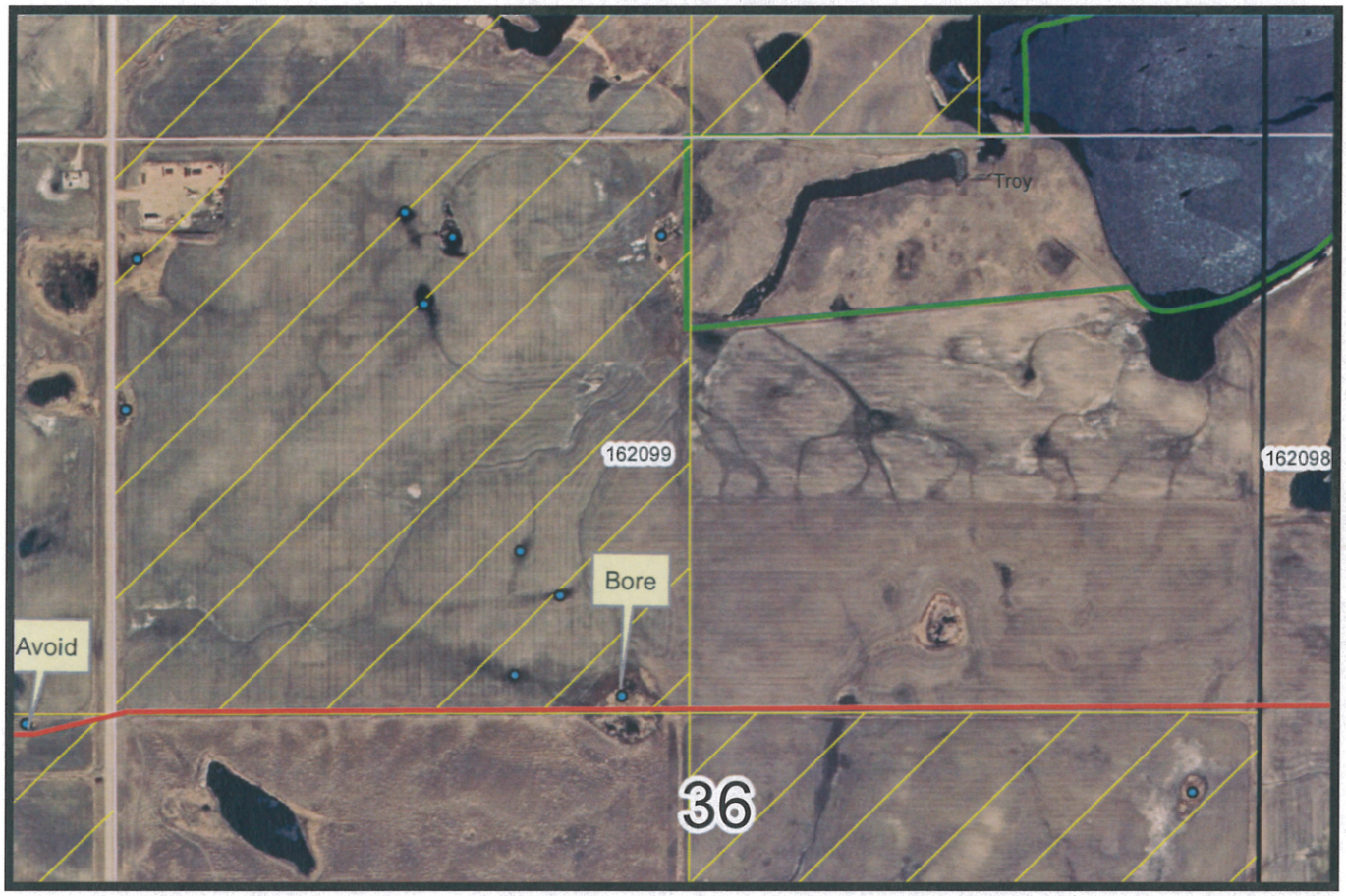
N
W E
S

Aerial Photography: 2012
Map Prepared: 9/22/2014

Disclaimer: The ONLY purpose of this map is to aid in the siting of oil and/or gas facilities. THIS MAP IS NOT AN OFFICIAL MAP OF U.S. FISH AND WILDLIFE SERVICE PROTECTED WETLANDS AND IS NOT INTENDED TO BE USED FOR ANY OTHER PURPOSE BESIDES THE PLANNING AND SITING OF OIL AND/OR GAS FACILITIES.

Stampede Pipeline

Divide County
T. 162 N. R. 99 W.
Section 36, N1/2



0 0.25 0.5 0.75 1 Miles

Stampede Pipeline

Approximate Wetland Location

Wetland Easement

Grassland and Wetland Easement

Waterfowl Production Area

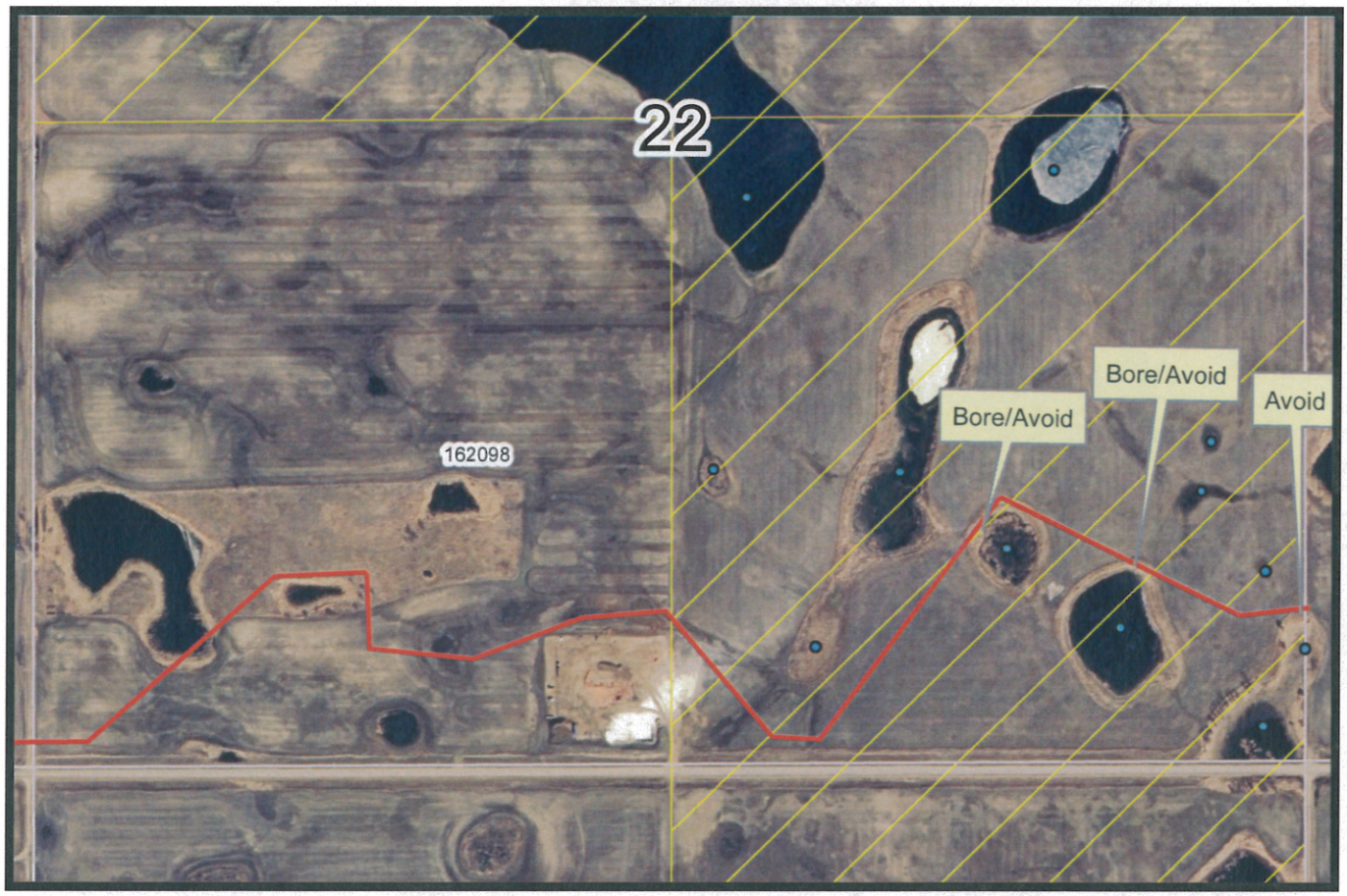
N
W E
S

Aerial Photography: 2012
Map Prepared: 9/22/2014

Disclaimer: The ONLY purpose of this map is to aid in the siting of oil and/or gas facilities. THIS MAP IS NOT AN OFFICIAL MAP OF U.S. FISH AND WILDLIFE SERVICE PROTECTED WETLANDS AND IS NOT INTENDED TO BE USED FOR ANY OTHER PURPOSE BESIDES THE PLANNING AND SITING OF OIL AND/OR GAS FACILITIES.

Stampede Pipeline

Divide County
T. 162 N. R. 98 W.
Section 22, S1/2



0 0.25 0.5 0.75 1 Miles

Stampede Pipeline

Approximate Wetland Location

Wetland Easement

Grassland and Wetland Easement

Waterfowl Production Area

N
W E
S

Aerial Photography: 2012
Map Prepared: 9/22/2014

Disclaimer: The ONLY purpose of this map is to aid in the siting of oil and/or gas facilities. THIS MAP IS NOT AN OFFICIAL MAP OF U.S. FISH AND WILDLIFE SERVICE PROTECTED WETLANDS AND IS NOT INTENDED TO BE USED FOR ANY OTHER PURPOSE BESIDES THE PLANNING AND SITING OF OIL AND/OR GAS FACILITIES.

Stampede Pipeline

Divide County
T. 162 N. R. 98 W.
Section 31, S1/2

0 0.25 0.5 0.75 1 Miles

Stampede Pipeline

Approximate Wetland Location

Wetland Easement

Grassland and Wetland Easement

Waterfowl Production Area

N
W E
S

Aerial Photography: 2012
Map Prepared: 9/22/2014

Disclaimer: The ONLY purpose of this map is to aid in the siting of oil and/or gas facilities. THIS MAP IS NOT AN OFFICIAL MAP OF U.S. FISH AND WILDLIFE SERVICE PROTECTED WETLANDS AND IS NOT INTENDED TO BE USED FOR ANY OTHER PURPOSE BESIDES THE PLANNING AND SITING OF OIL AND/OR GAS FACILITIES.

Stampede Pipeline

Divide County
T. 162 N. R. 98 W.
Section 32

0 0.25 0.5 0.75 1 Miles

Stampede Pipeline

Approximate Wetland Location

Wetland Easement

Grassland and Wetland Easement

Waterfowl Production Area

N
W E
S

Aerial Photography: 2012
Map Prepared: 9/22/2014

Disclaimer: The ONLY purpose of this map is to aid in the siting of oil and/or gas facilities. THIS MAP IS NOT AN OFFICIAL MAP OF U.S. FISH AND WILDLIFE SERVICE PROTECTED WETLANDS AND IS NOT INTENDED TO BE USED FOR ANY OTHER PURPOSE BESIDES THE PLANNING AND SITING OF OIL AND/OR GAS FACILITIES.

July 21, 2014

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

RE: Meadowlark Midstream Company, LLC – Global Stampede Pipeline Project
Threatened and Endangered Species, Migratory Bird, and Managed Lands Review.

Dear Mr. Towner,

Meadowlark Midstream Company, LLC (MMC), a wholly owned subsidiary of Summit Midstream Partners, LLC, is proposing the construction of the Global Stampede Pipeline Project (Project). The proposed Project is a new 46.1-mile; 10-inch diameter Crude Oil Pipeline that will originate 9.5 miles SE of Fortuna, ND at Meadowlark Midstream Company's Divide Pump Station and will terminate at the Basin Transload Rail Facility approximately 2 miles SE of Columbus, ND. Pipeline construction activities would typically occupy a 110-foot right-of-way. Following construction, the pipeline would be operated within a 25-foot permanent easement. Pipeline construction involves temporary impacts, with a post-construction restoration standard of restoring disturbed areas to their original pre-construction condition.

The location of the proposed Project is described below and depicted on the attached maps.

<u>Divide County, North Dakota the pipeline crosses:</u>

- Township 161N, Range 100W, Section 1
- Township 161N, Range 99W, Sections 4, 5, and 6
- Township 162N, Range 99W, Sections 31, 32, 33, 34, 35, and 36
- Township 162N, Range 98W, Sections 21, 22, 23, 24, 28, 29, 31, and 32
- Township 162N, Range 97W, Sections 19, 20, 21, 22, 23, and 24
- Township 162N, Range 96W, Sections 14, 15, 16, 19, 20, 21, 23, and 24
- Township 162N, Range 95W, Sections 13, 16, 17, 18, 19, 21, 22, 23, and 24

<u>Burke County, North Dakota the pipeline crosses</u>

- Township 162N, Range 94W, Sections 10, 11, 12, 15, 16, 17, and 18
- Township 162N, Range 93W, Sections 3, 4, 7, 8, and 9

The purpose of this request is to compile U.S. Fish and Wildlife Service's (USFWS) comments on environmental topics that are relevant to the North Dakota Public Service Commission's (PSC) siting requirements for Energy Transmission Facility

E3 ENVIRONMENTAL
871 Jefferson Avenue
St. Paul, MN 55102

Siting. This request has been prepared to augment that effort and facilitate a thorough project review.

Federally Listed Species Analysis:

Results of the review of the USFWS Information Planning and Conservation System (IPaC) database, at http://ecos.fws.gov/ipac, on June 25th, 2014 listed the following species to be considered in an effects analysis for the Project:

Federally Listed Species
Gray wolf (*Canis lupus*) – Endangered
Whooping crane (*Grus americana*) – Endangered
Piping plover (*Charadrius melodus*) – Threatened
Designated Critical Habitat – Missouri River

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:

Gray wolf: Historical records show that wolf sightings are very rare within North Dakota. Sightings in proximity to the project have been reported in the Killdeer Mountains in Dunn County (Johnson 1999). The Killdeer Mountains are about 60 miles to the southeast of the survey area. Most wolves in North Dakota are likely dispersed animals that originated in northern Minnesota, Riding National Park or Spruce Woods Reserve, Manitoba. Currently, wolves are not known to inhabit the project area. The proposed project will have **no effect** on the gray wolf.

Whooping crane: The whooping crane is a large bodied marsh species that breeds primarily 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. The proposed project will not result in a loss of crane habitat. Pipeline construction involves temporary impacts, with a post-construction restoration standard of restoring disturbed areas to their original pre-construction condition. Potential impacts are anticipated to be limited to the time period during active construction should it coincide with the spring migration period. Spring migration by the Aransas/Wood Buffalo population from the Texas Gulf Coast begins between the end of March and mid-April, with the last birds generally leaving Texas by the first of May. Experienced breeders are among the first to arrive in Canadian nesting areas in late April, with the rest of the birds arriving throughout the following 6-8 weeks.

Project precautionary measures would be implemented if a whooping crane is sighted in or near the project area. MMC would voluntarily suspend all heavy equipment operation activities and notify the USFWS should a whooping crane be spotted within 0.5 mile of the project area. Heavy equipment activities would resume upon the departure of the individual(s). The pipeline is a buried utility and will not have a direct impact on this species. As a result, the proposed pipeline would have **no effect** on the species.

E3 ENVIRONMENTAL
871 Jefferson Avenue
St. Paul, MN 55102

Piping plover: The piping plover is 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 Yellowstone and Missouri, and in alkali wetlands including those in northeastern Montana and North Dakota. The project will intersect prairie pothole wetlands, some of which may be suitable alkali wetland habitat, particularly in low-water years. Wetland, waterbody and habitat surveys will be conducted for the project and best management practices will be implemented to avoid impacts to the piping plover. This will be achieved by avoiding and minimizing impacts to potential habitat and by observing sensitive timing windows. The nearest federally designated critical habitat is Miller Lake located approximately 15 miles west. The project is approximately 46 miles from the Missouri River and Lake Sakakawea. The proposed project will have **no effect** on piping plovers or designated critical habitat for the piping plover.

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. MMC requests confirmation regarding the presence or absence of USFWS managed lands within the proposed study area.

Migratory Bird Consultation:

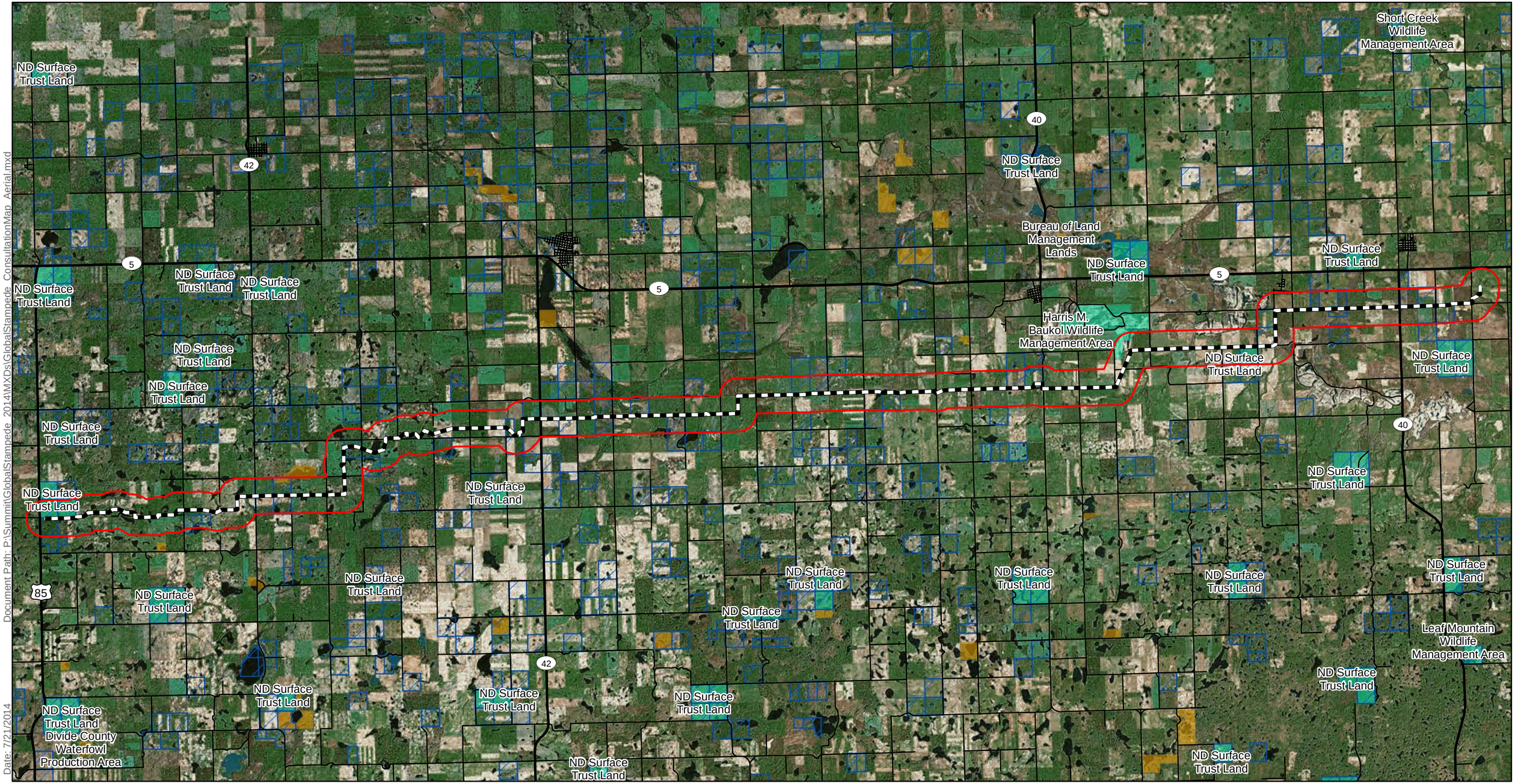
USFWS administers various wildlife related mandates of national concern including the Migratory Bird Treaty Act (MBTA). MMC understands that unlike the Endangered Species Act, the MBTA has no provisions for the allowance of a take and therefore compliance may best be achieved by avoiding or minimizing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

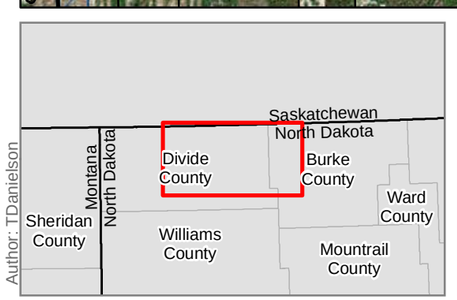
E3 Environmental, LLC (E3) has been retained by MMC to provide environmental consulting support for this project. Should you have any questions or require additional information, please contact me at 651-282-0652 or kschmidt@go2e3.com.

Sincerely,

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

Enclosures: Project maps – USGS topographic and aerial photography
cc: E3 Project Files





Pipeline
Corridor (1 Mile)
Mineral Trust Land
Federal Land
State Land

N

E3 Environmental
Enhancing Execution with Experience

0 1.75 3.5 7 Miles

1:160,500

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline

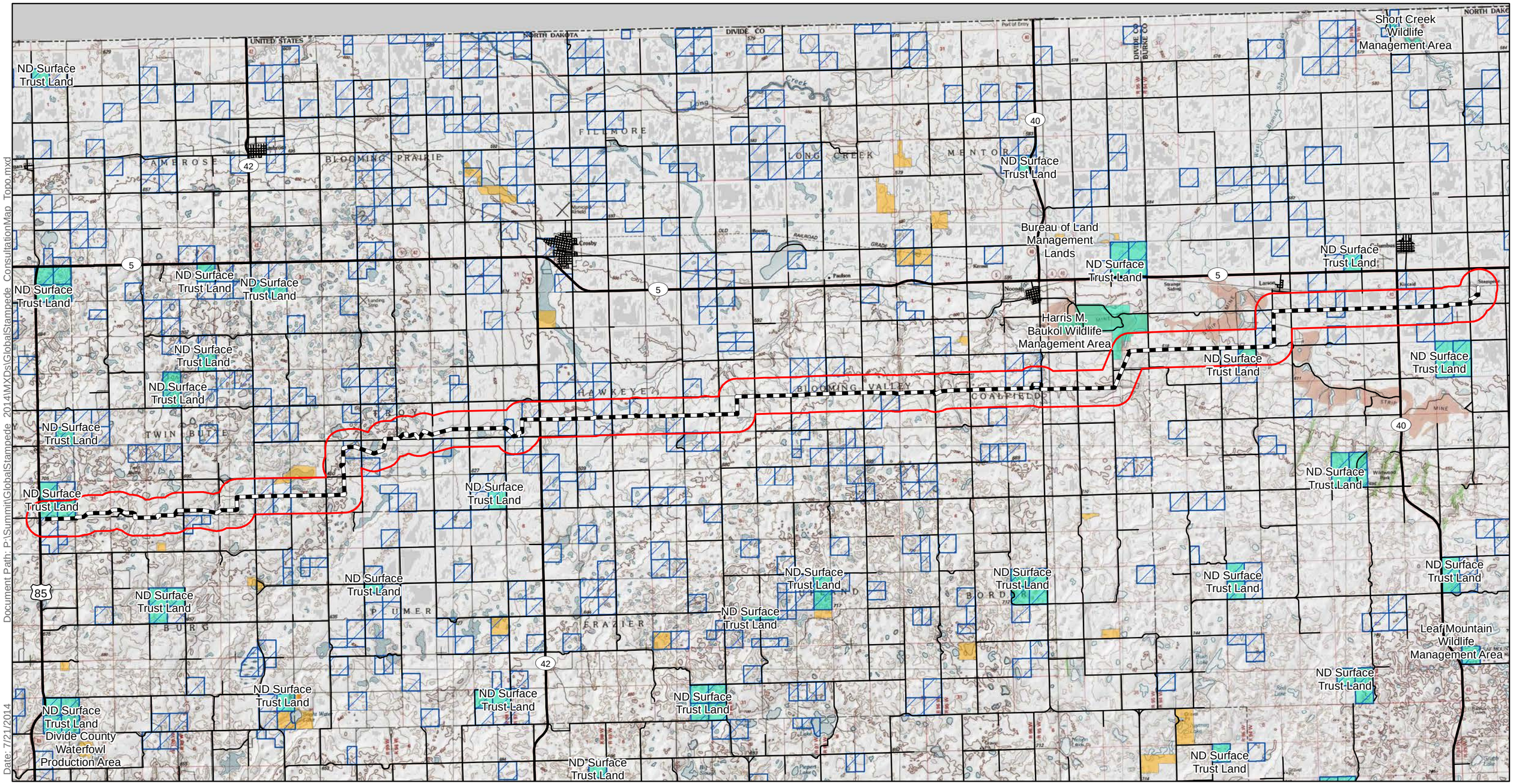
Aerial Overview Map

Divide and Burke Counties, ND

Author: TDanielson

Date: 7/21/2014

Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_ConsultationMap_Aerial.mxd



Saskatchewan
North Dakota
Montana
North Dakota
Divide County
Burke County
Ward County
Sheridan County
Williams County
Mountrail County

Pipeline
Corridor (1 Mile)
Mineral Trust Land
Federal Land
State Land

N

E3 Environmental
Enhancing Execution with Experience

0 1.75 3.5 7 Miles

1:160,500

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline

Aerial Overview Map

Divide and Burke Counties, ND

Author: TDanielson

Date: 7/21/2014

Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_ConsultationMap_Topo.mxd

North Dakota Game and Fish Department

Consultation

"VARIETY IN HUNTING AND FISHING"

NORTH DAKOTA GAME AND FISH DEPARTMENT

100 NORTH BISMARCK EXPRESSWAY BISMARCK, NORTH DAKOTA 58501-5095 PHONE 701-328-6300 FAX 701-328-6352

August 15, 2014

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

Dear Ms. Schmidt:

RE: Meadowlark Midstream Company, LLC – Global Stampede Pipeline Project

Meadowlark Midstream Company, LLC (MMC) is proposing the construction of the Global Stampede Pipeline, a new 46.1-mile 10-inch diameter crude oil pipeline that will originate 9.5 miles SE of Fortuna, ND at MMC's Divide Pump Station and will terminate at the Basin Transload Rail Facility approximately 2 miles SE of Columbus, ND.

The Harris M. Baukol Wildlife Management Area is located within the proposed project corridor in the SW¼ Section 12 & NW¼ Section 13, T162N, R95W. A special use permit would be required if these lands will be impacted by construction activity. Mr. Kent Luttschwager, Wildlife Resource Management Supervisor for the district, can be contacted at 701-770-0918 for additional information on permit requirements.

A primary concern with this project is the possible disturbance of native prairie associated with construction of the pipeline and access roads. We ask that work within these areas be avoided to the extent possible, and every effort be made to prevent destruction of woody vegetation.

The National Wetland Inventory indicates various wetlands within the proposed project corridor. Steps should be taken to protect any wetlands that cannot be avoided, no alterations should be made to existing drainage patterns, and above-ground appurtenances should not be placed in wetland areas.

We do not believe this project will have significant adverse effects on wildlife or wildlife habitat, including species of conservation priority, provided any unavoidable destruction or degradation of wetland acres is mitigated in kind, and disturbed areas are reclaimed to pre-project conditions.

Private Lands Open to Sportsmen (PLOTS) is a public access program which cost-shares with private landowners to help conserve fish and wildlife habitat. PLOTS lands are not owned or managed by the ND Game and Fish Department. Information regarding PLOTS locations is available at: http://gf.nd.gov/hunting/private-land-open-sportsmen. This page is updated to reflect changes as tracts are added or removed.

Sincerely,

Steve Dyke

(for) Greg Link
Chief
Conservation & Communication Division

js

July 21, 2014

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

RE: Meadowlark Midstream Company, LLC – Global Stampede Pipeline Project
State Conservation Priority Species Consultation, State Plots Land Review

Dear Mr. Link,

Meadowlark Midstream Company, LLC (MMC), a wholly owned subsidiary of Summit Midstream Partners, LLC, is proposing the construction of the Global Stampede Pipeline Project (Project). The proposed Project is a new 46.1-mile; 10-inch diameter Crude Oil Pipeline that will originate 9.5 miles SE of Fortuna, ND at Meadowlark Midstream Company's Divide Pump Station and will terminate at the Basin Transload Rail Facility approximately 2 miles SE of Columbus, ND. Pipeline construction activities would typically occupy a 110-foot right-of-way. Following construction, the pipeline would be operated within a 25-foot permanent easement. Pipeline construction involves temporary impacts, with a post-construction restoration standard of restoring disturbed areas to their original pre-construction condition.

The location of the proposed Project is described below and depicted on the attached maps.

<u>Divide County, North Dakota the pipeline crosses:</u>

- Township 161N, Range 100W, Section 1
- Township 161N, Range 99W, Sections 4, 5, and 6
- Township 162N, Range 99W, Sections 31, 32, 33, 34, 35, and 36
- Township 162N, Range 98W, Sections 21, 22, 23, 24, 28, 29, 31, and 32
- Township 162N, Range 97W, Sections 19, 20, 21, 22, 23, and 24
- Township 162N, Range 96W, Sections 14, 15, 16, 19, 20, 21, 23, and 24
- Township 162N, Range 95W, Sections 13, 16, 17, 18, 19, 21, 22, 23, and 24

<u>Burke County, North Dakota the pipeline crosses</u>

- Township 162N, Range 94W, Sections 10, 11, 12, 15, 16, 17, and 18
- Township 162N, Range 93W, Sections 3, 4, 7, 8, and 9

E3 ENVIRONMENTAL
871 Jefferson Avenue
St. Paul, MN 55102

E3 has accessed http://gf.nd.gov/hunting/private-land-open-sportsmen to review the proposed Project corridor for the presence of PLOTS Lands. The results of this search concluded that no PLOTS Lands will be intersected by the project in Burke and Divide Counties.

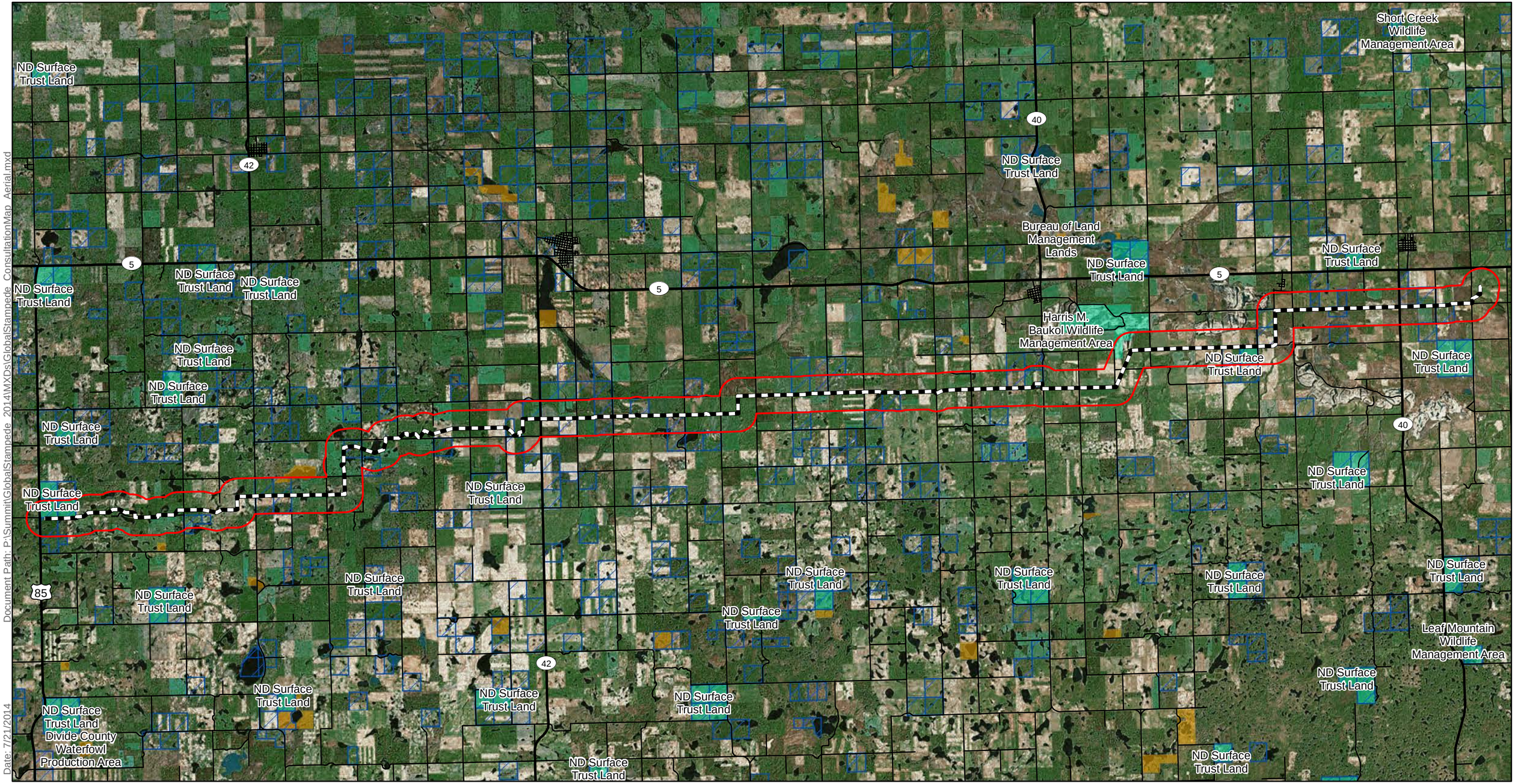
The purpose of this correspondence is twofold: to request a review of the proposed Project for presence or absence of State Conservation Priority Species; and to request confirmation of the presence or absence of North Dakota Game and Fish Department PLOTS Lands within the proposed pipeline corridor. This information will be included in a North Dakota Public Service Commission application for the Project. E3 Environmental, LLC (E3) has been retained by MMC 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.

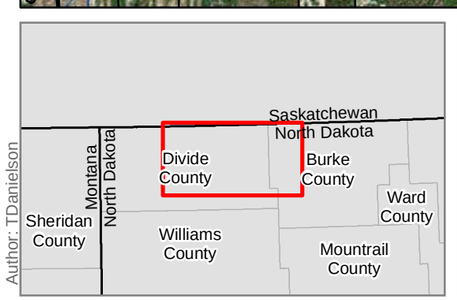
Sincerely,

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

Enclosures: Project Maps

cc: E3 Project Files





Pipeline
Corridor (1 Mile)
Mineral Trust Land
Federal Land
State Land

N

E3 Environmental
Enhancing Execution with Experience

0 1.75 3.5 7 Miles

1:160,500

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline

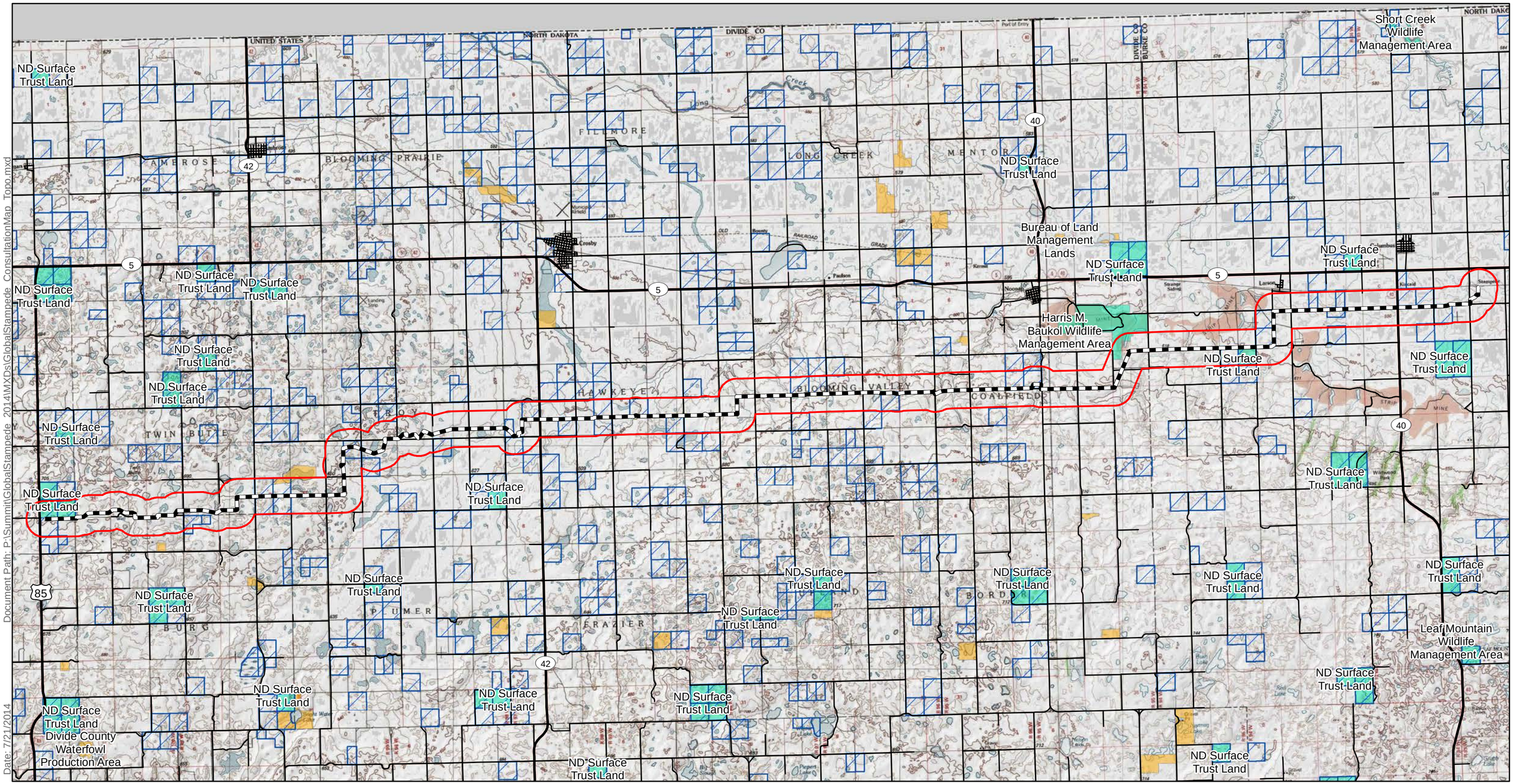
Aerial Overview Map

Divide and Burke Counties, ND

Author: TDanielson

Date: 7/21/2014

Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_ConsultationMap_Aerial.mxd



Saskatchewan
North Dakota
Montana
North Dakota
Divide County
Burke County
Ward County
Sheridan County
Williams County
Mountrail County

Pipeline
Corridor (1 Mile)
Mineral Trust Land
Federal Land
State Land

N

E3 Environmental
Enhancing Execution with Experience

0 1.75 3.5 7 Miles

1:160,500

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline

Aerial Overview Map

Divide and Burke Counties, ND

Author: TDanielson

Date: 7/21/2014

Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_ConsultationMap_Topo.mxd

North Dakota Parks and Recreation Department

Consultation

July 21, 2014

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

RE: Meadowlark Midstream Company, LLC – Global Stampede Pipeline Project
State Conservation Priority Species Consultation

Dear Ms. Duttenhefner,

Meadowlark Midstream Company, LLC (MMC), a wholly owned subsidiary of Summit Midstream Partners, LLC, is proposing the construction of the Global Stampede Pipeline Project (Project). The proposed Project is a new 46.1-mile; 10-inch diameter Crude Oil Pipeline that will originate 9.5 miles SE of Fortuna, ND at Meadowlark Midstream Company's Divide Pump Station and will terminate at the Basin Transload Rail Facility approximately 2 miles SE of Columbus, ND. Pipeline construction activities would typically occupy a 110-foot right-of-way. Following construction, the pipeline would be operated within a 25-foot permanent easement. Pipeline construction involves temporary impacts, with a post-construction restoration standard of restoring disturbed areas to their original pre-construction condition.

The location of the proposed Project is described below and depicted on the attached maps.

<u>Divde County, North Dakota the pipeline crosses:</u>

- Township 161N, Range 100W, Section 1
- Township 161N, Range 99W, Sections 4, 5, and 6
- Township 162N, Range 99W, Sections 31, 32, 33, 34, 35, and 36
- Township 162N, Range 98W, Sections 21, 22, 23, 24, 28, 29, 31, and 32
- Township 162N, Range 97W, Sections 19, 20, 21, 22, 23, and 24
- Township 162N, Range 96W, Sections 14, 15, 16, 19, 20, 21, 23, and 24
- Township 162N, Range 95W, Sections 13, 16, 17, 18, 19, 21, 22, 23, and 24

<u>Burke County, North Dakota the pipeline crosses</u>

- Township 162N, Range 94W, Sections 10, 11, 12, 15, 16, 17, and 18
- Township 162N, Range 93W, Sections 3, 4, 7, 8, and 9

E3 ENVIRONMENTAL
871 Jefferson Avenue
St. Paul, MN 55102

The purpose of this request is to compile the North Dakota Parks and Recreation Department's (Department) comments on environmental topics that are relevant to the North Dakota Public Service Commission's siting requirements for Energy Transmission Facility Siting. It is our understanding that the Department administers the following state programs:

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

We request a review of the proposed corridor and route (see attached map) for the presence or absence of any lands, projects and/or sensitive species that fall under the purview of these programs.

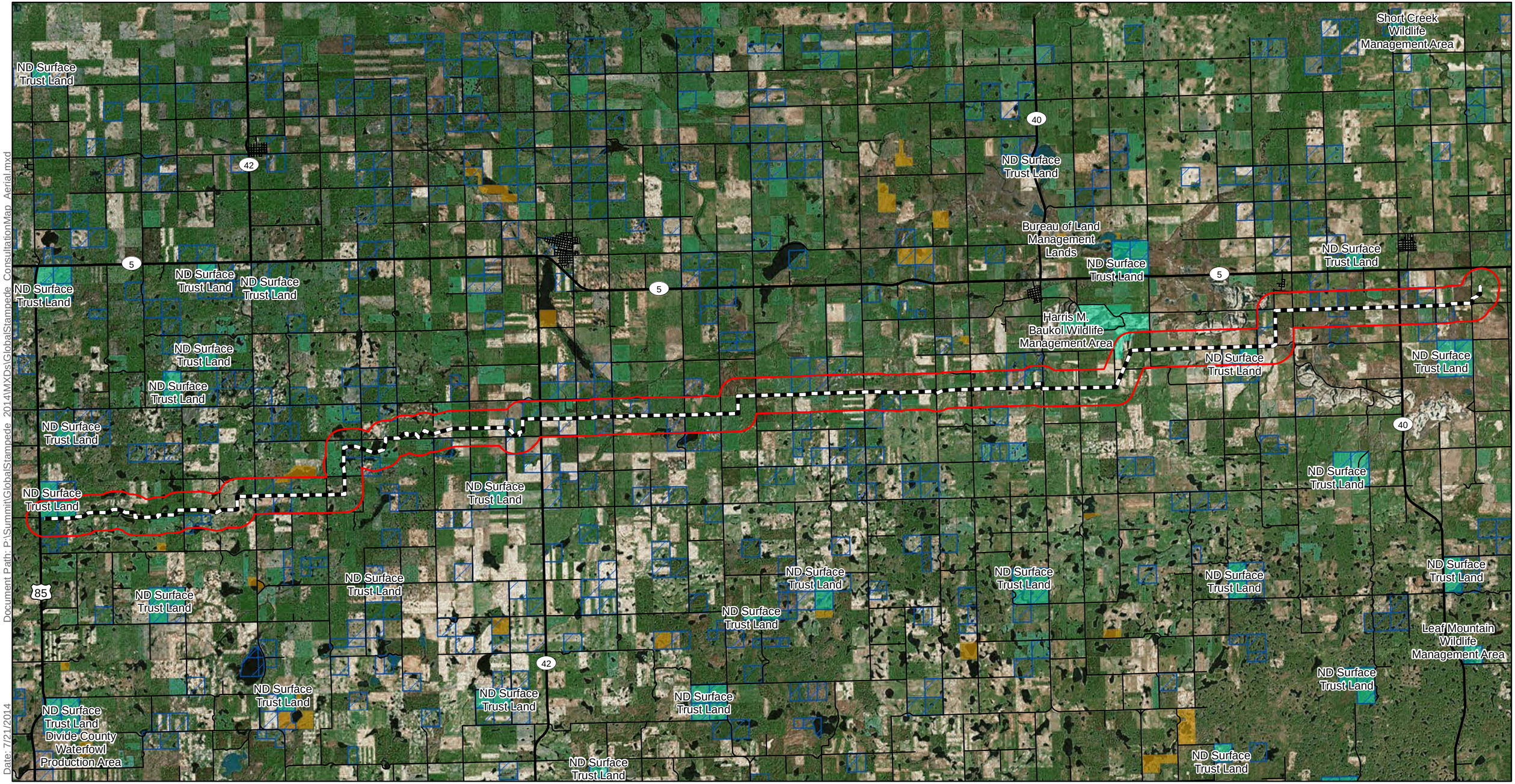
E3 Environmental, LLC has been retained by MMC to provide environmental consulting support for this project. Should you have any questions or require additional information, please contact me at 651-282-0652 or kschmidt@go2e3.com.

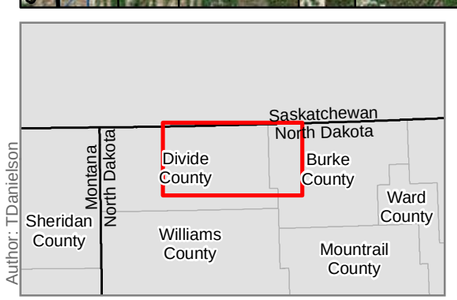
Sincerely,

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

Enclosures: Project map

cc: E3 Project Files





Pipeline
Corridor (1 Mile)
Mineral Trust Land
Federal Land
State Land

N

E3 Environmental
Enhancing Execution with Experience

0 1.75 3.5 7 Miles

1:160,500

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline

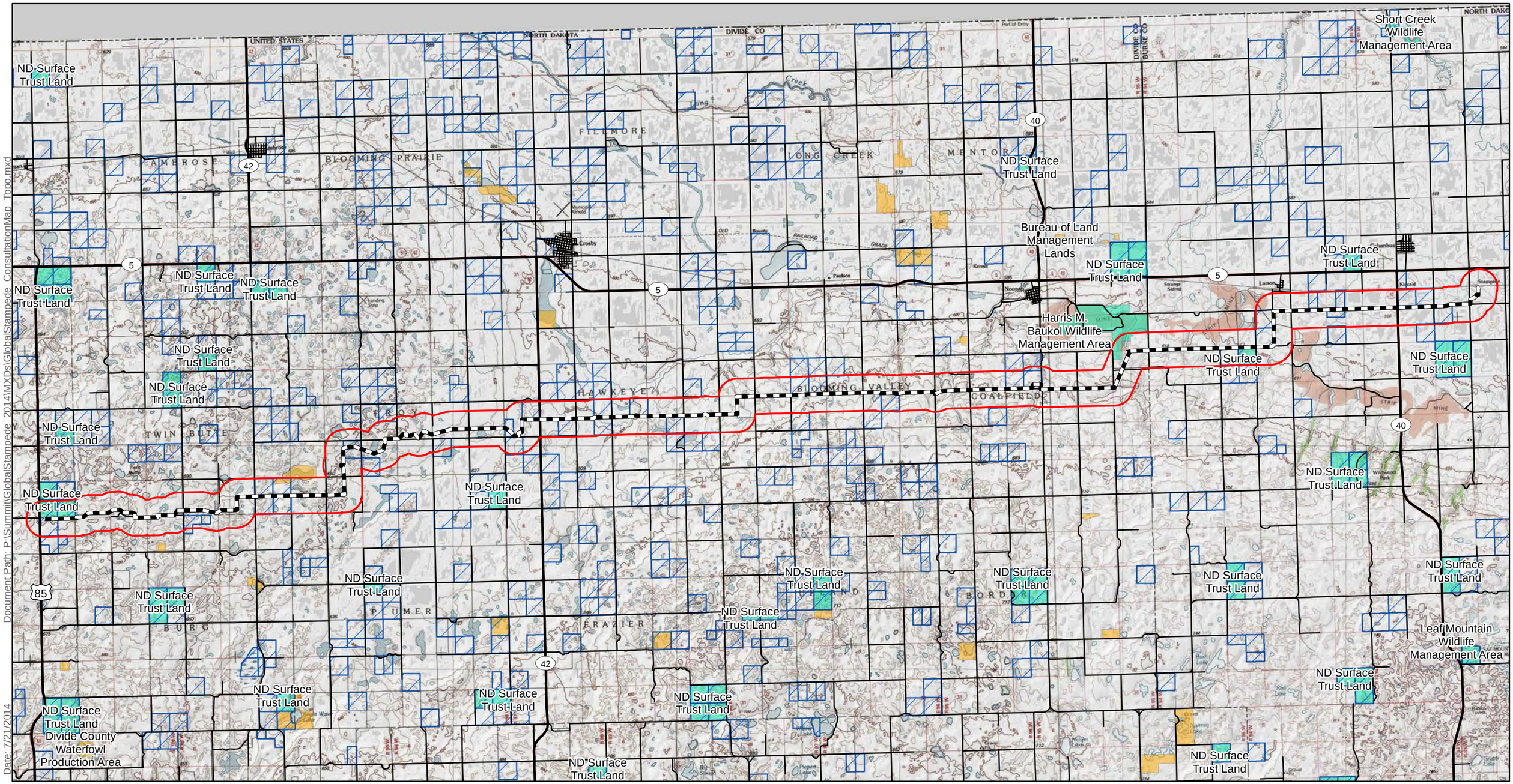
Aerial Overview Map

Divide and Burke Counties, ND

Author: TDanielson

Date: 7/21/2014

Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_ConsultationMap_Aerial.mxd



Saskatchewan
North Dakota
Montana
North Dakota
Divide County
Burke County
Ward County
Sheridan County
Williams County
Mountrail County

Pipeline
Corridor (1 Mile)
Mineral Trust Land
Federal Land
State Land

N

E3 Environmental
Enhancing Execution with Experience

0 1.75 3.5 7 Miles

1:160,500

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline

Aerial Overview Map

Divide and Burke Counties, ND

Author: TDanielson

Date: 7/21/2014

Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_ConsultationMap_Topo.mxd

North Dakota State Lands Department-School Trust Lands

Constulation

Katie Schmidt

From: Haupt, Michael L. <mhaupt@nd.gov>
Sent: Wednesday, July 23, 2014 3:11 PM
To: Katie Schmidt
Cc: Tyler Danielson
Subject: RE: MMC-Global Stampede Project Consultation Request
Attachments: 162-94-16BRKLarsonMine.pdf

Katie,

Good afternoon! We could consider a pipeline corridor near the north section line as shown on the attached aerial photo, however, portions of this tracts were mined for coal and there may be some on-going settling occurring. You may want to ask the reclamation division of the ND Public Service Commission to what extent the surface was affected by coal mining before pursuing a route across this tract. Let me know if you have questions. 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

From: Katie Schmidt [mailto:KSchmidt@go2e3.com]
Sent: Monday, July 21, 2014 3:54 PM
To: Haupt, Michael L.
Cc: Tyler Danielson
Subject: MMC-Global Stampede Project Consultation Request

Dear Mr. Haupt,

Meadowlark Midstream Company, LLC (MMC), a wholly owned subsidiary of Summit Midstream Partners, LLC, is proposing the construction of the Global Stampede Pipeline Project (Project). The proposed Project is a new 46.1-mile; 10-inch diameter Crude Oil Pipeline that will originate 9.5 miles SE of Fortuna, ND at Meadowlark Midstream Company's Divide Pump Station and will terminate at the Basin Transload Rail Facility approximately 2 miles SE of Columbus, ND. Pipeline construction activities would typically occupy a 110-foot right-of-way. Following construction, the pipeline would be operated within a 25-foot permanent easement. Pipeline construction involves temporary impacts, with a post-construction restoration standard of restoring disturbed areas to their original pre-construction condition.
The location of the proposed Project is described below and depicted on the attached maps.

Divde County, North Dakota the pipeline crosses:

- Township 161N, Range 100W, Section 1
- Township 161N, Range 99W, Sections 4, 5, and 6
- Township 162N, Range 99W, Sections 31, 32, 33, 34, 35, and 36
- Township 162N, Range 98W, Sections 21, 22, 23, 24, 28, 29, 31, and 32
- Township 162N, Range 97W, Sections 19, 20, 21, 22, 23, and 24
- Township 162N, Range 96W, Sections 14, 15, 16, 19, 20, 21, 23, and 24
- Township 162N, Range 95W, Sections 13, 16, 17, 18, 19, 21, 22, 23, and 24

Burke County, North Dakota the pipeline crosses

- Township 162N, Range 94W, Sections 10, 11, 12, 15, 16, 17, and 18
- Township 162N, Range 93W, Sections 3, 4, 7, 8, and 9

E3 has accessed North Dakota Geographic Information Systems downloadable data at http://www.nd.gov/gis/mapsdata/ to review the proposed Project corridor for the presence of State School Trust Lands. The results of this search concluded that the following sections intersect State Lands in Burke and Divide County:

Burke County, North Dakota the pipeline crosses:

- Township 162N, Range 94W, Section 16

Divide County, North Dakota the pipeline crosses:

- None

The purpose of this correspondence is to request a review of the proposed project corridor (see attached) for the presence or absence of State School Trust Lands. This information will be included in a North Dakota Public Service Commission application for the Project.

E3 Environmental, LLC has been retained by MMC 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.

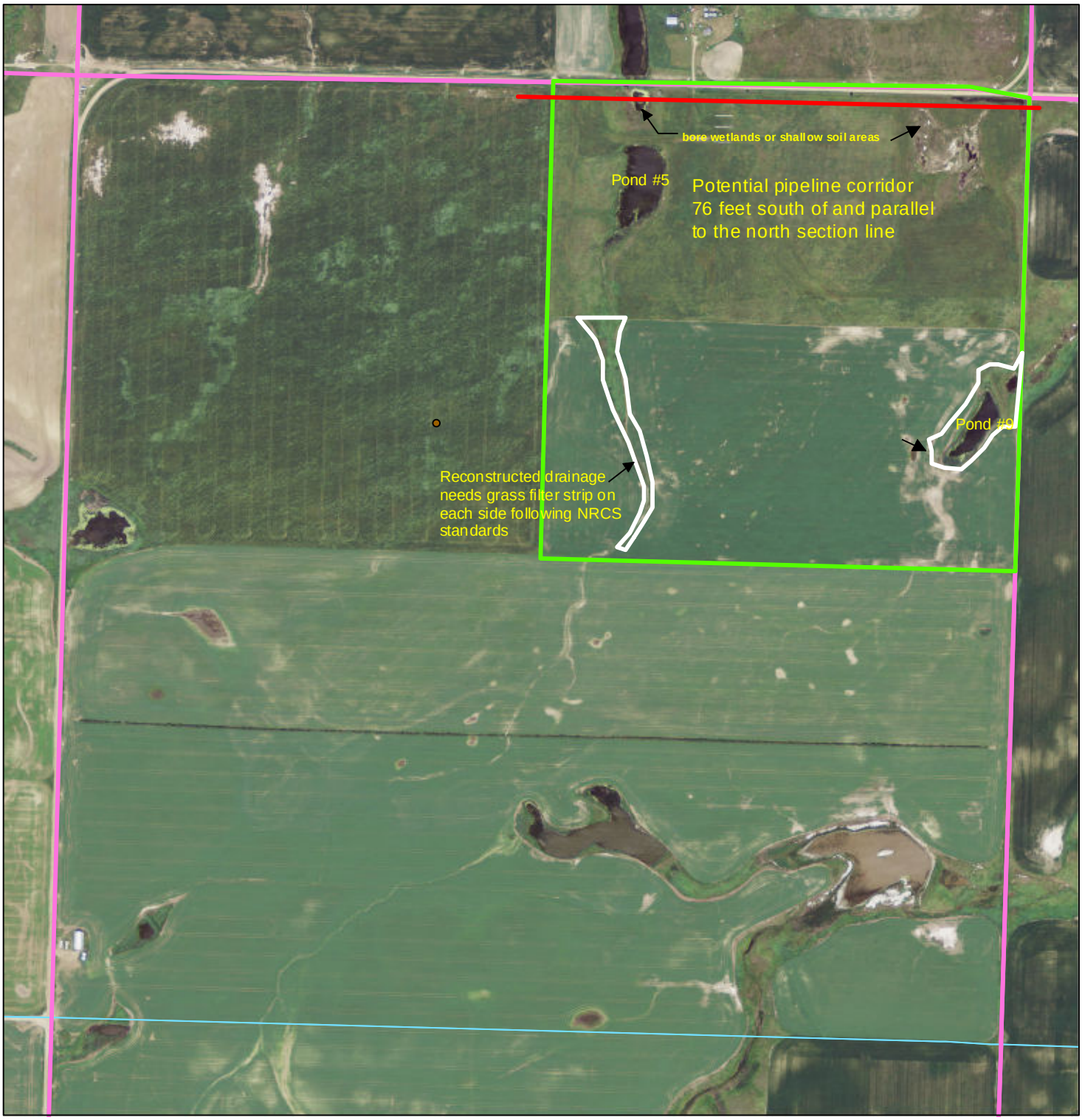
Sincerely,

Katie Schmidt, EIT
Senior Consultant
E3 Environmental, LLC
kschmidt@go2e3.com
O: 651.282.0652
M: 651.216.6881
871 Jefferson Avenue
St. Paul, MN 55102
www.go2e3.com

16-T162-R94

Burke County

Township: Keller



N
W E
S

Map Datum is WGS 84 (same as NAD 83)

0 0.5 1 Miles

Printed: 9/27/2006 -- ND State Land Dept.

Katie Schmidt

From: Katie Schmidt
Sent: Monday, July 21, 2014 3:54 PM
To: mhaupt@nd.gov
Cc: Tyler Danielson (tdanielson@go2e3.com)
Subject: MMC-Global Stampede Project Consultation Request
Attachments: Maps.pdf

Dear Mr. Haupt,

Meadowlark Midstream Company, LLC (MMC), a wholly owned subsidiary of Summit Midstream Partners, LLC, is proposing the construction of the Global Stampede Pipeline Project (Project). The proposed Project is a new 46.1-mile; 10-inch diameter Crude Oil Pipeline that will originate 9.5 miles SE of Fortuna, ND at Meadowlark Midstream Company's Divide Pump Station and will terminate at the Basin Transload Rail Facility approximately 2 miles SE of Columbus, ND. Pipeline construction activities would typically occupy a 110-foot right-of-way. Following construction, the pipeline would be operated within a 25-foot permanent easement. Pipeline construction involves temporary impacts, with a post-construction restoration standard of restoring disturbed areas to their original pre-construction condition.
The location of the proposed Project is described below and depicted on the attached maps.

Divde County, North Dakota the pipeline crosses:

- Township 161N, Range 100W, Section 1
- Township 161N, Range 99W, Sections 4, 5, and 6
- Township 162N, Range 99W, Sections 31, 32, 33, 34, 35, and 36
- Township 162N, Range 98W, Sections 21, 22, 23, 24, 28, 29, 31, and 32
- Township 162N, Range 97W, Sections 19, 20, 21, 22, 23, and 24
- Township 162N, Range 96W, Sections 14, 15, 16, 19, 20, 21, 23, and 24
- Township 162N, Range 95W, Sections 13, 16, 17, 18, 19, 21, 22, 23, and 24

Burke County, North Dakota the pipeline crosses

- Township 162N, Range 94W, Sections 10, 11, 12, 15, 16, 17, and 18
- Township 162N, Range 93W, Sections 3, 4, 7, 8, and 9

E3 has accessed North Dakota Geographic Information Systems downloadable data at http://www.nd.gov/gis/mapsdata/ to review the proposed Project corridor for the presence of State School Trust Lands. The results of this search concluded that the following sections intersect State Lands in Burke and Divide County:

Burke County, North Dakota the pipeline crosses:

- Township 162N, Range 94W, Section 16

Divide County, North Dakota the pipeline crosses:

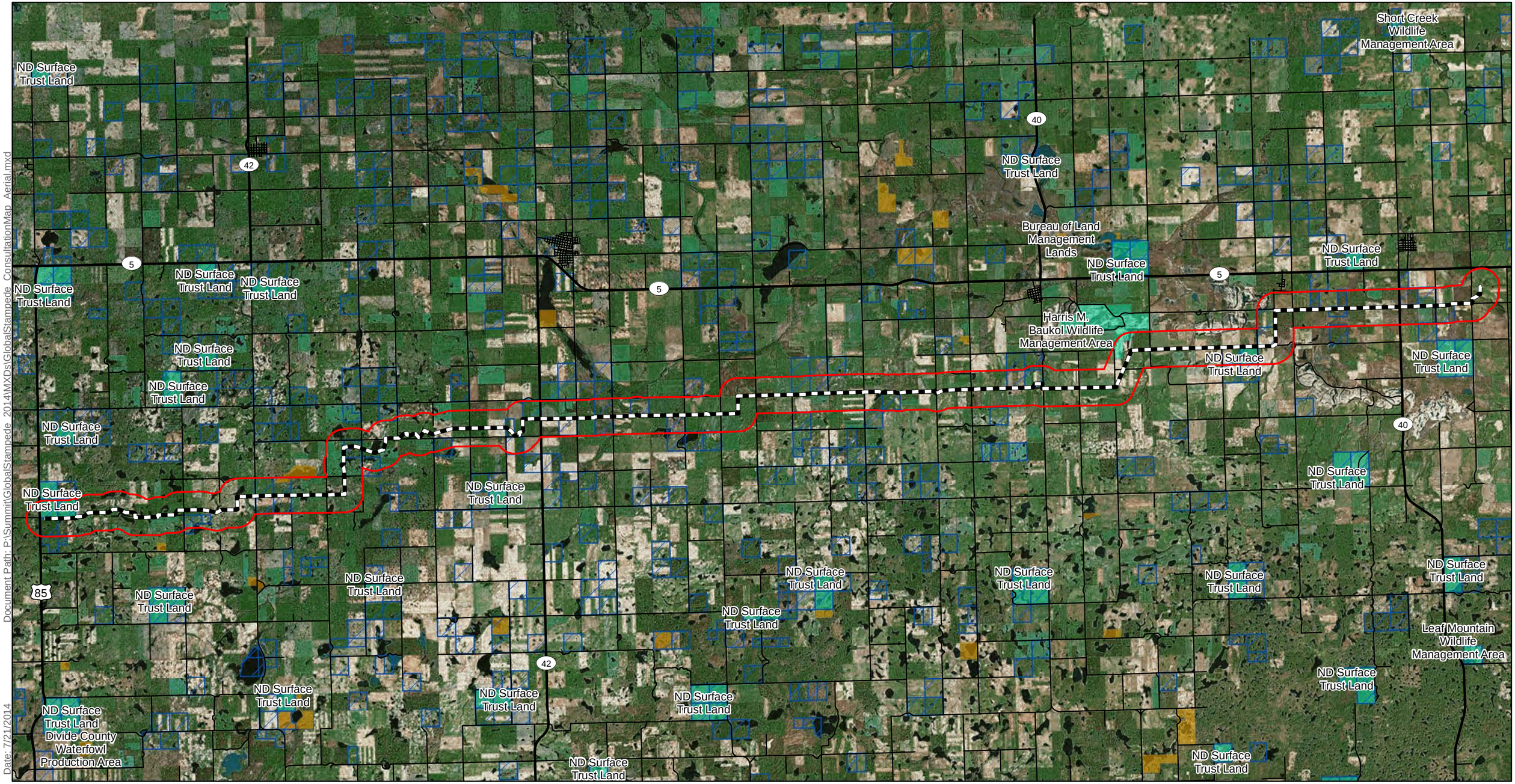
- None

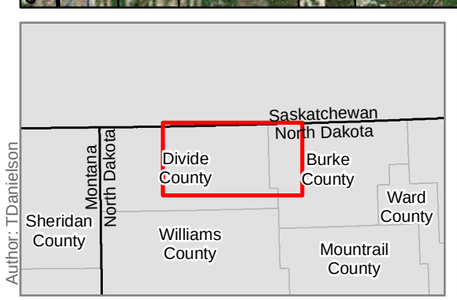
The purpose of this correspondence is to request a review of the proposed project corridor (see attached) for the presence or absence of State School Trust Lands. This information will be included in a North Dakota Public Service Commission application for the Project.

E3 Environmental, LLC has been retained by MMC 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, EIT
Senior Consultant
E3 Environmental, LLC
kschmidt@go2e3.com
O: 651.282.0652
M: 651.216.6881
871 Jefferson Avenue
St. Paul, MN 55102
www.go2e3.com





Pipeline
Corridor (1 Mile)
Mineral Trust Land
Federal Land
State Land

N

E3 Environmental
Enhancing Execution with Experience

0 1.75 3.5 7 Miles

1:160,500

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline

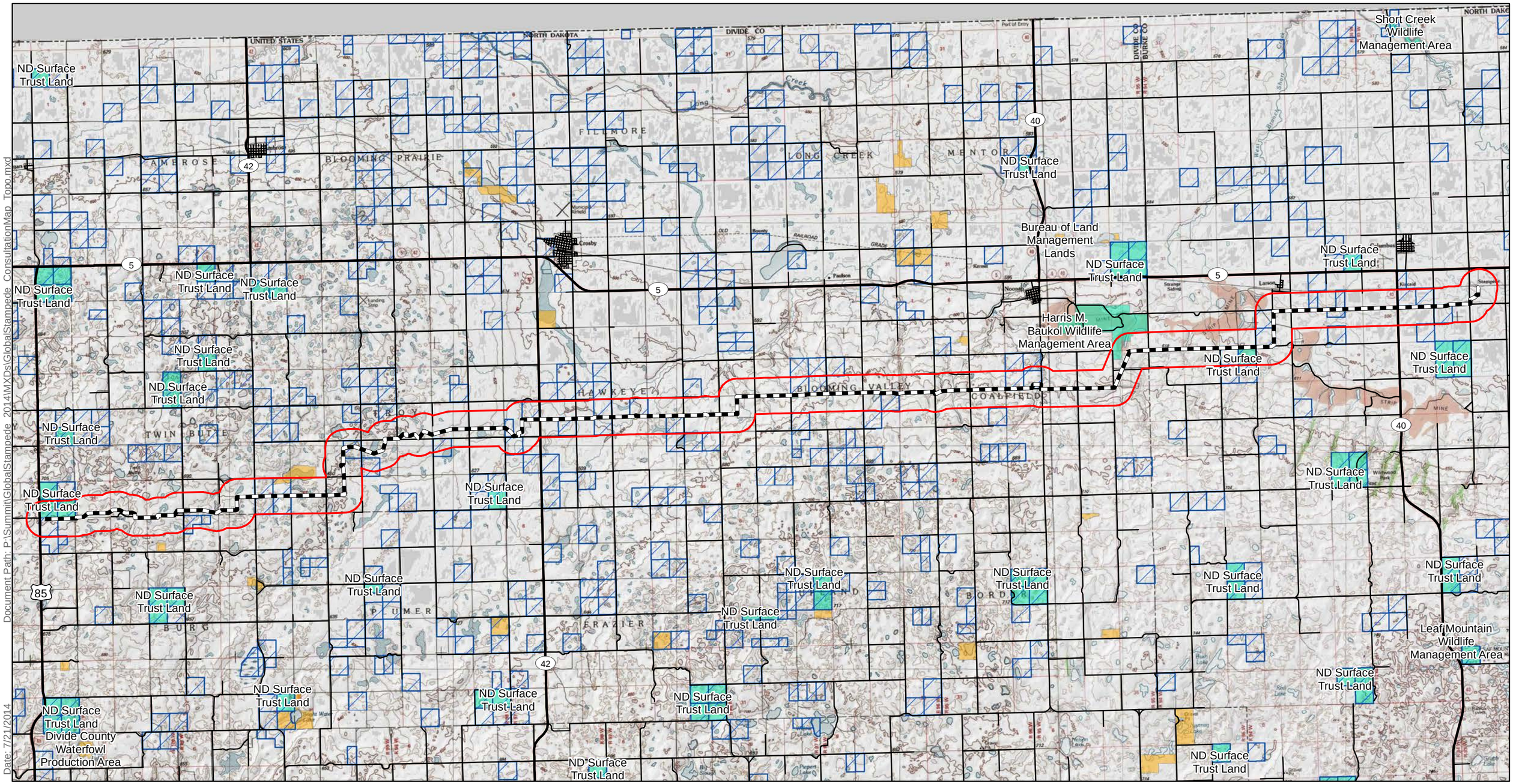
Aerial Overview Map

Divide and Burke Counties, ND

Author: TDanielson

Date: 7/21/2014

Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_ConsultationMap_Aerial.mxd



Saskatchewan
North Dakota
Montana
North Dakota
Divide County
Burke County
Ward County
Sheridan County
Williams County
Mountrail County

Pipeline
Corridor (1 Mile)
Mineral Trust Land
Federal Land
State Land

N

E3 Environmental
Enhancing Execution with Experience

0 1.75 3.5 7 Miles

1:160,500

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline

Aerial Overview Map

Divide and Burke Counties, ND

Author: TDanielson

Date: 7/21/2014

Document Path: P:\Summit\GlobalStampede_2014\MXDs\GlobalStampede_ConsultationMap_Topo.mxd

North Dakota State Lands Department-Mineral Trust Lands

Constulation

Chris Schmidt

From: Chris Schmidt
Sent: Thursday, November 06, 2014 10:11 AM
To: Chris Schmidt
Subject: RE: MMC Global Stampede Project Consultation Request

---

From: Bayley, Keith W.
Sent: Friday, August 01, 2014 2:59 PM
To: 'Katie Schmidt'
Subject: RE: MMC Global Stampede Project Consultation Request

Katie,

We agree that the attached plat fairly represents the approximate location of the pipeline route 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.

Keith Bayley
Land Professional
ND Department of Trust Lands
701.328.1912
kbayley@nd.gov

From: Katie Schmidt [mailto:KSchmidt@go2e3.com]
Sent: Friday, August 01, 2014 10:10 AM
To: Bayley, Keith W.
Subject: RE: MMC Global Stampede Project Consultation Request

Keith,

Good morning. Attached you will find the file in the format requested. Let me know if you have any additional information.

Katie

Katie Schmidt, EIT
Senior Consultant
E3 Environmental, LLC
kschmidt@go2e3.com
O: 651.282.0652
M: 651.216.6881

From: Bayley, Keith W. [mailto:kbayley@nd.gov]
Sent: Thursday, July 31, 2014 4:09 PM
To: Katie Schmidt
Subject: RE: MMC Global Stampede Project Consultation Request

Katie,

Would you resend the gis file. If you zipped it, rename the .zip file to a .txt extension and then it sneak around our server "protection". I can rename it here back to .zip and unzip it. Thanks.

Keith

From: Katie Schmidt [mailto:KSchmidt@go2e3.com]
Sent: Monday, July 21, 2014 3:51 PM
To: Bayley, Keith W.
Cc: Tyler Danielson
Subject: MMC Global Stampede Project Consultation Request

Dear Mr. Bayley,

Meadowlark Midstream Company, LLC (MMC), a wholly owned subsidiary of Summit Midstream Partners, LLC, is proposing the construction of the Global Stampede Pipeline Project (Project). The proposed Project is a new 46.1-mile; 10-inch diameter Crude Oil Pipeline that will originate 9.5 miles SE of Fortuna, ND at Meadowlark Midstream Company's Divide Pump Station and will terminate at the Basin Transload Rail Facility approximately 2 miles SE of Columbus, ND. Pipeline construction activities would typically occupy a 110-foot right-of-way. Following construction, the pipeline would be operated within a 25-foot permanent easement. Pipeline construction involves temporary impacts, with a post-construction restoration standard of restoring disturbed areas to their original pre-construction condition.
The location of the proposed Project is described below and depicted on the attached maps. Attached you will also find a zip file containing the ESRI GIS data for the centerline and 1-mile corridor.

Burke County, North Dakota the pipeline crosses:

- Township 162N, Range 94W, Sections 10, 11, 12, 15, 16, 17, and 18
- Township 162N, Range 93W, Sections 3, 4, 7, 8, and 9

Divide County, North Dakota the pipeline crosses:

- Township 161N, Range 100W, Section 1
- Township 161N, Range 99W, Sections 4, 5, and 6
- Township 162N, Range 99W, Sections 31, 32, 33, 34, 35, and 36
- Township 162N, Range 98W, Sections 21, 22, 23, 24, 28, 29, 31, and 32
- Township 162N, Range 97W, Sections 19, 20, 21, 22, 23, and 24
- Township 162N, Range 96W, Sections 14, 15, 16, 19, 20, 21, 23, and 24
- Township 162N, Range 95W, Sections 13, 16, 17, 18, 19, 21, 22, 23, and 24

E3 has accessed www.land.nd.gov to review the proposed Project corridor for the presence of State Mineral Trust Lands. The results of this search concluded that the following sections intersect State Lands in Burke and Divide County:

Burke County, North Dakota the pipeline crosses:

- Township 162N, Range 93W, Section 9
- Township 162N, Range 94W, Sections 10, 12, and 16

Divide County, North Dakota the pipeline crosses:

- Township 161N, Range 100W, Section 1
- Township 162N, Range 95W, Section 16
- Township 162N, Range 96W, Sections 16 and 23
- Township 162N, Range 97W, Sections 19, 20, 21, 22, and 23
- Township 162N, Range 98W, Section 29
- Township 162N, Range 99W, Section 36

The purpose of this consultation is to seek your concurrence with this analysis. This information will be included in a North Dakota Public Service Commission application for the Project. For your convenience, please refer to the attached map and shape files, which depicts the Project corridor and State Mineral Trust Lands.

E3 has been retained by MMC 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, EIT
Senior Consultant
E3 Environmental, LLC
kschmidt@go2e3.com
O: 651.282.0652
M: 651.216.6881
871 Jefferson Avenue
St. Paul, MN 55102
www.go2e3.com

From: Katie Schmidt [mailto:KSchmidt@go2e3.com]
Sent: Monday, July 21, 2014 3:51 PM
To: Bayley, Keith W.
Cc: Tyler Danielson
Subject: MMC Global Stampede Project Consultation Request

Dear Mr. Bayley,

Meadowlark Midstream Company, LLC (MMC), a wholly owned subsidiary of Summit Midstream Partners, LLC, is proposing the construction of the Global Stampede Pipeline Project (Project). The proposed Project is a new 46.1-mile; 10-inch diameter Crude Oil Pipeline that will originate 9.5 miles SE of Fortuna, ND at Meadowlark Midstream Company's Divide Pump Station and will terminate at the Basin Transload Rail Facility approximately 2 miles SE of Columbus, ND. Pipeline construction activities would typically occupy a 110-foot right-of-way. Following construction, the pipeline would be operated within a 25-foot permanent easement. Pipeline construction involves temporary impacts, with a post-construction restoration standard of restoring disturbed areas to their original pre-construction condition.
The location of the proposed Project is described below and depicted on the attached maps. Attached you will also find a zip file containing the ESRI GIS data for the centerline and 1-mile corridor.

Burke County, North Dakota the pipeline crosses:

- Township 162N, Range 94W, Sections 10, 11, 12, 15, 16, 17, and 18
- Township 162N, Range 93W, Sections 3, 4, 7, 8, and 9

Divide County, North Dakota the pipeline crosses:

- Township 161N, Range 100W, Section 1
- Township 161N, Range 99W, Sections 4, 5, and 6
- Township 162N, Range 99W, Sections 31, 32, 33, 34, 35, and 36
- Township 162N, Range 98W, Sections 21, 22, 23, 24, 28, 29, 31, and 32
- Township 162N, Range 97W, Sections 19, 20, 21, 22, 23, and 24
- Township 162N, Range 96W, Sections 14, 15, 16, 19, 20, 21, 23, and 24
- Township 162N, Range 95W, Sections 13, 16, 17, 18, 19, 21, 22, 23, and 24

E3 has accessed www.land.nd.gov to review the proposed Project corridor for the presence of State Mineral Trust Lands. The results of this search concluded that the following sections intersect State Lands in Burke and Divide County:

Burke County, North Dakota the pipeline crosses:

- Township 162N, Range 93W, Section 9
- Township 162N, Range 94W, Sections 10, 12, and 16

Divide County, North Dakota the pipeline crosses:

- Township 161N, Range 100W, Section 1
- Township 162N, Range 95W, Section 16

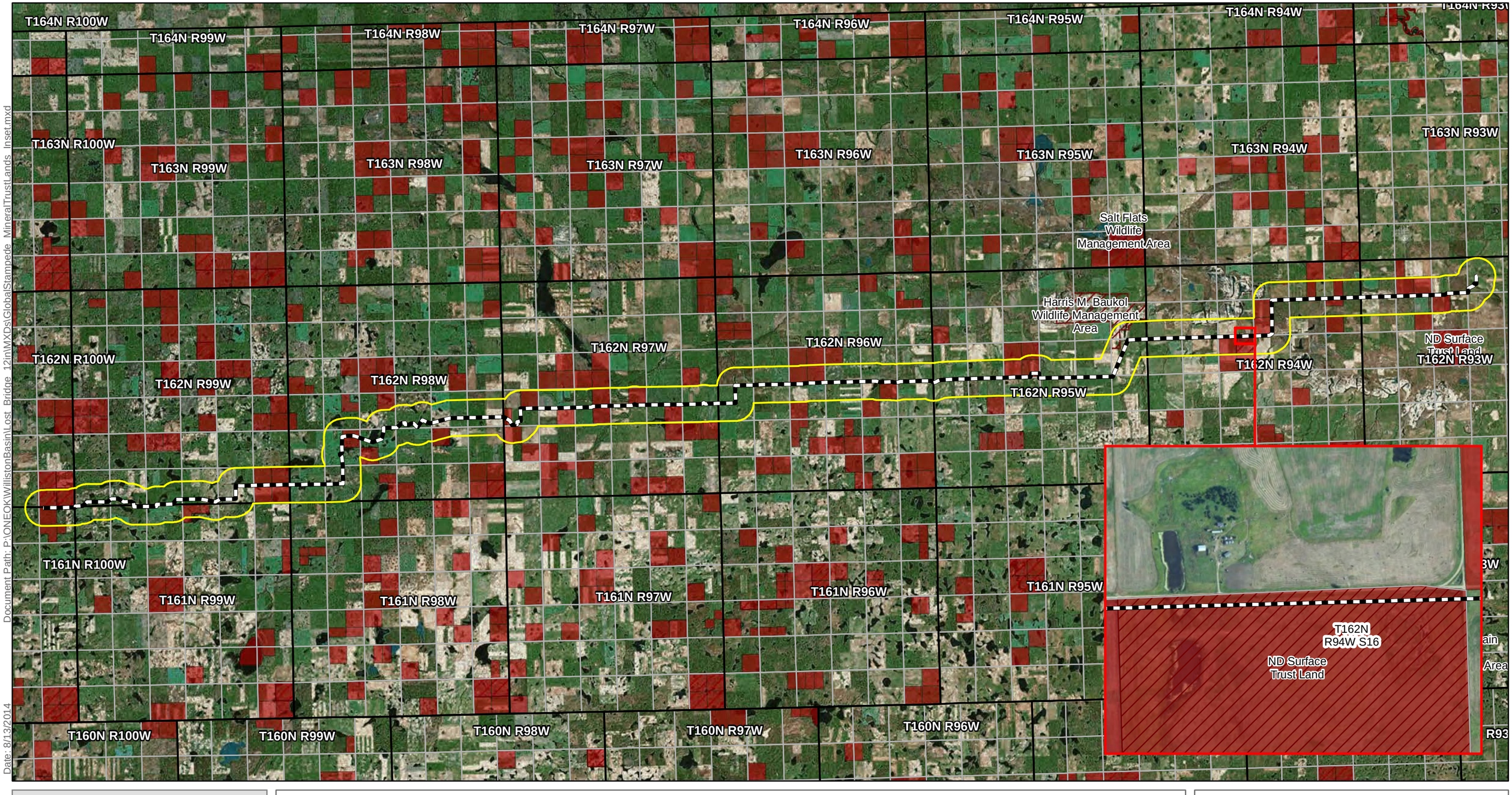
- Township 162N, Range 96W, Sections 16 and 23
- Township 162N, Range 97W, Sections 19, 20, 21, 22, and 23
- Township 162N, Range 98W, Section 29
- Township 162N, Range 99W, Section 36

The purpose of this consultation is to seek your concurrence with this analysis. This information will be included in a North Dakota Public Service Commission application for the Project. For your convenience, please refer to the attached map and shape files, which depicts the Project corridor and State Mineral Trust Lands.

E3 has been retained by MMC 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,

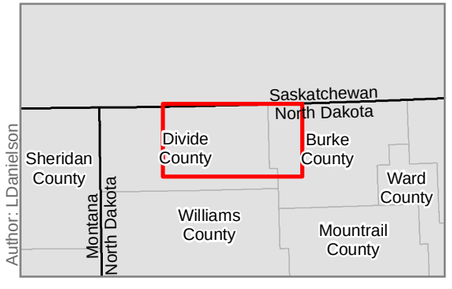
Katie Schmidt, EIT
Senior Consultant
E3 Environmental, LLC
kschmidt@go2e3.com
O: 651.282.0652
M: 651.216.6881
871 Jefferson Avenue
St. Paul, MN 55102
www.go2e3.com



Document Path: P:\ONEOK\WillistonBasin\Lost Bridge 12in\MXDs\GlobalStampede_MineralTrustLands_Inset.mxd

Date: 8/13/2014

Author: LDanielson



- Pipeline
- Corridor (1 Mile)
- Mineral Trust Land
- State Land

N

E3 Environmental
Enhancing Execution with Experience

0 1.75 3.5 7 Miles

1:160,500

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline

ND Mineral Trust Lands

Divide and Burke Counties, ND

North Dakota State Historic Preservation Office

Constulation

STATE HISTORICAL SOCIETY OF NORTH DAKOTA

November 4, 2014

Ms. Chris Schmidt, Consultant
E3 Environmental, LLC
871 Jefferson Avenue
St. Paul, MN 55102

ND SHPO REF.: 14-1626A PSC Case No.PU-14-223 "Addendum to a Class I and Class III Cultural Resource Inventory of the Meadowlark Midstream Company Global Stampede Pipeline, Burke and Divide Counties, North Dakota, for Pipeline Alignment Reroutes"

Dear Mr. Schmidt,

We reviewed ND SHPO REF.: 14-1626A PSC Case No.PU-14-223 "Addendum to a Class I and Class III Cultural Resource Inventory of the Meadowlark Midstream Company Global Stampede Pipeline, Burke and Divide Counties, North Dakota, for Pipeline Alignment Reroutes," and find the report acceptable.

We concur with a "No Significant Sites" determination for the project, provided the project remains as described and mapped in your above-captioned report dated October 22, 2014.

Thank you for the opportunity to review this project. If you have questions please contact Susan Quinnell at squinnell@nd.gov or (701) 328-3576.

Sincerely,

Merlan E. Paaverud, Jr.
Director, State Historical Society of North Dakota

October 22nd, 2014

Paul Picha
Chief Archaeologist
State Historical Society of North Dakota
Archeology & Historic Preservation Division
North Dakota Heritage Center
612 East Boulevard Avenue
Bismarck, ND 58505-0830

RE: Addendum to A Class I and Class III Cultural Resource Inventory of the Meadowlark Midstream Company Global Stampede Pipeline, Burke and Divide Counties, North Dakota, for Pipeline Alignment Reroutes

Dear Mr. Picha,

Meadowlark Midstream Company, LLC (MMC), a wholly owned subsidiary of Summit Midstream Partners, LLC, is proposing the construction of the Global Stampede Pipeline Project (Project). This Project includes the construction of a 46-mile crude oil transmission pipeline; as such the Project is subject to the North Dakota Public Service Commissions (PSC) Siting Act. The Project will be located in Burke and Divide Counties, North Dakota. E3 Environmental, LLC (E3), MMC's Environmental Consultant, is preparing the required application materials for the ND PSC; a cultural resource inventory is a required part of this filing. On August 29, 2014, the North Dakota State Historical Preservation Office (ND SHPO) provided concurrence with the findings and recommendations of the original Class I and Class III Cultural Resource Inventory for this Project (NDSHPO REF.: 14-1626). To meet the Project objectives, the alignment of the proposed Project has been altered resulting in the need for an additional Cultural Resource Inventory.

E3 on the behalf of MMC submits the enclosed report titled *Addendum to A Class I and Class III Cultural Resource Inventory of the Meadowlark Midstream Company Global Stampede Pipeline, Burke and Divide Counties, North Dakota for Pipeline Alignment Reroutes* (Report). This Report, prepared by SWCA Environmental Consultants (SWCA), documents the results of the cultural resource inventory conducted for the proposed Project in support of reroutes to the proposed Global Stampede pipeline alignment and supplements the previously MMC submitted report: *A Class I and Class III Cultural Resource Inventory of the Meadowlark Midstream Company Global Stampede Pipeline, Burke and Divide Counties, North Dakota* for which compliance was received from on August 29, 2014.

Three (3) previously recorded cultural resources were revisited during field work for the current Project. They are described below:

32BK68: Great Northern Railroad – Recommended Eligible
32DV143: Homestead, Cultural Material Scatter – Recommended Not Eligible
32DV144: Cultural Material Scatter – Recommended Not Eligible

E3 ENVIRONMENTAL
871 Jefferson Avenue
St. Paul, MN 55102

Of the resources outlined above, all but site 32BK68 (Great Northern Railroad) are recommended not eligible for the NRHP, and therefore no further work is necessary. Portions of site 32BK68 have been eligible for the NRHP. Therefore, SWCA and E3 recommends that MMC avoids site 32BK68 through the use of a horizontal directional drill.

One (1) newly-recorded isolated find consisting of a historic automobile body (32 DVX435) was discovered during the Project, and is recommended not eligible and therefore no further work is necessary.

In addition, Nine (9) previously recorded site leads which crossed the Project were revisited but not found during fieldwork. They are described below:

32BKX776: Unknown/Site Lead – Unevaluated
32DVX205: Unknown/Site Lead – Unevaluated
32DVX206: Unknown/Site Lead – Unevaluated
32DVX214: Cultural Material Scatter/Site Lead - Unevaluated
32DVX219: Cultural Material Scatter/Site Lead – Unevaluated
32DVX220: Cultural Material Scatter/Site Lead – Unevaluated
32DVX244: Cultural Material Scatter/Site Lead - Unevaluated
32DVX246: Cultural Material Scatter/Site Lead - Unevaluated
32DVX247: Cultural Material Scatter/Site Lead – Unevaluated

Should you have any project related questions or require additional information, please contact me at 651-282-0654 or by email at cschmidt@go2e3.com.

Sincerely,

Chris Schmidt, Associate Consultant
E3 Environmental, LLC
871 Jefferson Ave
St. Paul, MN 55102

Enclosures:

Addendum to A Class I and Class III Cultural Resource Inventory of the Meadowlark Midstream Company Global Stampede Pipeline, Burke and Divide Counties, North Dakota for Pipeline Alignment Reroutes (1 Copy)

cc: Jason Panek, Meadowlark Midstream Company, LLC
Jolene Schleicher, SWCA Environmental Consultants
E3 Project Files

STATE HISTORICAL SOCIETY OF NORTH DAKOTA

August 29, 2014

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

ND SHPO REF.: 14-1626 PSC Case No.?? "A Class III Cultural Resource Inventory of the Meadowlark Midstream Company Global Stampede Pipeline, Burke and Divide Counties, North Dakota"

Dear Ms. Schmidt,

We reviewed ND SHPO REF.: 14-1626 PSC Case No.?? "A Class III Cultural Resource Inventory of the Meadowlark Midstream Company Global Stampede Pipeline, Burke and Divide Counties, North Dakota," and find the report acceptable.

We concur with a "No Significant Sites" determination for the project, provided the project remains as described and mapped in your above-captioned report dated July, 2014.

Thank you for the opportunity to review this project. If you have questions please contact Susan Quinnell at squinnell@nd.gov or (701) 328-3576.

Sincerely,

Merlan E. Paaverud, Jr.
Director, State Historical Society of North Dakota

August 26th, 2014

Paul Picha
Chief Archaeologist
State Historical Society of North Dakota
Archeology & Historic Preservation Division
North Dakota Heritage Center
612 East Boulevard Avenue
Bismarck, ND 58505-0830

RE: A Class I and Class III Cultural Resource Inventory of the Meadowlark Midstream Company Global Stampede Pipeline, Burke and Divide Counties, North Dakota

Dear Mr. Picha,

Meadowlark Midstream Company, LLC (MMC), a wholly owned subsidiary of Summit Midstream Partners, LLC, is proposing the construction of the Global Stampede Pipeline Project (Project). This Project includes the construction of a 46.1-mile crude oil transmission pipeline; as such the Project is subject to the North Dakota Public Service Commissions (PSC) Siting Act. The Project will be located in Burke and Divide Counties, North Dakota. E3 Environmental, LLC (E3), MMC's Environmental Consultant, is preparing the required application materials for the ND PSC; a cultural resource inventory is a required part of this filing.

MMC submits the enclosed report titled *A Class I and Class III Cultural Resource Inventory of the Meadowlark Midstream Company Global Stampede Pipeline, Burke and Divide Counties, North Dakota* (Report). This Report, prepared by SWCA Environmental Consultants (SWCA), documents the results of the cultural resource inventory conducted for the proposed Project.

Ten (10) previously recorded cultural resources were revisited but not found during field work. They are described below:

32BK12: Quarry Mine - Unevaluated
32BKX776: Unknown/Site Lead – Unevaluated
32DVX206: Unknown/Site Lead – Unevaluated
32DVX214: Cultural Material Scatter/Site Lead - Unevaluated
32DVX219: Cultural Material Scatter/Site Lead - Unevaluated
32DVX220: Cultural Material Scatter/Site Lead - Unevaluated
32DVX243: Cultural Material Scatter/Site Lead - Unevaluated
32DVX244: Cultural Material Scatter/Site Lead - Unevaluated
32DVX246: Cultural Material Scatter/Site Lead - Unevaluated
32DVX247: Cultural Material Scatter/Site Lead – Unevaluated

E3 ENVIRONMENTAL
871 Jefferson Avenue
St. Paul, MN 55102

Fourteen (14) cultural resources were newly recorded and the sites are described below respectively:

32BK68: Great Northern Railroad – Recommended Eligible
32BK155: Depression, Foundation, Cultural Material Scatter – Not Eligible
32BK156: Cultural Material Scatter – Not Eligible
32DV141: Cultural Material Scatter – Not Eligible
32DV142: Buildings, Cultural Material Scatter – Not Eligible
32DV143: Homestead, Cultural Material Scatter – Not Eligible
32BK157: Cultural Material Scatter – Not Eligible
32DV144: Cultural Material Scatter – Not Eligible
32DV145: Cultural Material Scatter – Not Eligible
32BKX1003: Isolated Find/Farm Equipment – Not Eligible
32DVX432: Isolated Find/Farm Equipment – Not Eligible
32BKX1004: Isolated Find/Farm Equipment – Not Eligible
32DVX433: Isolated Find/Wagon – Not Eligible
32DVX434: Isolated Find/Farm Equipment – Not Eligible

Of the resources outlined above, all but site 32BK68 (Great Northern Railroad) are recommended not eligible for the NRHP, and therefore no further work is necessary. Portions of site 32BK68 have been eligible for the NRHP. Therefore, SWCA and E3 recommends that MMC avoids site 32BK68 through the use of a horizontal directional drill.

Should you have any project related questions or require additional information, please contact me at 651-282-0652 or by email at kschmidt@go2e3.com.

Sincerely,

Katie Schmidt

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

Enclosures:

A Class I and Class III Cultural Resource Inventory of the Meadowlark Midstream Company Global Stampede Pipeline, Burke and Divide Counties, North Dakota (1 Copy)

cc: Jason Panek, Meadowlark Midstream Company, LLC
Jolene Schleicher, SWCA Environmental Consultants
E3 Project Files

North Dakota State Public Service Commission: Reclamation Division Constulation

Chris Schmidt

To: Katie Schmidt
Subject: RE: Proposed Global Stampede Pipeline route

From: Deutsch, James R. [mailto:jdeutsch@nd.gov]
Sent: Tuesday, August 26, 2014 2:52 PM
To: Fahn, Patrick J.
Cc: Katie Schmidt
Subject: FW: Proposed Global Stampede Pipeline route

Pat,

Attached is the letter and map that I received from Ms. Schmidt about the proposed pipeline route and my response to her. As we discussed, I believe you should respond to her question about any restrictions on constructing the pipeline through the area that may have been disturbed for overburden removal for BNI's coal mining activities in the late 1970's.

Thanks,

Jim

From: Katie Schmidt
Sent: Tuesday, August 26, 2014 2:51 PM
To: Deutsch, James R.
Subject: RE: Proposed Glodbal Stampede Pipeline route

Sounds good, please note we are preparing a Consolidated Application for submittal to the ND PSC in accordance with the Siting Act. Please let Mr. Fahn know that if he has any questions he can reach me directly.

Thanks-Katie

Katie Schmidt, EIT
Senior Consultant
E3 Environmental, LLC
kschmidt@go2e3.com
O: 651.282.0652
M: 651.216.6881

E3 ENVIRONMENTAL
Enhancing Execution with Experience

From: Deutsch, James R. [mailto:jdeutsch@nd.gov]
Sent: Tuesday, August 26, 2014 2:48 PM
To: Katie Schmidt
Subject: RE: Proposed Glodbal Stampede Pipeline route

Katie,

I will be forwarding your question to Patrick Fahn who is the Director of Compliance and Competitive Markets at PSC. He carries out technical reviews of pipeline siting applications and makes recommendations to the Commission on these matters.

Jim

From: Katie Schmidt [mailto:KSchmidt@go2e3.com]
Sent: Tuesday, August 26, 2014 2:22 PM
To: Deutsch, James R.
Subject: RE: Proposed Glodbal Stampede Pipeline route

Thank you for your quick response. Are there any restrictions or specific concerns your agency may have with proceeding with the construction of this pipeline project through this area?

Katie

Katie Schmidt, EIT
Senior Consultant
E3 Environmental, LLC
kschmidt@go2e3.com
O: 651.282.0652
M: 651.216.6881

From: Deutsch, James R. [mailto:jdeutsch@nd.gov]
Sent: Tuesday, August 26, 2014 2:16 PM
To: Katie Schmidt
Subject: Proposed Glodbal Stampede Pipeline route

Ms. Schmidt,

Attached is a copy of the letter that is being mailed to you today in response to your August 19th letter about coal mining in the NE¼ of Section 16, T162N, R94W, in Burke County. It appears about 1,000 feet along the proposed Global Stampede Pipeline route in the NE¼NE¼ may have been affected by overburden removal when coal mining occurred in the late 1970's. I checked our records for that maps that may have depicted the actual overburden removal boundary, but did not find a map with that much detail.

Please contact me if you have questions.

Jim Deutsch
Director, Reclamation and AML Divisions
North Dakota Public Service Commission
(701) 328-2251

Public Service Commission
State of North Dakota

COMMISSIONERS
Brian P. Kalk
Randy Christmann
Julie Fedorchak

Executive Secretary
Darrell Nitschke

600 East Boulevard, Dept. 408
Bismarck, North Dakota 58505-0480
Web: www.psc.nd.gov
E-mail: ndpsc@nd.gov
Phone: 701-328-2400
ND Toll Free: 1-877-245-6685
Fax: 701-328-2410
TDD: 800-366-6888 or 711

August 26, 2014

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

Dear Ms. Schmidt:

This is in response to your inquiry about past mining activities along the proposed Global Stampede Pipeline route in the NE¼ of Section 16, T162N, R94W, in Burke County south of Larson, ND. Part of this quarter section was mined by BNI Coal, Ltd (formerly Baukol-Noonan, Inc.) in the late 1970's and it appears the actual surface mine pits may have extended into the proposed pipeline right-of-way in much of the NE¼NE¼ of Section 16. While the mined area has been reclaimed, including the replacement of the topsoil and subsoil that was saved prior to mining, this area may be subject to future settling.

While it is unlikely that major stability problems will occur in this area, some differential settling is possible. Since the proposed pipeline route is on the border of the area that was mined, it is suggested that you conduct soil probing/geotechnical testing to determine the actual limits of the mine disturbance in the NE¼NE¼. Also, it should be noted that the land just across the east-west section line road (southern portion of the SE¼ of Section 9) was also mined by BNI Coal.

Also, I compared the route of the proposed pipeline to our inventory of abandoned surface and underground coal mines in North Dakota and no **known** abandoned underground mines occur along the route. The route appears close to a portion of an obvious abandoned surface mine in Section 13, T162N, R95W, but I assume the proposed pipeline route avoids that area.

Please contact me if you have any questions.

Sincerely,

James R. Deutsch
Director, Reclamation and
Abandoned Mine Lands Divisions

Minedata/GenCorr/2014/Larson_Mine_pipeline_ltr_8-26-14.docx

August 19, 2014

Mr. James Deutsch, Director
Reclamation Division
North Dakota Public Service Commission
600 East Boulevard, Dept. 408
Bismarck, ND 58503-0480

RE: Global Stampede Pipeline Project Consultation Letter

Mr. Deutsch,

Meadowlark Midstream Company, LLC (MMC), a wholly owned subsidiary of Summit Midstream Partners, LLC, is proposing the construction of the Global Stampede Pipeline Project (Project). The proposed Project is a new 46.1-mile; 10-inch diameter Crude Oil Pipeline that will originate 9.5 miles SE of Fortuna, ND at Meadowlark Midstream Company's Divide Pump Station and will terminate at the Basin Transload Rail Facility approximately 2 miles SE of Columbus, ND. Pipeline construction activities would typically occupy a 110-foot right-of-way. Following construction, the pipeline would be operated within a 25-foot permanent easement. Pipeline construction involves temporary impacts, with a post-construction restoration standard of restoring disturbed areas to their original pre-construction condition.

The location of the proposed Project is described below and depicted on the attached map.

<u>Divide County, North Dakota the pipeline crosses:</u>

- Township 161N, Range 100W, Section 1
- Township 161N, Range 99W, Sections 4, 5, and 6
- Township 162N, Range 99W, Sections 31, 32, 33, 34, 35, and 36
- Township 162N, Range 98W, Sections 21, 22, 23, 24, 28, 29, 31, and 32
- Township 162N, Range 97W, Sections 19, 20, 21, 22, 23, and 24
- Township 162N, Range 96W, Sections 14, 15, 16, 19, 20, 21, 23, and 24
- Township 162N, Range 95W, Sections 13, 16, 17, 18, 19, 21, 22, 23, and 24

<u>Burke County, North Dakota the pipeline crosses</u>

- Township 162N, Range 94W, Sections 10, 11, 12, 15, 16, 17, and 18
- Township 162N, Range 93W, Sections 3, 4, 7, 8, and 9

E3 ENVIRONMENTAL
871 Jefferson Avenue
St. Paul, MN 55102

This Project is subject to the North Dakota Public Service Commission's siting requirements as set forth in the Energy Transmission Facility Siting Act (Act). In accordance with this Act, Project consultations were initiated with other state agencies including the North Dakota State Lands-School Trust group. In this consultation, it was identified that portions of Section 16, Township 162, Range 94 have been utilized for coal mining. It was recommended that your group be contacted regarding these activities and potential impacts these activities may have to the proposed Project corridor and route (see attached map.)

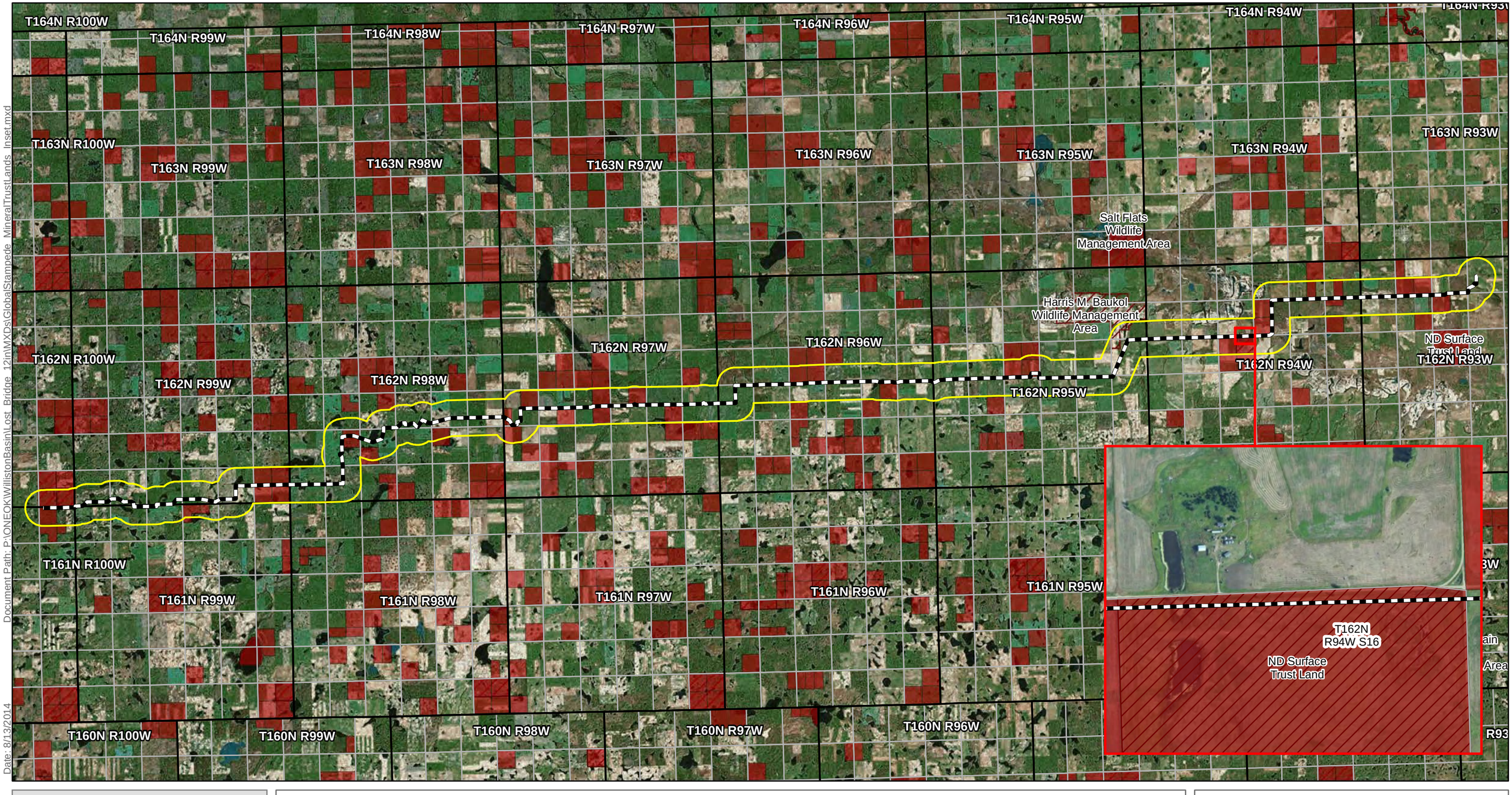
E3 has been retained by MMC to provide environmental consulting support for this Project. Should you have any questions or require additional information, please contact me at 651-282-0652 or kschmidt@go2e3.com.

Sincerely,

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

Enclosures: Project Map

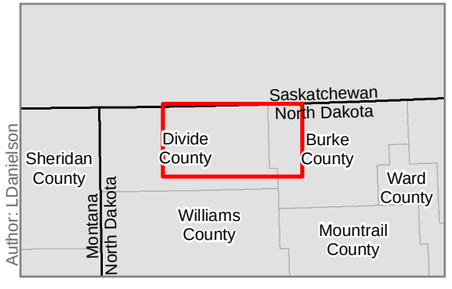
cc: E3 Project Files



Document Path: P:\ONEOK\WillistonBasin\Lost Bridge 12in\MXDs\GlobalStampede_MineralTrustLands_Inset.mxd

Date: 8/13/2014

Author: LDanielson



- Pipeline
- Corridor (1 Mile)
- Mineral Trust Land
- State Land

N

E3 Environmental
Enhancing Execution with Experience

0 1.75 3.5 7 Miles

1:160,500

Map not to scale, for environmental review purposes only.

Meadowlark Midstream Company, LLC

Global Stampede Pipeline

ND Mineral Trust Lands

Divide and Burke Counties, ND

Appendix D

Natural Resource Report

Natural Resources and Wetland Determination Report for the Global Stampede Pipeline, Divide and Burke Counties, North Dakota

Prepared for

E3 Environmental, LLC

On behalf of

Meadowlark Midstream, LLC

Prepared by

SWCA Environmental Consultants

November 2014

Natural Resources and Wetland Determination Report for the Global Stampede Pipeline, Divide and Burke Counties, North Dakota

Prepared for:

E3 Environmental, LLC
871 Jefferson Avenue
St. Paul, Minnesota 55102

On behalf of:

Meadowlark Midstream, LLC
1512 Larimer Street, Suite 540
Denver, Colorado 80202

Prepared by:

Kate Kenninger, M.S.
Natural Resource Specialist

Reviewed by:

Tom Furgason
Sr. Principal, Rocky Mountain Plains Offices

SWCA Environmental Consultants
116 North 4th Street, Suite 200
Bismarck, North Dakota 58501
Phone (701) 258-6622, Fax (701) 258-5957

SWCA Project No. 29469

November 5, 2014

TABLE OF CONTENTS

TABLE OF CONTENTS (continued)

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

1.0 INTRODUCTION

1.1 BACKGROUND

Meadowlark Midstream, LLC (Meadowlark) proposes to construct an approximately 46-mile-long pipeline in Divide and Burke Counties, North Dakota. SWCA Environmental Consultants (SWCA) conducted natural resources field surveys to identify exclusion and avoidance areas as specified in North Dakota Administrative Code 69-06-08-02 for the proposed Global Stampede pipeline project.

As proposed, the Global Stampede pipeline is approximately 46 miles long, spanning private and state lands in North Dakota (Appendix A). The project falls under the jurisdiction of the North Dakota Public Service Commission (NDPSC). E3 Environmental, LLC is assisting Meadowlark with their application to the NDPSC for a certificate of corridor compatibility and route permit for the project.

SWCA conducted field surveys, including reroutes, of a 150-foot-wide survey corridor (110-foot-wide right-of-way [ROW]) on June 16–19, September 30, and October 1–2, 2014, to determine the potential presence and extent of wetlands and waterbodies, including potentially jurisdictional waters of the U.S., within the proposed survey area. Concurrently with the wetland/waterbody determinations, SWCA conducted a cursory threatened and endangered species survey and habitat assessment; a tree, sapling, and shrub enumeration survey; and a noxious weed survey. Site layout maps of the survey area and natural resource features identified during the field surveys are provided in Appendix A.

This report outlines the methodology used by SWCA's ecologists to complete each of the aforementioned surveys. Additionally, this report presents the results of the completed field surveys and regulatory recommendations to facilitate compliance with the NDPSC and the U.S. Army Corps of Engineers (USACE) Nationwide Permit 12.

1.2 REGULATORY BACKGROUND

1.2.1 Clean Water Act, Section 404

Section 404 of the Clean Water Act prohibits the discharge of fill material into waters of the U.S., also known as jurisdictional waters, without a permit from the USACE.

1.2.2 USACE Nationwide Permit 12

The USACE Nationwide Permit 12 authorizes the construction of utility lines and associated facilities in waters of the U.S., provided the activity does not result in the permanent loss of greater than 0.5 acre of waters of the U.S., including wetlands, and meets the Nationwide Permit General Conditions.

Nationwide Permit 12 requires that the permittee submit a pre-construction notification prior to commencing construction if any of the following criteria are met.

- The activity involves mechanized land clearing in a forested wetland.
- A Section 10 permit is required to cross a navigable waterbody (Rivers and Harbors

Act).

- The utility line exceeds 500 feet in length through any single crossing of a water of the U.S.
- The utility line is placed within a jurisdictional area (i.e., water of the U.S.) and it runs parallel to a stream bed that is within that jurisdictional area.
- Discharges result in the permanent loss of greater than 0.1 acre of waters of the U.S.
- Permanent access roads are constructed above grade in waters of the U.S. for a distance of more than 500 feet.
- Permanent access roads are constructed in waters of the U.S. with impervious materials.

1.2.3 USACE Regional Conditions

The USACE has published several regional conditions for projects operating under Nationwide Permits in North Dakota (USACE 2013). The regional conditions apply to wetlands classified as "fens," waters adjacent to natural springs, the Missouri River, historic properties, and fish spawning areas.

2.0 METHODS

2.1 SURVEY AREA

Overall, northwest North Dakota is characterized by a moderate to cool climate, with cold, dry winters and mild to warm summers. Mean annual precipitation for the area is 14 to 16 inches (Bryce et al. 1998).

The proposed project is located in the Great Plains (level I) ecoregion. Further, the proposed project is located in the West-Central Semi-Arid Prairies and Temperate Prairies (level II) ecoregions, Northwestern Glaciated Plains and Aspen Parkland/Northern Glaciated Plains (level III) ecoregions, and the Northern Missouri Coteau and Northern Dark Brown Prairie (level IV) ecoregions. These ecoregions are characterized by glaciated topography, are hummocky, with stream drainages absent or uncommon and prairie pothole wetlands are present. Primary land uses are grazing, small grain agriculture, and recreation (Bryce et al. 1998). Figures 1 and 2 are overviews of the project area.

Figure 1. Project area overview depicting general topography towards eastern end of pipeline corridor, facing west.

Figure 2. Project area overview depicting general topography towards western end of pipeline corridor, facing east.

The inventoried area for the North Dakota portion of the project area discussed herein is situated on the U.S. Geological Survey Stampede (1959), Columbus (1959), Columbus SE (1982), Columbus SW (1982), Noonan SE (1959), Noonan SW (1959), Crosby SE (1959), Crosby SW (1959), and Colgan SE (1984), North Dakota, quadrangles. The proposed project corridor that was surveyed on June 16–19, September 30, and October 1–2, 2014, encompasses portions of 58 sections within 9 townships and ranges.

- Sections 4, 5, 6, Township (T) 161 North (N), Range (R) 99 West (W)
- Section 1, T161N, R100W
- Sections 3, 4, 7, 8, 9, T162N, R93W
- Sections 9, 10, 11, 12, 15, 16, 17, 18, T162N, R94W
- Sections 13, 15, 16, 17, 18, 19, 21, 22, 23, 24, T162N, R95W
- Sections 14, 15, 16, 19, 20, 21, 22, 23, 24, T162N, R96W
- Sections 19, 20, 21, 22, 23, 24, T162N, R97W
- Sections 21, 22, 23, 24, 28, 29, 31, 32, T162N, R98W
- Sections 31, 32, 33, 34, 35, 36, T162N, R99W

2.2 WETLANDS

National Wetland Inventory (NWI) mapping for the region indicates the presence of wetlands (U.S. Fish and Wildlife Service [USFWS] 2012a). SWCA ecologists conducted wetland determinations within the survey area based on the principles and guidelines provided in the 1987 *Corps of Engineers Wetlands Delineation Manual* (Manual) (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetlands Determination Manual: Great Plains Region Version 2.0* (Supplement) (USACE 2010). According to the Manual, an area is a wetland if three mandatory wetland indicators are present in a given area, with special exceptions. These criteria include the presence of hydrophytic vegetation and wetland hydrology. During wetland determinations SWCA recorded indicators of hydrology and hydrophytic vegetation. All wetlands and waterbodies geographically referenced within the survey area during field survey are depicted on the site layout maps in Appendix A.

2.2.1 Hydrophytic Vegetation

Ecologists recorded all plants within the vegetative community based on the respective stratum each species occupied. A tree is defined by the Supplement to be a woody-stemmed plant with a trunk diameter at breast height (DBH) of equal to or greater than 3 inches, regardless of height. The sapling and shrub stratum is defined by the Supplement to be composed of woody-stemmed plants with a trunk DBH of less than 3 inches, regardless of height. The herbaceous stratum includes all non-woody-stemmed plants regardless of height. Finally, the woody vine stratum includes all woody-stemmed vines, regardless of diameter.

SWCA recorded the binomial scientific name and percent cover of all plants within a 30-foot radius for the tree stratum, a 15-foot radius for the sapling/shrub stratum, a 5-foot radius for the herbaceous stratum, and a 30-foot radius for the woody vine stratum. SWCA ecologists noted each plant species' respective USFWS indicator status (i.e., upland [UPL], facultative upland [FACU], facultative [FAC], facultative wetland [FACW], and obligate [OBL]). In some instances the size and shape of the vegetative sampling plot was manipulated to better encompass each wetland or upland area, though the overall area assessed remained

unchanged. Vegetation communities met the hydrophytic vegetation criterion for wetlands if greater than 50% of dominant species had an indicator status of FAC, FACW, and OBL. SWCA also noted and geospatially referenced all populations of North Dakota state- or county-listed noxious weeds identified within the survey area.

2.2.2 Wetland Hydrology

A wetland was determined to contain wetland hydrology if at least one primary indicator or at least two secondary indicators of wetland hydrology were present, as defined by the Manual and Supplement. Common hydrologic indicators include the presence of surface water, high water table, soil saturation, water marks on trees or other objects, sediment deposits, water-stained leaves, and oxidized rhizospheres on living roots.

2.3 WATERBODIES

Waterbodies (i.e., ponds, creeks, streams, rivers) were identified by the presence of an ordinary high water mark (OHWM). Common identifiable indicators of an OHWM include open water or evidence of a clear, natural line visible on the bank; shelving; changes in soil characteristics; the destruction of terrestrial vegetation; 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 jurisdiction. Please note that the USACE has full discretion in determining the jurisdictional status of referenced wetlands and waterbodies.

SWCA classified streams as perennial, intermittent, or ephemeral based on field observations. During a typical year, a perennial stream contains flowing water year-round and the water table is located above the stream bed. Groundwater is the primary water source for stream flow while precipitation runoff is supplemental. Ecologists classified streams that showed significant flow during the field survey as perennial. Additionally, the U.S. Geological Survey topographic maps were used as reference.

An intermittent stream has flowing water for only portions of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

2.4 NOXIOUS WEED SURVEYS

SWCA conducted a noxious weed survey of all populations of North Dakota state- or county-listed noxious weeds within the project area.

2.5 TREE, SAPLING, AND SHRUB COUNT

SWCA ecologists determined the total number of trees, saplings, and shrubs present within the survey area using several different techniques depending on the type of woody vegetation habitat (i.e., forested upland, shrubland, or shelterbelt) encountered and the overall extent of each habitat within the ROW. The boundary of all forested upland, shrubland, and shelterbelt habitat was geographically referenced using a Trimble GeoXT series handheld global positioning system (GPS) unit. In forested upland and shrubland habitat, SWCA counted or estimated the number of all woody-stemmed vegetation with a DBH of ≥1 inch. In shelterbelt areas, all woody-stemmed vegetation, regardless of DBH, was inventoried via direct count. Ecologists taxonomically identified all recorded individuals to the species level within each habitat type.

2.6 WILDLIFE INCLUDING THREATENED AND ENDANGERED SPECIES

Prior to conducting field surveys, SWCA reviewed information obtained from the USFWS list of threatened and endangered species by North Dakota county (USFWS 2014) regarding the presence of threatened or endangered species that may occur within the survey area. This document does not represent a comprehensive survey, but rather acknowledges the past and/or current presence of listed species. The lack of discovery of threatened or endangered species does not signify their non-existence within the area, but only that no primary or secondary indications of these species were recorded. SWCA completed a random survey for all listed species and suitable habitat.

A line-of-sight binocular survey for raptor species was also conducted for a distance of approximately 0.5 mile. SWCA ecologists noted all wildlife observed during the field survey. Wildlife sightings can involve primary observations (i.e., actual sighting of an animal) or secondary observations (i.e., observation of scat, tracks, or fur deposits).

2.7 MAPPING

The boundaries of each wetland, waterbody, woody vegetation habitat, and noxious weed assemblage were geographically recorded using a Trimble GeoXT GPS unit. The aforementioned GPS unit is capable of recording geographic data with sub-meter accuracy. SWCA used Universal Transverse Mercator Zone 13 North as the projected coordinate system and North American Datum 1983 as the datum. ArcGIS v10.0 (ESRI Redlands, California) was used to analyze recorded features, calculate areas, and generate the maps provided in Appendix A. Please note that all data collected using the GPS unit, and displayed on the attached maps, are for review purposes only and do not represent a professional civil survey.

3.0 RESULTS

3.1 VEGETATION

During the field survey, SWCA ecologists identified four general types of vegetative communities within the survey area. These vegetative communities were classified as herbaceous upland, shrubland and upland woody vegetation, cropland, and palustrine emergent (PEM) wetland. PEM wetlands are characterized by the presence of herbaceous hydrophytic or submergent aquatic macrophytes. Photographs of the survey area are provided in Appendix C.

Vegetation communities met the hydrophytic vegetation criterion for wetlands if greater than 50% of dominant species had an indicator status of FAC, FACW, or OBL. The upland communities failed to meet at least one of the three assessed wetland criteria.

3.1.1 Herbaceous Upland

The herbaceous upland community consists of areas dominated by non-woody vegetation such as grasses and forbs. Herbaceous uplands observed were commonly comprised of smooth brome (*Bromus inermis*), western wheatgrass (*Pascopyrum smithii*), crested wheatgrass (*Agropyron cristatum*), Kentucky bluegrass (*Poa pratensis*), quackgrass (*Elymus repens*), alfalfa (*Medicago sativa*), yellow sweetclover (*Melilotus officinalis*), white sage (*Artemisia ludoviciana*), field sowthistle (*Sonchus arvensis*), curlycup gumweed (*Grindelia squarrosa*), common sunflower (*Helianthus annuus*), and white sweetclover (*Melilotus alba*).

3.1.2 Shrubland and Woody Vegetation

Shrubland communities occurring throughout the survey area consisted of upland areas dominated by woody-stemmed vegetation including silver buffaloberry (*Shepherdia argentea*) and western snowberry (*Symphoricarpos occidentalis*).

Forested upland vegetation consisted of green ash (*Fraxinus pennsylvanica*), boxelder (*Acer negundo*), American elm (*Ulmus americana*), eastern cottonwood (*Populus deltoids*), Siberian elm (*Ulmus pumila*), Siberian peashrub (*Caragana arborescens*), chokecherry (*Prunus virginiana*), silver buffaloberry, and western snowberry.

3.1.3 Cropland

Cropland was confirmed in the survey area and classified as canola (*Brassica napus*), hard red spring wheat (*Triticum aestivum*), and corn (*Zea mays*).

3.1.4 Hydrophytic Vegetation

Aquatic vegetation species confirmed during the survey included foxtail barley (*Hordeum jubatum*), short-awned foxtail (*Alopecurus aequalis*), creeping meadow-foxtail (*Alopecurus arundinaceus*), reed canarygrass (*Phalaris arundinacea*), prairie cordgrass (*Spartina pectinata*), common spikerush (*Eleocharis palustris*), water knotweed (*Polygonum amphibium*), rough barnyardgrass (*Echinochloa muricata*), Indian hemp (*Apocynum cannabinum*), western dock (*Rumex occidentalis*), golden dock (*Rumex fueginus*), sloughgrass (*Beckmannia syzigachne*), water hemlock (*Cicuta maculate*), common reed (*Phragmites*

australis), Baltic rush (*Juncus arcticus*), whitetop (*Scolochloa festucacea*), Dudley's rush (*Juncus dudleyi*), softstem bulrush (*Schoenoplectus tabernaemontani*), and broad-leaf cattail (*Typha latifolia*).

3.2 HYDROLOGY

Wetland communities observed during the determination effort displayed at least one primary or two secondary indicators of wetland hydrology, as defined by the Manual and Supplement. Upland communities either failed to display hydrologic indicators or failed to meet the hydrophytic vegetation criterion, as defined by the Manual and Supplement. Common indicators of wetland hydrology observed during field surveys include Surface Water (A1), Water Marks (B1), Sediment Deposits (B2), Drift Deposits (B3), Algal Mat or Crust (B4), Surface Soil Cracks (B6), Inundation Visible on Aerial Imagery (B7), Water-Stained Leaves (B9), Drainage Patterns (B10), Salt Crust (B11), Aquatic Invertebrates (B13), Saturation Visible on Aerial Imagery (C9), and Geomorphic Position (D2).

According to National Weather Service preliminary climatological data for Williston, North Dakota (approximately 45 miles south from the project area), 9.37 inches of precipitation were recorded from March 1 through October 2, 2014 (Table 1). This amount is 1.90 inches below normal for this time period.

Table 1. Monthly Recorded Rainfall at National Weather Service Station in Williston, North Dakota

Month	Recorded Precipitation (inches)	Normal Precipitation (inches)	Difference (inches)
March 2014	0.32	0.71	-0.39
April 2014	1.71	1.00	0.71
May 2014	1.62	1.92	-0.30
June 2014	1.44	2.52	-1.08
July 2014	0.66	2.54	-1.88
August 2014	2.24	1.45	0.79
September 2014	1.35	1.06	0.29
October 1–2, 2014	0.03	0.07	-0.04
Total	**9.37**	**11.27**	**-1.90**

Source: National Oceanic and Atmospheric Administration 2014

3.3 WETLANDS

SWCA recorded 111 PEM wetlands within the 150-foot survey area, totaling approximately 68.27 acres. Approximately 47.95 acres of PEM wetlands are proposed to be temporarily impacted in the 110-foot-wide construction ROW (Table 2). Twenty-four jurisdictional wetlands will be temporarily impacted; however, the USACE has the final authority to determine jurisdictional status.

Table 2. PEM Wetland Acreage within the Survey Area

Feature ID	Location	USACE Jurisdiction*	Total PEM Size (acres)	Temporarily Impacted Area within 110-foot-wide ROW (acres)	Length of Required Crossing (feet)
AWET1	Depression	Isolated	0.03	0.00	0.00
AWET2	Depression	Isolated	0.03	0.00	0.00
AWET3	Depression	Likely Jurisdictional	1.69	0.94	590.28
AWET4	Depression	Likely Jurisdictional	0.23	0.16	73.84
AWET5	Depression	Likely Jurisdictional	0.18	0.13	91.63
AWET6	Intermittent Drainage	Likely Jurisdictional	0.11	0.07	30.90
AWET7	Depression	Isolated	0.02	0.01	24.54
AWET8	Depression	Isolated	3.28	2.42	971.04
AWET9	Depression	Isolated	0.07	0.04	71.14
AWET10	Depression	Isolated	0.99	0.75	523.88
AWET11	Depression	Isolated	0.20	0.13	92.37
AWET12	Depression	Isolated	0.11	0.06	111.75
AWET13	Depression	Isolated	0.07	0.07	297.06
AWET14	Intermittent Drainage	Likely Jurisdictional	0.12	0.08	48.11
AWET15	Depression	Likely Jurisdictional	0.07	0.05	33.12
AWET16	Depression	Isolated	0.04	0.04	172.37
AWET17	Depression	Isolated	0.04	0.01	49.92
AWET18	Depression	Isolated	0.34	0.31	506.67
AWET19	Depression	Isolated	0.55	0.47	476.47
AWET20	Depression	Likely Jurisdictional	0.46	0.40	202.09
AWET21	Depression	Isolated	0.01	0.01	76.53
AWET22	Depression	Isolated	0.23	0.17	93.56
AWET23	Depression	Isolated	0.11	0.06	85.35
AWET24	Depression	Isolated	0.05	0.03	82.96
AWET25	Intermittent Drainage	Likely Jurisdictional	0.25	0.06	39.63
AWET26	Intermittent Drainage	Likely Jurisdictional	0.30	0.24	292.01
AWET27	Depression	Likely Jurisdictional	0.15	0.00	0.00
AWET28	Intermittent Drainage	Likely Jurisdictional	0.34	0.26	183.77
AWET29	Intermittent Drainage	Likely Jurisdictional	0.58	0.37	279.40
AWET30	Intermittent Drainage	Likely Jurisdictional	0.69	0.42	188.80
AWET31	Depression	Isolated	0.31	0.31	168.23
AWET32	Depression	Likely Jurisdictional	0.14	0.13	65.05
AWET33	Depression	Isolated	2.65	1.22	632.85
AWET34	Depression	Isolated	0.57	0.29	131.45
AWET35	Depression	Isolated	0.09	0.02	60.60

Feature ID	Location	USACE Jurisdiction*	Total PEM Size (acres)	Temporarily Impacted Area within 110-foot-wide ROW (acres)	Length of Required Crossing (feet)
AWET36	Intermittent Drainage	Likely Jurisdictional	0.71	0.59	317.58
AWET37	Depression	Isolated	0.19	0.04	127.02
AWET38	Depression	Isolated	0.53	0.40	256.25
AWET39	Depression	Isolated	1.33	1.02	712.90
AWET40	Depression	Isolated	0.06	0.00	0.00
AWET41	Depression	Isolated	2.28	1.72	768.98
AWET42	Depression	Isolated	0.23	0.19	125.80
AWET43	Depression	Isolated	0.45	0.20	218.94
AWET44	Depression	Isolated	0.37	0.37	367.01
AWET45	Intermittent Drainage	Isolated	0.17	0.17	59.60
AWET46	Depression	Isolated	0.78	0.58	351.23
AWET47	Depression	Isolated	2.06	1.12	458.61
AWET48	Depression	Isolated	0.17	0.00	0.00
BWET1	Depression	Isolated	0.26	0.19	78.95
BWET2	Depression	Isolated	6.56	4.73	2091.56
BWET3	Depression	Isolated	2.51	1.90	773.16
BWET4	Depression	Isolated	0.44	0.31	159.84
BWET5	Depression	Isolated	0.12	0.08	124.37
BWET6	Floodplain	Likely Jurisdictional	1.24	0.88	531.17
BWET7	Depression	Isolated	0.48	0.34	199.24
BWET8	Depression	Isolated	5.06	3.69	1520.04
BWET9	Depression	Isolated	2.45	1.84	749.74
BWET10	Depression	Isolated	1.40	1.04	437.26
BWET11	Intermittent Drainage	Likely Jurisdictional	0.87	0.74	370.92
BWET12	Floodplain	Likely Jurisdictional	0.86	0.68	489.26
BWET13	Depression	Isolated	0.68	0.51	285.41
BWET14	Depression	Isolated	0.26	0.15	137.75
BWET15	Intermittent Drainage	Likely Jurisdictional	0.37	0.35	200.45
BWET16	Depression	Isolated	0.23	0.17	96.63
BWET17	Intermittent Drainage	Likely Jurisdictional	0.30	0.11	61.30
BWET18	Intermittent Drainage	Isolated	0.32	0.29	228.82
BWET19	Depression	Isolated	0.12	0.10	42.76
BWET20	Depression	Isolated	0.73	0.68	398.62
BWET21	Intermittent Drainage	Isolated	0.14	0.11	90.50
BWET22	Depression	Isolated	0.37	0.26	141.72
BWET23	Intermittent Drainage	Isolated	0.08	0.05	27.46

Feature ID	Location	USACE Jurisdiction*	Total PEM Size (acres)	Temporarily Impacted Area within 110-foot-wide ROW (acres)	Length of Required Crossing (feet)
BWET24	Depression	Isolated	0.41	0.41	366.88
BWET25	Intermittent Drainage	Likely Jurisdictional	0.14	0.08	32.00
BWET26	Intermittent Drainage	Isolated	0.11	0.10	63.64
BWET27	Depression	Isolated	0.20	0.20	128.28
BWET28	Depression	Isolated	0.21	0.17	101.22
BWET29	Depression	Isolated	0.14	0.13	70.89
BWET30	Depression	Isolated	0.25	0.20	99.13
BWET31	Intermittent Drainage	Likely Jurisdictional	0.31	0.22	98.14
BWET32	Depression	Isolated	0.23	0.06	143.36
BWET33	Depression	Isolated	0.69	0.69	448.61
BWET34	Depression	Isolated	0.26	0.26	143.72
BWET35	Depression	Isolated	0.12	0.12	80.34
BWET36	Depression	Isolated	0.01	0.00	0.00
BWET37	Intermittent Drainage	Likely Jurisdictional	0.26	0.19	93.69
BWET38	Depression	Isolated	0.10	0.10	122.15
BWET39	Depression	Isolated	0.15	0.10	108.95
BWET40	Depression	Isolated	0.25	0.25	126.82
BWET41	Depression	Isolated	1.29	0.93	430.39
BWET42	Depression	Isolated	0.14	0.14	83.82
BWET43	Depression	Isolated	0.38	0.29	131.01
BWET44	Depression	Isolated	0.14	0.01	57.68
BWET45	Depression	Isolated	0.38	0.33	185.26
BWET46	Depression	Likely Jurisdictional	2.23	1.77	1431.18
BWET47	Depression	Isolated	0.71	0.58	670.56
BWET48	Depression	Isolated	0.49	0.19	347.72
BWET49	Depression	Isolated	0.29	0.05	108.20
BWET50	Depression	Isolated	0.15	0.06	114.29
BWET51	Depression	Isolated	0.94	0.71	300.10
BWET52	Intermittent Drainage	Isolated	0.12	0.00	0.00
BWET53	Depression	Isolated	0.02	0.00	0.00
BWET54	Depression	Isolated	0.33	0.26	125.51
BWET55	Depression	Isolated	0.45	0.04	243.65
BWET56	Depression	Isolated	1.12	0.79	346.28
BWET57	Depression	Isolated	2.23	1.40	745.15
BWET58	Depression	Isolated	0.15	0.00	0.00
BWET59	Intermittent Drainage	Isolated	0.45	0.29	161.71
BWET60	Depression	Isolated	0.08	0.06	147.63
BWET61	Depression	Isolated	0.99	0.70	410.58

Feature ID	Location	USACE Jurisdiction*	Total PEM Size (acres)	Temporarily Impacted Area within 110-foot-wide ROW (acres)	Length of Required Crossing (feet)
BWET62	Depression	Isolated	0.04	0.00	21.77
BWET63	Depression	Isolated	1.03	0.74	373.21
Total			**68.27**	**47.95**	

* The USACE has the final authority on the jurisdictional status of a waterbody.
PEM = palustrine emergent
ROW = right-of-way
USACE = U.S. Army Corps of Engineers

3.4 WATERBODIES

SWCA identified seven waterbodies during the field survey: four intermittent streams and three permanent waterbodies (Table 3). All seven waterbodies are considered to be likely jurisdictional due to the presence of an OHWM. Representative photographs of waterbodies delineated in the field are provided in Appendix C.

In addition, SWCA recorded 17 upland swales and five roadway ditches that are likely to contain flowing water during high rain events or spring run-off; however, no OHWM was present.

Table 3. Waterbody ID, Name, Classification, Acreages, and Jurisdictional Status

Waterbody ID	Waterbody Name	Classification	Total Size (acres)	Temporarily Impacted Area within 110-foot-wide ROW (acres)	Length in Construction ROW (feet)	Average Width of OHWM (feet)	USACE Jurisdictional Status*
ASTR19	Unnamed	Intermittent	0.32	0.23	131.72	3	Jurisdictional
BSTR1	Unnamed	Intermittent	0.14	0.10	51.08	5	Jurisdictional
BSTR2	Unnamed	Intermittent	0.16	0.10	117.06	5	Jurisdictional
BSTR4	Unnamed	Intermittent	0.16	0.02	12.59	4	Jurisdictional
BWB1	Unnamed	Permanent PEM*	3.16	1.85	751.85	0	Jurisdictional
BWB2	Unnamed	Permanent PEM*	1.85	0.72	317.81	0	Jurisdictional
BWB3	Unnamed	Permanent PEM*	0.11	0.05	166.85	0	Jurisdictional
Total			**5.90**	**3.07**			

* The USACE has the final authority on the jurisdictional status of a waterbody.
OHWM = ordinary high water mark
PEM = Perennial Emergent
ROW = right-of-way
USACE = U.S. Army Corps of Engineers

3.5 SOILS

Forty-one soil types are present in the project construction corridor, based on Natural Resources Conservation Service mapping (NRCS 2014; Appendix B). The project area analyzed for soils covers the 110-foot-wide construction corridor. Table 4 lists all soil units within the project area. The following soil component descriptions represent the most prevalent soil series found within the survey area (NRCS 2014).

Table 4. NRCS Derived Soil Series Present within the 110-foot-wide ROW

Soil Types	Slopes (%)	Acres within 110-foot-wide ROW	Percent within Map Unit
Williams-Zahl loams	3 to 6	132.22	21.48
Zahl-Williams-Zahill complex	6 to 9	57.00	9.26
Zahl-Williams loams	9 to 15	47.02	7.64
Zahl-Williams loams	6 to 9	40.34	6.55
Noonan-Niobell loams	0 to 6	38.44	6.24
Harriet, Regan, and Stirum soils	0 to 2	33.30	5.41
Miranda-Noonan loams	0 to 3	33.01	5.36
Williams-Niobell loams	0 to 3	21.87	3.55
Williams-Bowbells loams	0 to 3	20.13	3.27
Williams-Niobell loams	3 to 6	19.77	3.21
Farnuf-Alkabo silt loams	0 to 3	17.54	2.85
Zahl-Williams-Vallers loams	0 to 60	15.08	2.45
Portal-Lihen fine sandy loams	0 to 2	14.24	2.31
Noonan-Niobell-Tonka complex	0 to 3	13.33	2.16
Lihen-Blanchard loamy fine sands	0 to 6	12.44	2.02
Williams-Zahl-Parnell complex	0 to 9	11.30	1.84
Noonan-Niobell-Williams loams	0 to 6	9.86	1.60
Farnuf-Sakakawea loams	2 to 6	9.37	1.52
Zahl-Max-Parnell complex	0 to 35	8.81	1.43
Tonka silt loam	0 to 1	7.75	1.26
Haplustolls-Ustorthents complex, reclaimed	0 to 6	5.85	0.95
Williams-Zahl complex	3 to 6	5.74	0.93
Straw loam	0 to 2	5.60	0.91
Vallers loam, saline	0 to 1	5.14	0.84
Niobell-Noonan-Tonka complex	0 to 6	4.76	0.77
Parshall-Tally-Dooley fine sandy loams	0 to 6	4.34	0.71
Farnuf loam	0 to 2	4.09	0.67
Wabek-Lehr complex	2 to 6	3.23	0.53

Soil Types	Slopes (%)	Acres within 110-foot-wide ROW	Percent within Map Unit
Wabek-Lehr-Appam complex	0 to 6	2.12	0.34
Parshall fine sandy loam	0 to 6	1.93	0.31
Dooley sandy loam	1 to 3	1.92	0.31
Southam silt loam	0 to 1	1.60	0.26
Hamerly-Tonka complex	0 to 3	1.21	0.20
Sakakawea-Farnuf loams	6 to 9	1.20	0.19
Parnell silty clay loam	0 to 1	1.14	0.19
Wabek-Appam complex	6 to 35	0.97	0.16
Vallers, saline-Parnell complex	0 to 1	0.93	0.15
Ustorthents-Haplustolls complex, reclaimed	6 to 9	0.50	0.08
Williams-Zahl-Lihen complex	6 to 15	0.31	0.05
Vallers-Parnell complex	0 to 1	0.13	0.02
Southam silty clay loam	0 to 1	0.03	<0.01
Total		**615.56**	**100.00**

Source: Natural Resources Conservation Service 2014.
ROW = right-of-way

3.5.1 Williams

The Williams series consists of very deep, slowly permeable, well-drained soils found on glacial till plains and moraines with slopes at approximately 0 to 35 percent. The mean annual precipitation found throughout the spatial extent of this soil type is approximately 14 inches and mean annual air temperature is approximately 42 degrees Fahrenheit (°F). This soil type is largely used for cultivation. Native vegetation species common to this soil type include western wheatgrass, needle and thread (*Hesperostipa comata*), blue grama (*Bouteloua gracilis*), and green needlegrass (*Nassella viridula*) (NRCS 2014).

3.5.2 Zahl

The Zahl series consists of very deep, slowly permeable, well-drained soils found on glacial till plains, moraines, and valley side slopes at approximately 1 to 60 percent. The mean annual precipitation found throughout the spatial extent of this soil type is approximately 14 inches and mean annual air temperature is approximately 40°F. This soil type is largely used for rangeland foraging. Native vegetation species common to this soil type include western wheatgrass, little bluestem (*Schizachyrium scoparium*), and needle and thread (NRCS 2014).

3.5.3 Zahill

The Zahill series consists of very deep, well-drained soils that formed in till and are found on till plains, hills, moraines and escarpments. Slopes are 0 to 65 percent. The mean annual precipitation found throughout the spatial extent of this soil type is approximately 13 inches and mean annual air temperature is approximately 42°F. This soil type is used in mainly range

and dryland crops. Native vegetation species common to this soil type include western wheatgrass, needle and thread, green needlegrass, little bluestem, prairie sandreed (*Calamovilfa longifolia*), bluebunch wheatgrass (*Pseudoroegneria spicata*), prairie junegrass (*Koeleria macrantha*), blue grama, sedges (*Carex* sp.), and other forbs (NRCS 2014).

3.5.4 Noonan

The Noonan series consists of very deep, well-drained or moderately well-drained soils formed in till. Permeability is moderate on the surface and slow in the Btn horizon. These soils are on till plains and uplands and have slopes of 0 to 15 percent. The mean annual precipitation found throughout the spatial extent of this soil type is 14 inches and mean annual air temperature is 39°F. These soils are used for spring-seeded small grains and pasture. Native vegetation includes western wheatgrass and blue grama (NRCS 2014).

3.5.5 Niobell

The Niobell series consists of very deep, well-drained or moderately well-drained soils that formed in till. Permeability is moderate on the surface and slow in the Btn horizon. These soils are on till plains and uplands and have slopes of 0 to 9 percent. The mean annual precipitation found throughout the spatial extent of this soil type is 14 inches and the mean annual air temperature is 39°F. These soils are used for spring-seeded small grains and pasture. Native vegetation includes green needlegrass, western wheatgrass, needle and thread, blue grama, Sandberg bluegrass (*Poa secunda*), some upland sedges, and a variety of forbs (NRCS 2014).

3.6 TREE, SAPLING, AND SHRUB COUNT

During SWCA's field survey, 35 upland tree and shrubland areas were geographically referenced within the survey area. Table 5 summarizes the number of trees estimated to be impacted by the project as currently proposed. The NDPSC requires a 2:1 post- to pre-construction mitigation for all trees, saplings, and shrubs impacted during the construction of the proposed pipeline. Therefore, SWCA estimates approximately 502 2-year-old sapling individuals would need to be replanted in order to fulfill the 2:1 mitigation requirement.

Table 5. Tree, Sapling, and Shrub Count

Woody Vegetation (WV) ID	Species	Type	Number of Trees*		Estimated Mitigation Commitment
			150-foot-wide Survey Corridor	110-foot-wide Construction ROW	
AWV1	green ash (*Fraxinus pennsylvanica*)	Tree Belt	20	0	0
AWV2	green ash	Natural	6	0	0
AWV3	green ash	Natural	10	0	0
AWV4	Siberian peashrub (*Caragana arborescens*)	Tree Row	50	17	34
AWV5	eastern cottonwood (*Populus deltoids*)	Tree	1	0	0
AWV6	green ash	Natural	2	0	0
AWV7	Russian olive (*Elaeagnus angustifolia*)	Natural	8	8	16
AWV8	peachleaf willow (*Salix amygdaloides*)	Natural	1	0	0
AWV9	Russian olive	Natural	1	0	0
AWV10	chokecherry (*Prunus virginiana*)	Natural	10	7	14
AWV11	green ash chokecherry	Natural	1 30	1 30	2 60
AWV12	chokecherry	Natural	40	24	48
AWV13	blue spruce (*Picea pungens*) lilac (*Syringa* spp.)	Planted	30 40	0 0	0 0
AWV14	green ash chokecherry	Natural	4 16	0 1	0 2
AWV15	ponderosa pine (*Pinus ponderosa*)	Planted	15	10	20
BWV1	eastern cottonwood	Natural	1	0	0
BWV2	green ash Siberian peashrub	Planted	5 13	2 6	4 12
BWV3	Russian olive	Planted	20	16	32
BWV4	Siberian elm (*Ulmus pumila*)	Planted	10	8	16

Woody Vegetation (WV) ID	Species	Type	Number of Trees*		Estimated Mitigation Commitment
			150-foot-wide Survey Corridor	110-foot-wide Construction ROW	
BWV5	green ash Siberian peashrub	Planted	8 6	3 2	6 4
BWV6	Russian olive	Planted	28	21	42
BWV7	green ash	Planted	35	25	50
BWV8	chokecherry	Natural	3	3	6
BWV9	eastern cottonwood chokecherry	Planted	2 10	1 4	2 8
BWV10	green ash American plum (*Prunus americana*)	Planted	12 15	4 5	8 10
BWV11	chokecherry	Natural	5	0	0
BWV12	chokecherry	Natural	10	0	0
BWV13	boxelder (*Acer negundo*) chokecherry	Natural	45 7	0 0	0 0
BWV14	eastern cottonwood	Natural	3	2	4
BWV15	boxelder	Planted	42	36	72
BWV16	green ash American elm (*Ulmus americana*) boxelder Siberian peashrub	Planted	30 12 4 4	7 3 1 1	14 6 2 2
BWV17	peachleaf willow	Natural	1	0	0
BWV18	boxelder	Natural	5	3	6
CWV1	quacking aspen (*Populus tremuloides*)	Natural	4	0	0
CWV2	boxelder	Natural	1	0	0
Total			**626**	**251**	**502**

* Estimated value based off of the observed density of trees.
ROW = right-of-way

3.7 NOXIOUS WEEDS

"Noxious weeds" is a general term used to describe plant species that are not native to a given area, spread rapidly, and have adverse ecological and economic impacts. These species may have high reproduction rates and are usually adapted to occupy a diverse range of habitats otherwise occupied by native species. These species may subsequently out-compete native plant species for resources, causing a reduction in native plant populations.

Noxious weeds have the potential to detrimentally affect public health, ecological stability, and agricultural practices. North Dakota Century Code (Chapter 63-01.1) and the North Dakota Department of Agriculture recognize 11 species as noxious, as shown in Table 6 (North Dakota Department of Agriculture 2013). Each county has the authority to add additional species to their list of noxious weeds. Burke County has listed common tansy (*Tanacetum vulgare*) in addition to the 11 state-listed noxious weeds. In 2012, no listed noxious weeds were reported for Divide County. In 2012, five state noxious weed species were found on 14,706 acres in Burke County.

Table 6. Documented Noxious Weed Occupied Area in Divide and Burke Counties, North Dakota

Common Name	Scientific Name	Divide County (acres)	Burke County (acres)
absinth wormwood	*Artemisia absinthium*	0	3,350
Canada thistle	*Cirsium arvense*	0	4,200
diffuse knapweed	*Centaurea diffusa*	0	0
leafy spurge	*Euphorbia esula*	0	7,000
musk thistle	*Carduus nutans*	0	4
purple loosestrife	*Lythrum salicaria*	0	0
Russian knapweed	*Acroptilon repens*	0	0
spotted knapweed	*Centaurea stoebe*	0	0
yellow toadflax	*Linaria vulgaris*	0	152
dalmatian toadflax	*Linaria dalmatica*	0	0
salt cedar	*Tamarix ramosissima*	0	0

Source: North Dakota Department of Agriculture 2013

Six areas of leafy spurge (*Euphorbia esula*) were noted during the survey totaling approximately 6.54 acres (Table 7). Approximately 4.82 acres occurred within the construction corridor.

Table 7. Noxious Weeds Observed during Field Survey of the Pipeline Route

Noxious Weed (ID)	Species	150-foot-wide Survey Corridor (acres)	110-foot-wide Construction Corridor (acres)
ANX1	leafy spurge (*Euphorbia esula*)	0.51	0.40
BNX1	leafy spurge	0.42	0.31
BNX2	leafy spurge	0.03	0.02
BNX3	leafy spurge	2.18	1.61

Noxious Weed (ID)	Species	150-foot-wide Survey Corridor (acres)	110-foot-wide Construction Corridor (acres)
BNX4	leafy spurge	3.35	2.48
BNX5	leafy spurge	0.05	0.00
Total		**6.54**	**4.82**

3.8 WILDLIFE

Several wildlife species that may exist in Divide and Burke Counties are listed as threatened or endangered under the Endangered Species Act (ESA) (16 United States Code 1531 et seq.). According to the USFWS, listed species in Divide and Burke Counties, North Dakota, include the gray wolf (*Canis lupus*), whooping crane (*Grus americana*), and piping plover (*Charadrius melodus*). Candidate species include Sprague's pipit (*Anthus spragueii*). Proposed species include northern long-eared bat (*Myotis septentrionalis*) and rufa red knot (*Calidris canutus rufa*) (USFWS 2014). Burke County, North Dakota, additionally has historical occurrence of the Dakota skipper (*Hesperia dacotae*), which is proposed for listing (USFWS 2014). SWCA conducted a cursory threatened and endangered species survey concurrently with the wetland determination. Ecologists did not observe any primary (i.e., actual sighting) or secondary (i.e., tracks, scat, fur) indication of the presence of threatened or endangered species.

The proposed project would have no effect on the gray wolf. Whooping crane and piping plover have the potential to occur within the project area as migrants. As a result, these species may be, but are not likely to be adversely, affected by the proposed project. The proposed project does not occur within the same watershed as Lake Sakakawea and therefore may affect, but is not likely to adversely affect the designated critical habitat for piping plover. The proposed project is not likely to jeopardize the Sprague's pipit, Dakota skipper, northern long-eared bat, and rufa red knot.

3.8.1 Gray Wolf

Federal Status: Endangered
Affects Determination: No effect

The gray wolf, listed as endangered in the United States in 1978, was believed extirpated from North Dakota in the 1920s and 1930s, with only sporadic reports from the 1930s to present (Licht and Huffman 1996; USFWS 1978). The presence of wolves in most of North Dakota consists of occasional dispersing animals from Minnesota and Manitoba (Licht and Fritts 1994; Licht and Huffman 1996). Most documented gray wolf sightings within western North Dakota are believed to be young males seeking to establish territory (Hagen et al. 2005). The Turtle Mountain region of north-central North Dakota provides marginal habitat that may be able to support a very small population of wolves. The closest known pack of wolves is the Minnesota population located approximately 17 miles (28 kilometers [km]) from the northeast corner of North Dakota.

The gray wolf uses a variety of habitats that support a large prey base, including montane and low-elevation forests, grasslands, and desert scrub (USFWS 2013a). Due to a lack of forested habitat and distance from Minnesota and Manitoba populations, as well as the troubled relationship between humans and wolves and their vulnerability to being shot in open habitats (Licht and Huffman 1996), the re-establishment of gray wolf populations in North Dakota is unlikely. Additionally, habitat fragmentation may further act as a barrier against wolf recolonization in western North Dakota. Therefore, the proposed project would have **no effect** on the gray wolf.

3.8.2 Whooping Crane

Federal Status: Endangered
Affect Determination: May affect, is not likely to adversely affect

The whooping crane was listed as endangered in 1970 in the United States by the USFWS and in 1978 in Canada. Historically, population declines were caused by shooting and destruction of nesting habitat in the prairies from agricultural development. Current threats to the species include habitat destruction, especially suitable wetland habitats that support breeding and nesting, as well as feeding and roosting during their fall and spring migration (Canadian Wildlife Service and USFWS 2007).

The July 2010 total wild population was estimated at 383 (USFWS 2013b). There is only one self-sustaining wild population, the Aransas-Wood Buffalo National Park population, which nests in Wood Buffalo National Park and adjacent areas in Canada, where approximately 83% of the wild nesting sites occur (Canadian Wildlife Service and USFWS 2007; USFWS 2013b). Divide and Burke Counties, including the project area, are within the primary migratory flyway of whooping cranes.

Whooping cranes probe the soil subsurface with their bills for foods on the soil or vegetation substrate (Canadian Wildlife Service and USFWS 2007). Whooping cranes are omnivores and foods typically include agricultural grains, as well as insects, frogs, rodents, small birds, minnows, berries, and plant tubers. The largest amount of time during migration is spent feeding in harvested grain fields (Canadian Wildlife Service and USFWS 2007). Studies indicate that whooping cranes use a variety of habitats during migration, in addition to cultivated croplands, and generally roost in small palustrine (marshy) wetlands within 0.6 mile (1 km) of suitable feeding areas (Howe 1987, 1989). Whooping cranes have been recorded in riverine habitats during their migration, with eight sightings along the Missouri River in North Dakota (Canadian Wildlife Service and USFWS 2007:18). In these cases, they roost on submerged sandbars in wide, unobstructed channels that are isolated from human disturbance (Armbruster 1990).

Suitable whooping crane foraging habitat (i.e., cultivated cropland and wetlands >0.04 hectare) was observed within the survey area. In addition, the project area is located within the migratory corridor for the whooping crane, with the nearest sighting approximately 8 feet north of the proposed alignment, approximately 410 feet west of BWB1 (USFWS, M. Tarcha, unpublished data). Several additional sightings have occurred within 1 mile of the project area (Appendix A). SWCA recommends that if construction is to occur within whooping crane spring and fall migration periods, and a whooping crane is observed within 0.5 mile of the

project, to stop construction and notify the USFWS. Therefore, the proposed project **may affect, but is not likely to adversely affect** the endangered whooping crane.

3.8.3 Piping Plover

Federal Status: Threatened
Affect Determination: May affect, is not likely to adversely affect

The piping plover is a small shorebird which breeds only in three geographic regions of North America: the Atlantic Coast, the Northern Great Plains, and the Great Lakes. Piping plover populations were federally listed as threatened and endangered in 1985, with the Northern Great Plains and Atlantic Coast populations listed as threatened, and the Great Lakes population listed as endangered (USFWS 1985).

Plovers in the Great Plains make their 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 (USFWS 2002, 2012b). The shorelines of lakes of the Missouri River constitute significant nesting areas for the bird. Piping plovers nest on the ground, making shallow scrapes in the sand, which they line with small pebbles or rocks (USFWS 1988). Anthropogenic alterations of the landscape along rivers and lakes where piping plover nest have increased the number and type of predators, subsequently decreasing nest success and chick survival (USFWS 2002, 2012b). The birds fly south by mid to late August to areas along the Texas coast and Mexico (USFWS 2002). The Northern Great Plains population has continued to decline despite federal listing, with population estimates of 1,500 breeding pairs in 1985 reduced to fewer than 1,100 in 1990. Low survival of adult birds has been identified as a factor (Root et al. 1992). Current conservation strategies include identification and preservation of known nesting sites, public education, and limiting or preventing shoreline disturbances near nests and hatched chicks (USFWS 1988, 2012b).

Piping plovers were observed during the field survey in an area adjacent to a wetland within the proposed ROW. Additionally, nesting behavior was noted and a nest was suspected in the area. SWCA recommends avoidance of wetlands to the extent possible and to construct outside of the migratory bird nesting season. Therefore, the proposed project **may affect, but is not likely to adversely affect** piping plovers.

3.8.4 Designated Critical Habitat of Piping Plover

Affect Determination: May affect, is not likely to adversely affect

The USFWS has designated critical habitat for the Great Lakes and Northern Great Plains populations of piping plover (USFWS 2002). Designated critical habitat for the piping plover includes 183,422 acres and 1,207.5 river miles of habitat including various wetland locations in Burke and Divide Counties, North Dakota (USFWS 2002).

Since the proposed project would not modify, alter, disturb, or affect the shoreline of Lake Sakakawea or the Missouri River, and is not within the same watershed as Lake Sakakawea or the Missouri River, the proposed project **may affect, but is not likely to adversely affect** designated critical habitat of the piping plover.

3.8.5 Sprague's Pipit

Federal Status: Candidate
Affect Determination: Not likely to jeopardize

The Sprague's pipit is a small passerine, 10 to 15 centimeters in length, endemic to the Northern Great Plains (USFWS 2011). The Sprague's pipit requires large tracts of native prairie habitat, unplowed, throughout their life cycle. Because native grasslands are disturbance-dependent, Sprague's pipit prefers grassland habitats that are regularly disturbed. The frequency of disturbance required for habitat maintenance depends on how quickly grasses grow to an intermediate height (4 to 12 inches) following a disturbance event.

In North Dakota, Sprague's pipit has been found in areas of moderate grazing. Sprague's pipits are sensitive to patch size and avoid edges between grasslands and other habitat features (USFWS 2011). They may avoid non-grassland features including roads, trails, oil wells, croplands, woody vegetation, and wetlands. The Sprague's pipit is reported to stay up to 350 meters away from anthropogenic features such as roads, oil wells, and wind turbines (USFWS 2011). The USFWS has estimated that each new oil well and associated road in North Dakota results in potential impacts to approximately 51 acres of pipit habitat due to avoidance and habitat fragmentation (USFWS 2011). Because of increasing habitat fragmentation, especially by energy development, throughout the Sprague's pipit range, and the loss of native prairie habitat, the Sprague's pipit was listed as a Candidate Species under the ESA in 2010 (USFWS 2011).

In North Dakota, Sprague's pipit breeds throughout the state except for the easternmost counties. During the breeding season they prefer large patches of well-drained, open native grassland with a minimum size of 358.3 acres (range = 170 to 776 acres). They have not been observed in areas smaller than 71.6 acres on their breeding grounds (USFWS 2011).

Native prairie habitat with grasses of intermediate height does occur within the project area. However, the habitat within and surrounding the project area has been previously disturbed by agriculture, roads, and oil and gas development. The proposed project is unlikely to directly affect habitat due to lack of adequate patch sizes required by the Sprague's pipit for breeding grounds in the immediate project area, but may indirectly contribute to reduced use of any nearby suitable grassland habitat patches within 350 meters of the proposed project. Therefore, the proposed project **is not likely to jeopardize the** Sprague's pipit.

3.8.6 Dakota Skipper

Federal Status: Proposed
Affect Determination: Not likely to jeopardize

The Dakota skipper is a small butterfly with a 1-inch wingspan and is found primarily in undisturbed native tall grass and upland dry Northern mixed grass prairie areas with a high diversity of wildflowers and grasses (Committee on the Status of Endangered Wildlife in Canada 2003). The Dakota skipper appears to require a range of precipitation-evaporation ratios between 60 and 105 and a soil pH between 7.20 and 7.90 (McCabe 1981). Larvae feed on grasses, favoring little bluestem. Adults commonly feed on nectar of flowering native forbs such as harebell (*Campanula rotundifolia*), wood lily (*Lilium philadelphicum*), and purple coneflower (*Echinacea angustifolia*). The species is threatened by conversion of native prairie

to cultivated agriculture or shrublands, over-grazing, invasive species, gravel mining, and inbreeding (USFWS 2005). Suitable habitat does not exist within the proposed project area. Construction activities are not anticipated to negatively impact the species as long as reclamation is conducted as soon as the construction phase is complete. In addition, the use of existing access roads to reach the proposed pipeline location reduces the potential fragmentation of suitable habitat. Lastly, the implementation of a noxious weed management program significantly reduces any potential impacts on the Dakota skipper and its habitat. Therefore, the proposed project **is not likely to jeopardize** this species. The use of best management practices and conservation guidelines (USFWS 2007) during construction and operation and immediate reclamation of short-term disturbance should decrease direct, indirect, and cumulative impacts to this species.

3.8.7 Rufa Red Knot

Federal Status: Proposed
Affect Determination: Not likely to jeopardize

The rufa red knot is a robin-sized shorebird that migrates long distances annually between its breeding grounds in the Canadian Arctic and several wintering regions, including the southeast United States, the northeast Gulf of Mexico, northern Brazil, and Tierra del Fuego at the southern tip of South America (USFWS 2013c). During migration, rufa red knots use key staging and stopover areas to rest and feed. In North Dakota, the red knot is a very rare migrant (USFWS 2013c). There are no known records of rufa red knot in the project vicinity; however, this species could use habitat along Lake Sakakawea as a stopover during migration.

Potential habitat along the lake is approximately 46 straight-line miles from the proposed project. Potential spills and sedimentation occurring within the project area are concerns for downstream water quality and could indirectly affect suitable stopover habitat for the rufa red knot. Activities associated with the construction, production, or reclamation of the proposed project are not anticipated to adversely affect suitable stopover habitat for the rufa red knot. Therefore, the proposed project **is not likely to jeopardize** the rufa red knot.

3.8.8 Migratory Birds

Status: Not listed, protected under the Migratory Bird Treaty Act
Effects of Project: No adverse effects anticipated

Suitable habitat for migratory birds exists in the entire project area. Specifically, grassland nesting birds have the potential to occur and nest in the project area, especially during the migratory bird breeding season between February 1 and July 15. Suitable woodland nesting habitat also occurs in the project area. Active mallard (*Anas platyrhynchos*), eastern kingbird (*Tyrannus tyrannus*), and northern shoveler (*Anas clypeata*) nests were discovered during the survey (Appendix A). An inactive raptor nest was also noted. SWCA recommends to construct outside of the migratory bird nesting season. The proposed action is unlikely to cause any adverse effects to migratory birds.

3.8.9 Bald Eagle

Federal Status: Delisted in 2007; protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act

Effects of Project: No adverse effects anticipated

The bald eagle (*Haliaeetus leucocephalus*) feeds on fish and carrion and typically roosts in large trees near a water source. Bald eagle nesting habitat is typically any mature stands of conifer or cottonwood trees in association with rivers, streams, reservoirs, lakes, or any significant body of water. Bald eagles in North Dakota are usually observed along the Missouri River (Gomes n.d.) and Yellowstone River. Bald eagles frequently migrate through the grassland habitats; however, no bald eagles or nests were observed during the field surveys. Therefore, **no adverse effects** to bald eagles are anticipated.

3.8.10 Golden Eagle

Federal Status: Unlisted; protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act

Effects of Project: No adverse effects anticipated

The golden eagle (*Aquila chrysaetos*) prefers habitat characterized by open prairie, plains, and forested areas. Usually, golden eagles can be found in proximity to badland cliffs which provide suitable nesting habitat. Golden eagles may occur within or near the survey area; however, no golden eagles or nests were observed during the field surveys. Therefore, **no adverse effects** to golden eagles are anticipated.

3.8.11 Wildlife Observed

During the field survey, SWCA ecologists observed various wildlife species which utilize wetlands and other habitat within the survey area (Table 8). Common wildlife species may be affected both directly via incidents with construction equipment or indirectly through the temporary fragmentation of habitat as a result of construction activities.

Table 8. Wildlife Observed during Field Surveys at the Proposed Pipeline Route

Common Name	Scientific Name	Observation Type
American avocet	*Recurvirostra americana*	Primary
American badger	*Taxidea taxus*	Primary
American coot	*Fulica americana*	Primary
American crow	*Corvus brachyrhynchos*	Primary
American robin	*Turdus migratorius*	Primary
American wigeon	*Anas Americana*	Primary
American white pelican	*Pelecanus erythrorhynchos*	Primary
Black tern	*Chlidonias niger*	Primary
Black-tailed prairie dog	*Cynomys ludovicianus*	Primary
Blue jay	*Cyanocitta cristata*	Primary
Blue-winged teal	*Anas discors*	Primary

Common Name	Scientific Name	Observation Type
Bobolink	*Dolichonyx oryzivorus*	Primary
Brewer's blackbird	*Euphagus cyanocephalus*	Primary
Brown-headed cowbird	*Molothrus ater*	Primary
California gull	*Larus californicus*	Primary
Canada goose	*Branta canadensis*	Primary
Chipping sparrow	*Spizella passerina*	Primary
Clay-colored sparrow	*Spizella pallida*	Primary
Common goldeneye	*Bucephala clangula*	Primary
Common grackle	*Quiscalus quiscula*	Primary
Common yellowthroat	*Geothlypis trichas*	Primary
Coyote	*Canis latrans*	Primary
Double-crested cormorant	*Phalacrocorax auritus*	Primary
Eared grebe	*Podiceps nigricollis*	Primary
Eastern kingbird	*Tyrannus tyrannus*	Primary – Nest Located
Field sparrow	*Spizella pusilla*	Primary
Franklin's gull	*Larus pipixcan*	Primary
Gadwall	*Anas strepera*	Primary
Grasshopper sparrow	*Ammodramus savannarum*	Primary
Gray partridge	*Perdix perdix*	Primary
Great blue heron	*Ardea herodias*	Primary
Green-winged teal	*Anas crecca*	Primary
Horned lark	*Eremophila alpestris*	Primary
Killdeer	*Charadrius vociferus*	Primary
Lesser scaup	*Aythya affinis*	Primary
Mallard	*Anas platyrhynchos*	Primary – Nest Located
Marbled godwit	*Limosa fedoa*	Primary
Mourning dove	*Zenaida macroura*	Primary
Muskrat	*Ondatra zibethicus*	Primary
Nelson's sparrow	*Ammodramus nelsoni*	Primary
North American beaver	*Castor canadensis*	Secondary – Dam
Northern flicker	*Colaptes auratus*	Primary
Northern harrier	*Circus cyaneus*	Primary
Northern pintail	*Anas acuta*	Primary
Northern shoveler	*Anas clypeata*	Primary – Nest Located
Pied-billed grebe	*Podilymbus podiceps*	Primary

Common Name	Scientific Name	Observation Type
Piping plover	*Charadrius melodus*	Primary
Raccoon	*Procyon lotor*	Secondary – Scat
Red fox	*Vulpes vulpes*	Primary
Redhead	*Aythya americana*	Primary
Red-necked phalarope	*Phalaropus lobatus*	Primary
Red-tailed hawk	*Buteo jamaicensis*	Primary
Red-winged blackbird	*Agelaius phoeniceus*	Primary
Ring-billed gull	*Larus delawarensis*	Primary
Ring-necked duck	*Aythya collaris*	Primary
Ring-necked pheasant	*Phasianus colchicus*	Primary
Ruddy duck	*Oxyura jamaicensis*	Primary
Savannah sparrow	*Passerculus sandwichensis*	Primary
Sharp-tailed grouse	*Tympanuchus phasianellus*	Primary
Sora	*Porzana carolina*	Primary
Striped skunk	*Mephitis mephitis*	Primary
Swainson's hawk	*Buteo swainsoni*	Primary
Thirteen-lined ground squirrel	*Spermophilus tridecemlineatus*	Primary
Upland sandpiper	*Bartramia longicauda*	Primary
Vesper sparrow	*Pooecetes gramineus*	Primary
Western grebe	*Aechmophorus occidentalis*	Primary
Western kingbird	*Tyrannus verticalis*	Primary
Western meadowlark	*Sturnella neglecta*	Primary
White-faced ibis	*Plegadis chihi*	Primary
White-tailed deer	*Odocoileus virginianus*	Primary
White-tailed jackrabbit	*Lepus townsendii*	Primary
Willet	*Catoptrophorus semipalmatus*	Primary
Wilson's phalarope	*Phalaropus tricolor*	Primary
Wilson's snipe	*Gallinago delicata*	Primary
Yellow-headed blackbird	*Xanthocephalus xanthocephalus*	Primary

4.0 CONCLUSIONS AND RECOMMENDATIONS

1. SWCA ecologists recorded approximately 68.27 acres of wetlands within the survey area.
2. In total, approximately 47.95 acres of PEM wetland *may* be temporarily impacted by construction activities.
3. Seven waterbodies were observed within the survey area: four intermittent streams and three permanent waterbodies.
4. SWCA estimates 251 trees, saplings, and shrubs may be impacted. Therefore, approximately 502 2-year-old saplings may need to be replanted to fulfill the 2:1 mitigation requirement.

   According to the recommendations of the North Dakota Forest Service, tree species selection for replacement should be accomplished through collaboration with a reputable area nursery. This will allow for species to be selected based on various factors including species hardiness and area soil type.
5. The piping plover, a threatened species, was observed during the field surveys within the proposed ROW. SWCA recommends avoiding wetlands to the extent possible, and to construct outside of the migratory bird nesting season. No other threatened or endangered species were observed during the field survey. Suitable roosting and foraging habitat exists within the project area for the whooping crane, and there have been several previous sightings within 1 mile of the project area (Appendix A). SWCA recommends that if construction is to occur within whooping crane spring and fall migration periods, and a whooping crane is observed within 0.5 mile of the project, to stop construction and notify the USFWS.

   The other listed threatened and endangered species which occur in Divide and Burke Counties are not likely to be detrimentally impacted by construction activities.
6. Migratory birds and habitat were observed throughout the entire project area. Active migratory bird nests (mallard, eastern kingbird, northern shoveler) were observed during the survey. Other types of suitable migratory bird habitat exist throughout the surveyed areas. A 0.5-mile line-of-sight survey was conducted throughout the survey area.

   One inactive raptor nest was observed during the survey. No active raptor nests were observed.
7. Six areas of leafy spurge were recorded within the surveyed areas, totaling approximately 6.54 acres. If noxious weeds are confirmed during construction activities, actions should be taken to reduce the potential to spread any state listed noxious weed species, especially to native areas.

5.0 LITERATURE CITED

Armbruster, M.J. 1990. Characterization of habitat used by whooping cranes during migration. *Biological Report* 90(4):1–16.

Bryce, S., J.M. Omernik, D.E. Pater, M. Ulmer, J. Schaar, J. Freeouf, R. Johnson, P. Kuck, and S.H. Azevedo. 1998. *Ecoregions of North Dakota and South Dakota*. Northern Prairie Wildlife Research Center Online. Available at: http://www.npwrc.usgs.gov/resource/habitat/ndsdeco/index.htm (Version 30NOV1998). Accessed June 22, 2011.

Canadian Wildlife Service and U.S. Fish and Wildlife Service (USFWS). 2007. *International Recovery Plan for the Whooping Crane*. Ottawa: Recovery of Nationally Endangered Wildlife (RENEW), and Albuquerque: U.S. Fish and Wildlife Service.

Committee on the Status of Endangered Wildlife in Canada. 2003. *COSEWIC Assessment and Status Report on the Dakota Skipper* Hesperia dacotae *in Canada*. Ottawa: Committee on the Status of Endangered Wildlife in Canada.

Environmental Laboratory. 1987. *Corps of Engineers Wetlands Determination Manual*. Technical Report Y-87-1. Vicksburg, Mississippi: U.S. Army Engineer Waterways Experiment Station.

Gomes, S. n.d. *Hawks, Eagles, and Falcons of North Dakota*. North Dakota Game and Fish Department, Bismarck. Northern Prairie Wildlife Research Center Online. Available at: http://www.npwrc.usgs.gov/resource/birds/hawks/index.htm. Accessed July 16, 2009.

Hagen, S.K., P.T. Isakson, and S.R. Dyke. 2005. *North Dakota Comprehensive Wildlife Conservation Strategy*. Bismarck: North Dakota Game and Fish Department.

Howe, M.A. 1987. Habitat use by migrating whooping cranes in the Aransas-Wood Buffalo corridor. In *Proceedings of the 1985 Crane Workshop*, edited by C. Lewis and J.W. Ziewitz, pp. 303–311. Grand Island, Nebraska: Platte River Whooping Crane Habitat Maintenance Trust and USFWS.

———. 1989. *Migration of Radio-Marked Whooping Cranes from the Aransas-Wood Buffalo Population: Patterns of Habitat Use, Behavior, and Survival*. USFWS Technical Report.

Licht, D.S., and S.H. Fritts. 1994. Gray wolf *(Canis lupus)* occurrences in the Dakotas. *American Midland Naturalist* 132:74–81.

Licht, D.S., and L.E. Huffman. 1996. Gray wolf status in North Dakota. *The Prairie Naturalist* 28(4):169–174.

McCabe, T.L. 1981. The Dakota skipper (*Hesperia dacotae*) (Skinner): Range and biology, with special reference to North Dakota. *Journal of the Lepidopterists' Society* 35(3):179–193.

National Oceanic and Atmospheric Administration. 2014. Williston, North Dakota Preliminary Monthly Climate Data Reports. Available at: http://www.weather.gov/climate/index.php?wfo=bis. Accessed May 1, 2014.

Natural Resources Conservation Service (NRCS). 2014. Web Soil Survey. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Available at: http://websoilsurvey.ncrs.usda.gov and http://soildatamart.ncrs.usda. Accessed June 30, 2014.

North Dakota Department of Agriculture. 2013. North Dakota Department of Agriculture Weed Survey. Available at: http://www.nd.gov/ndda/files/resource/NW2012report.pdf. Accessed June 30, 2014.

Root, B.G., M.R. Ryan, and P.M. Mayer. 1992. Piping plover survival in the Great Plains. *Journal of Field Ornithology* 63(1):10–15.

U.S. Army Corps of Engineers (USACE). 2013. *US Army Corps of Engineers 2012 Nationwide Permit Information*. US Army Corps of Engineers. Available at: http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/NationwidePermits.aspx. Accessed July 7, 2014.

———. 2010. *Regional Supplement to the Corps of Engineers Wetland Determination Manual: Great Plains Region Version 2.0*. Edited by J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-12. Vicksburg, Mississippi: U.S. Army Engineer Research and Development Center.

U.S. Fish and Wildlife Service (USFWS). 1978. Reclassification of the gray wolf in the United States and Mexico, with determination of critical habitat in Michigan and Minnesota. *Federal Register* 43(47):9607–9615.

———. 1985. Endangered and threatened wildlife and plants: determination of endangered and threatened status for the piping plover. *Federal Register* 50(238):50726–50734.

———. 1988. *Great Lakes and Northern Great Plains Piping Plover Recovery Plan*. Twin Cities, Minnesota: U.S. Fish and Wildlife Service.

———. 2002. Designation of critical habitat for the northern Great Plains breeding population of the piping plover; final rule. *Federal Register* 67(176):57637–57717.

———. 2005. Endangered and Threatened Wildlife and Plants; Review of Native Species that are Candidates or Proposed for Listing as Endangered or Threatened; Annual Notice of Findings on Resubmitted Petitions; Annual Description of Progress on Listing Actions; Proposed Rule. *Federal Register* 70(90):24870–24934.

———. 2007. *Dakota Skipper Conservation Guidelines* Hesperia dacotae *(Skinner) (Lepidoptera: Hesperiidae)*. U.S. Fish and Wildlife Service, Twin Cities Field Office. Available at: http://www.fws.gov/midwest/endangered/insects/dask-cons-guid2007.pdf. Accessed September 3, 2010.

———. 2011. Endangered and threatened wildlife and plants; 12-month finding on a petition to list Sprague's pipit as endangered or threatened throughout its range. *Federal Register* 75(178):56028–56050.

———. 2012a. National Wetland Inventory: Wetlands Online Mapper. Available at: http://westlandsfew.er.usgs.gov/wtlnds/launch.html. Accessed July 15, 2012.

———. 2012b. Piping plover. Available at: http://www.fws.gov/mountain-prairie/species/birds/pipingplover. Accessed September 7, 2010.

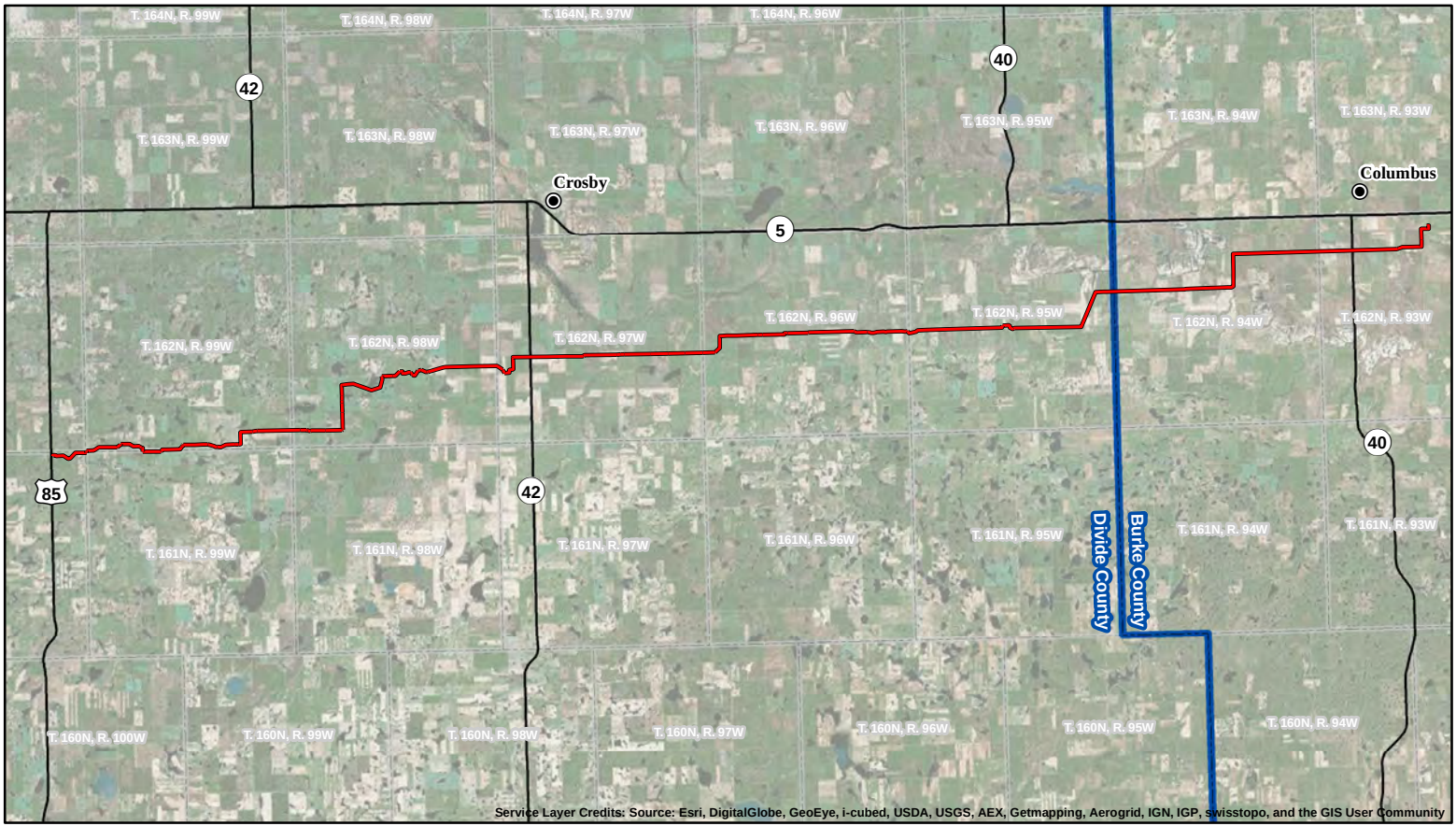
———. 2013a. Gray wolf. Available at: http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=A00D. Accessed February 21, 2013.

———. 2013b. Whooping crane. Available at: http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B003. Accessed February 21, 2013.

———. 2013c. Endangered and Threatened Wildlife and Plants; Proposed Threatened Status for the Rufa Red Knot (*Calidris canutus rufa*). *Federal Register* 78(189):60024–60098.

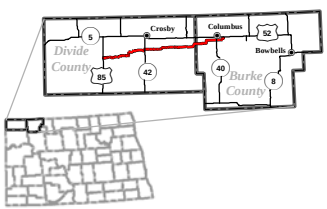
———. 2014. County occurrence of endangered, threatened, and candidate species and designated critical habitat in North Dakota. Available at: http://www.fws.gov/northdakotafieldoffice/county_list.htm. Accessed April 24, 2014.

APPENDIX A
Vicinity and Site Layout Maps



Global Stampede

- City
- Proposed Pipeline
- Existing Road
- County Boundary



SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

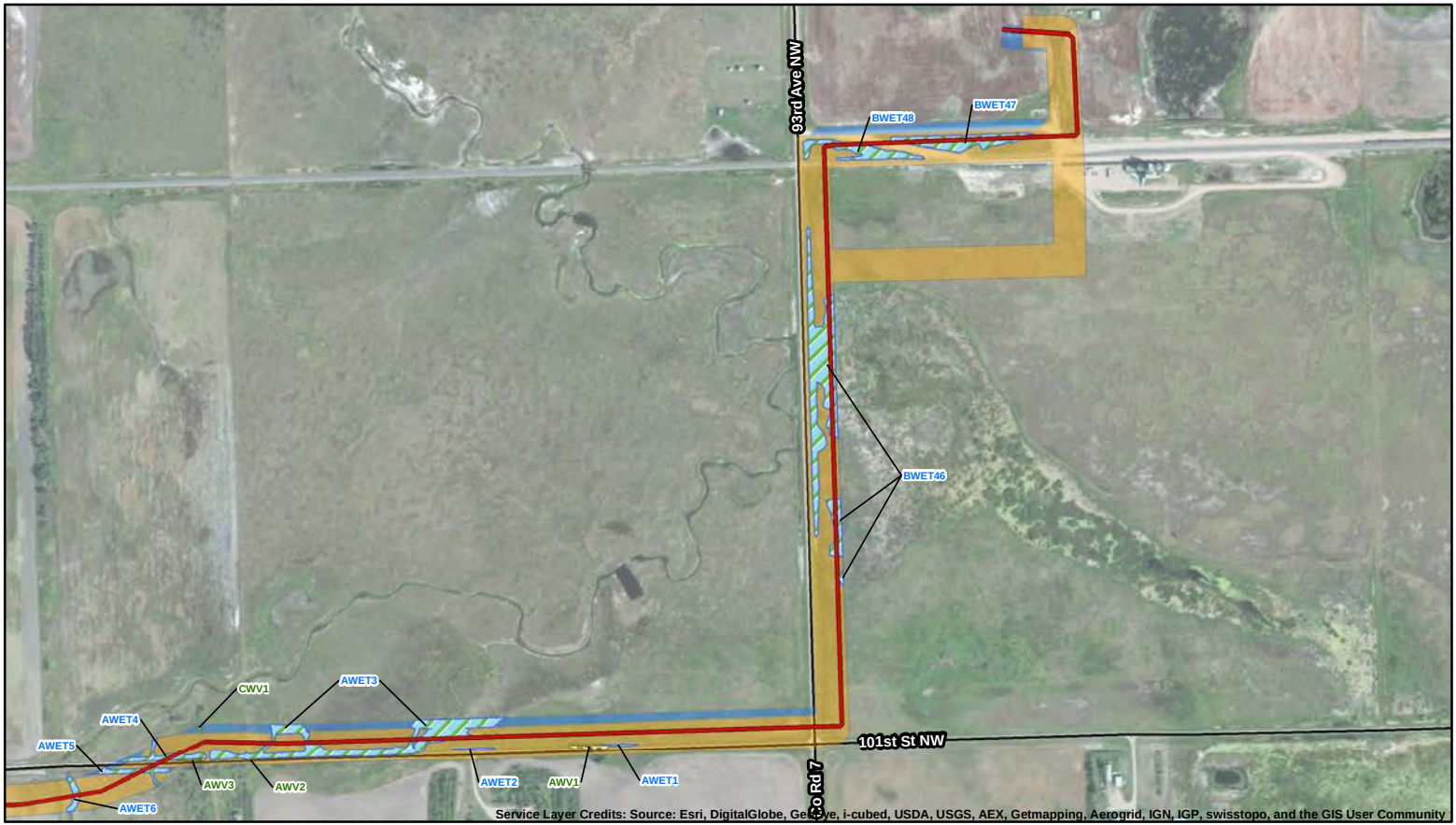
Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

Miles
0 5 10

Kilometers
0 10 20

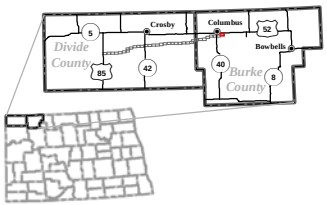
Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Burke and Divide Counties, North Dakota

Projection: NAD 1983 UTM Zone 13N



Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



SWCA® ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

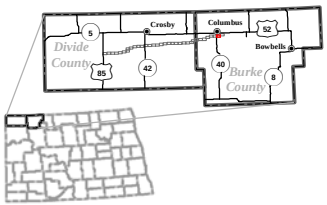
Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Stampede (1959), Columbus (1959)
Township/Range: T162N, R93W
Burke County, North Dakota

Projection: NAD 1983 UTM Zone 13N

Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

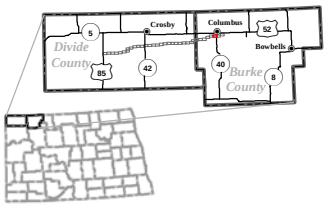
Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Columbus (1959)
Township/Range: T162N, R93W
Burke County, North Dakota

Projection: NAD 1983 UTM Zone 13N

Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

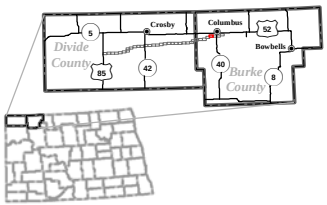
Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Columbus (1959)
Township/Range: T162N, R93W & T162N, R94W
Burke County, North Dakota

Projection: NAD 1983 UTM Zone 13N

Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



SWCA® ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

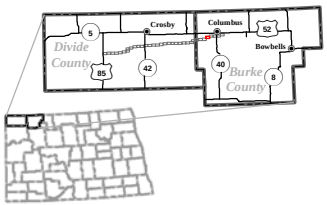
Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Columbus (1959)
Township/Range: T162N, R94W
Burke County, North Dakota

Projection: NAD 1983 UTM Zone 13N

Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

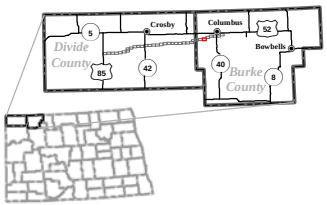
Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Columbus (1959), Columbus SE (1959)
Township/Range: T162N, R94W
Burke County, North Dakota

Projection: NAD 1983 UTM Zone 13N

Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

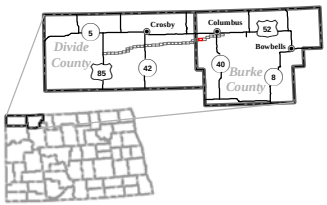
Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Columbus SE (1959), Columbus SW (1959)
Township/Range: T162N, R94W
Burke County, North Dakota

Projection: NAD 1983 UTM Zone 13N

Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

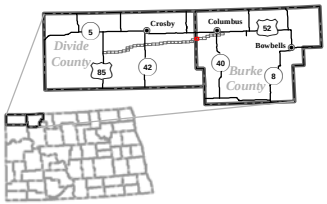
Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Columbus SW (1959)
Township/Range: T162N, R94W
Burke County, North Dakota

Projection: NAD 1983 UTM Zone 13N

Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

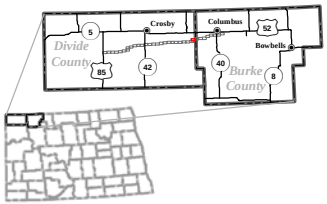
Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Columbus SW (1959)
Township/Range: T162N, R94W & T162N, R95W
Burke and Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N

Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



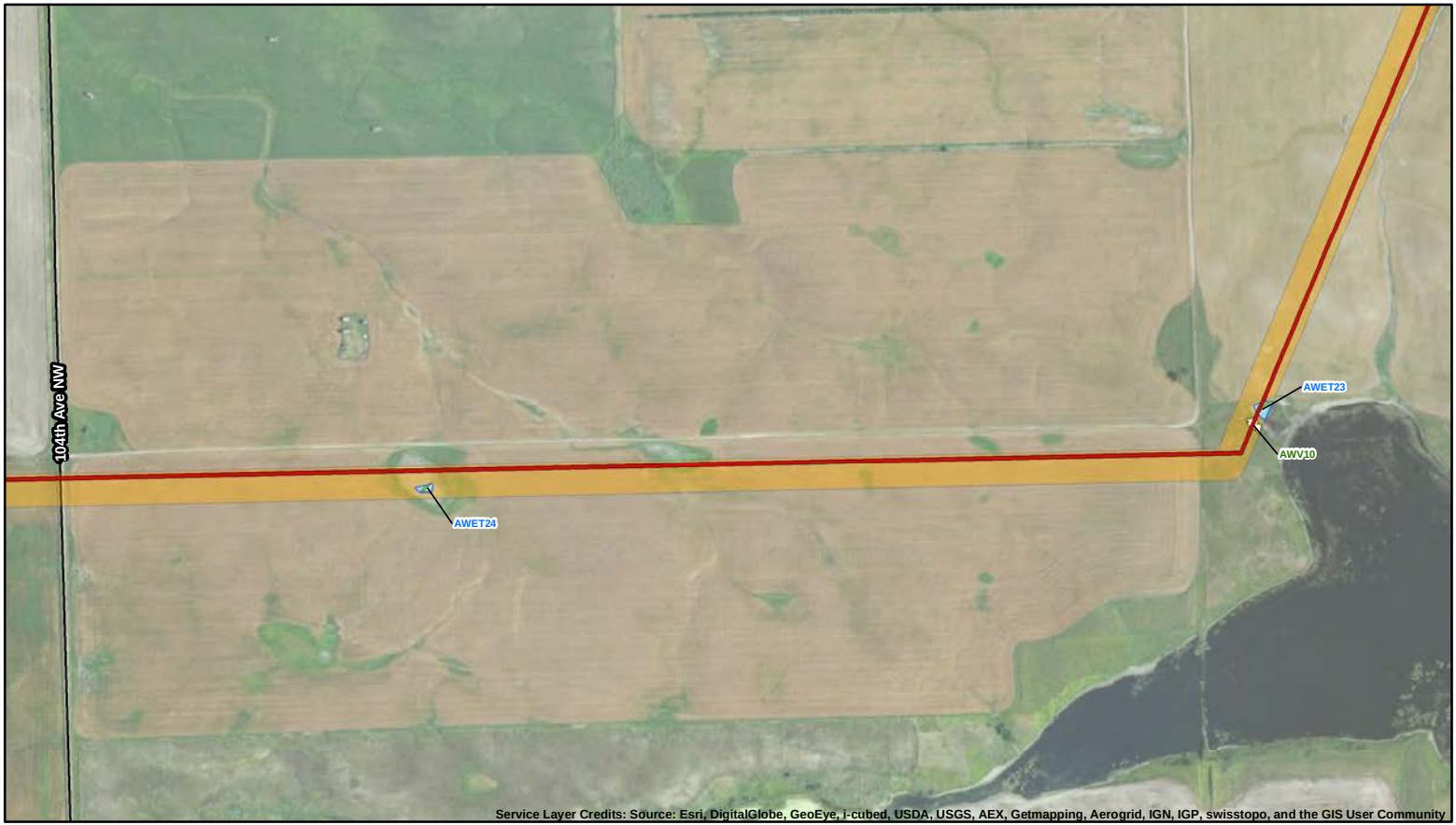
SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

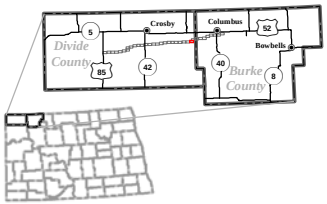
Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Columbus SW (1959)
Township/Range: T162N, R95W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N



Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



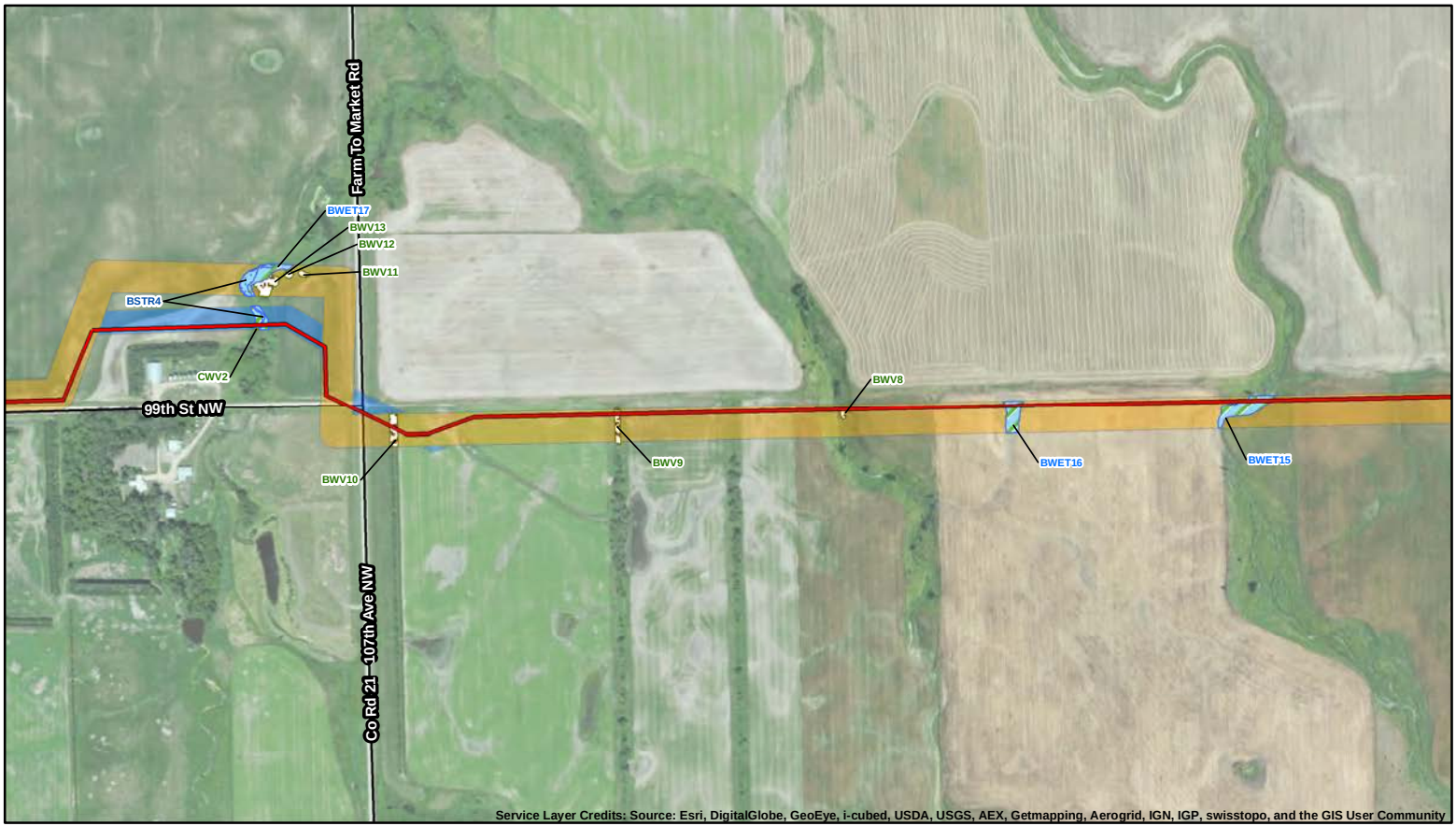
SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

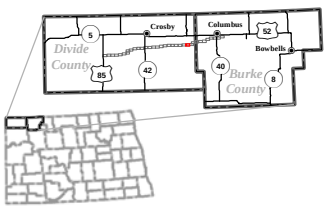
Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Columbus SW (1959)
Township/Range: T162N, R95W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N



Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

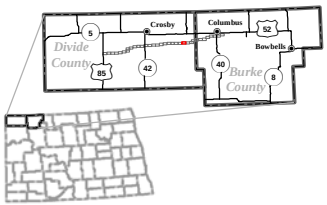
Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Columbus SW (1959), Noonan SE (1959)
Township/Range: T162N, R95W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N

Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

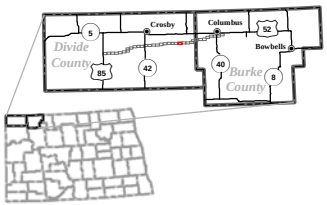
Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Noonan SE (1959)
Township/Range: T162N, R95W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

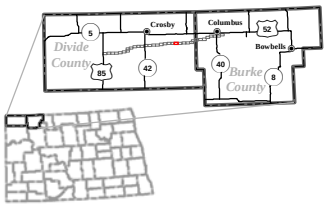
Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Noonan SE (1959)
Township/Range: T162N, R95W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N

Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

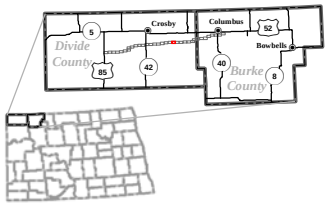
Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Noonan SE (1959)
Township/Range: T162N, R95W & T162N, R96W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N

Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

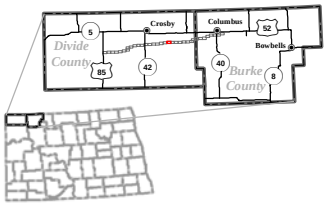
Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Noonan SE (1959)
Township/Range: T162N, R96W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N

Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

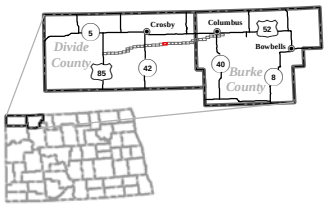
Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Noonan SE (1959), Noonan SW (1959)
Township/Range: T162N, R96W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N

Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



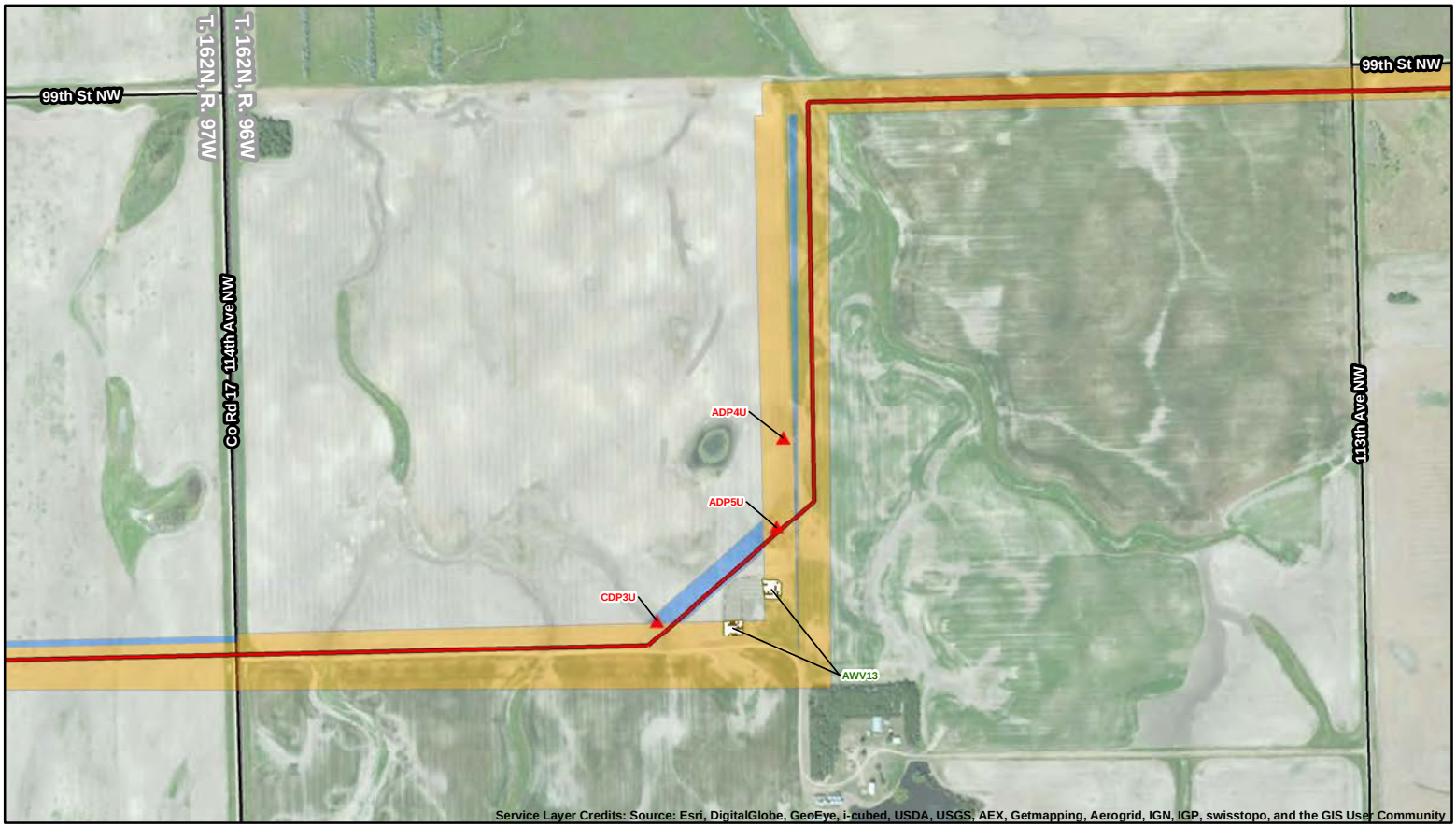
SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

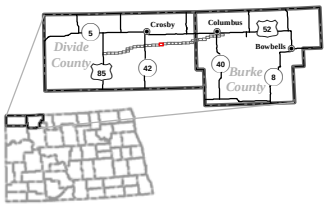
Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Noonan SW (1959)
Township/Range: T162N, R96W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N



Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

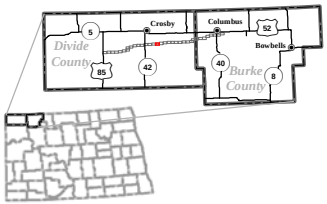
Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Noonan SW (1959)
Township/Range: T162N, R96W & T162N, R97W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N

Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

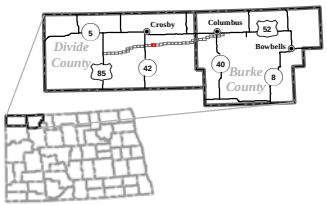
Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Noonan SW (1959)
Township/Range: T162N, R97W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N

Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

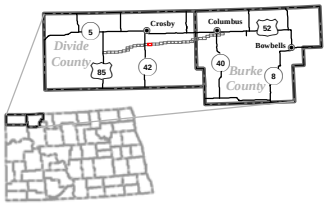
Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Noonan SW (1959), Crosby SE (1959)
Township/Range: T162N, R97W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N

Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



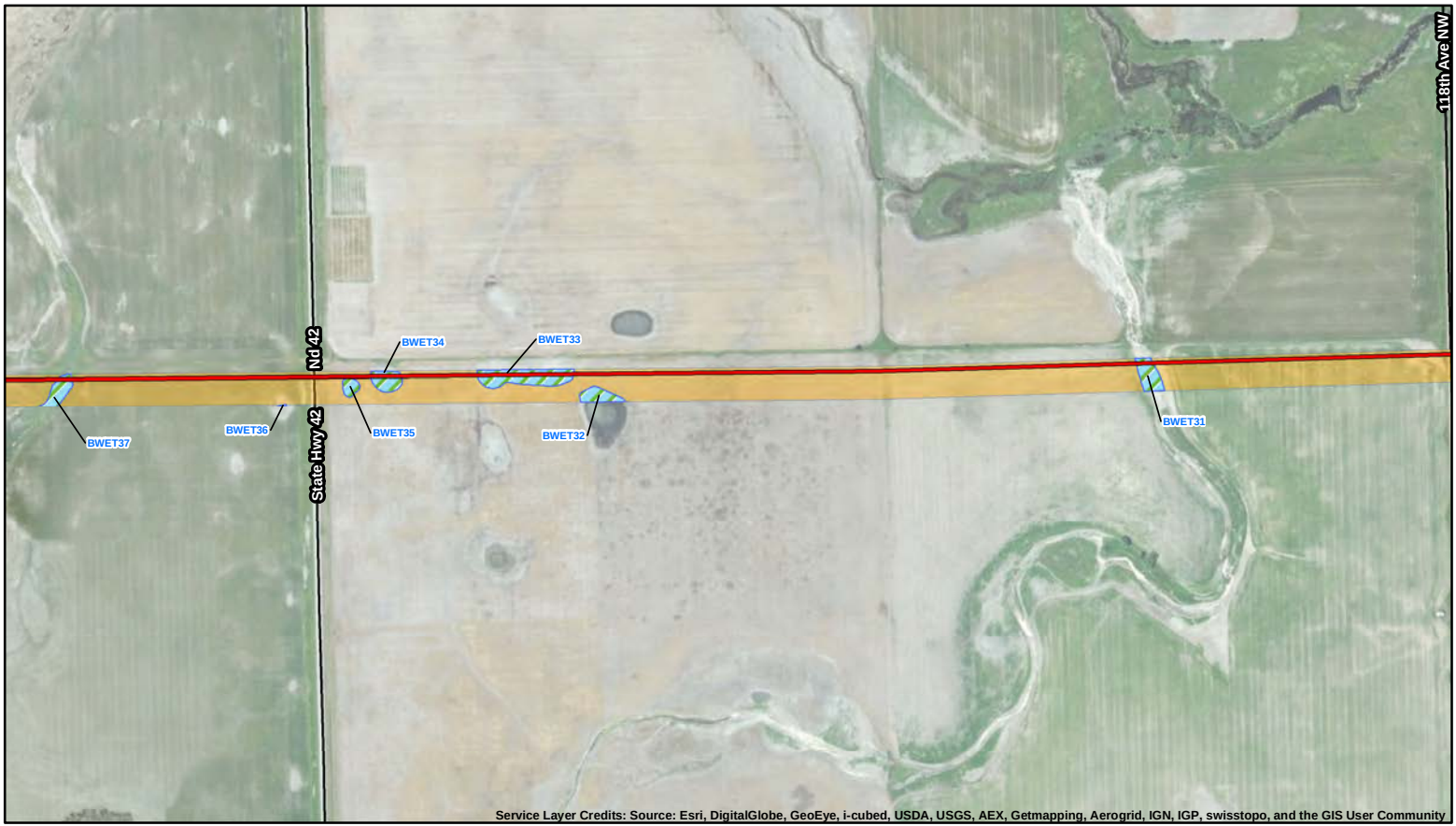
SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

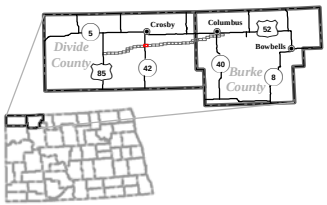
Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Crosby SE (1959)
Township/Range: T162N, R97W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N



Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



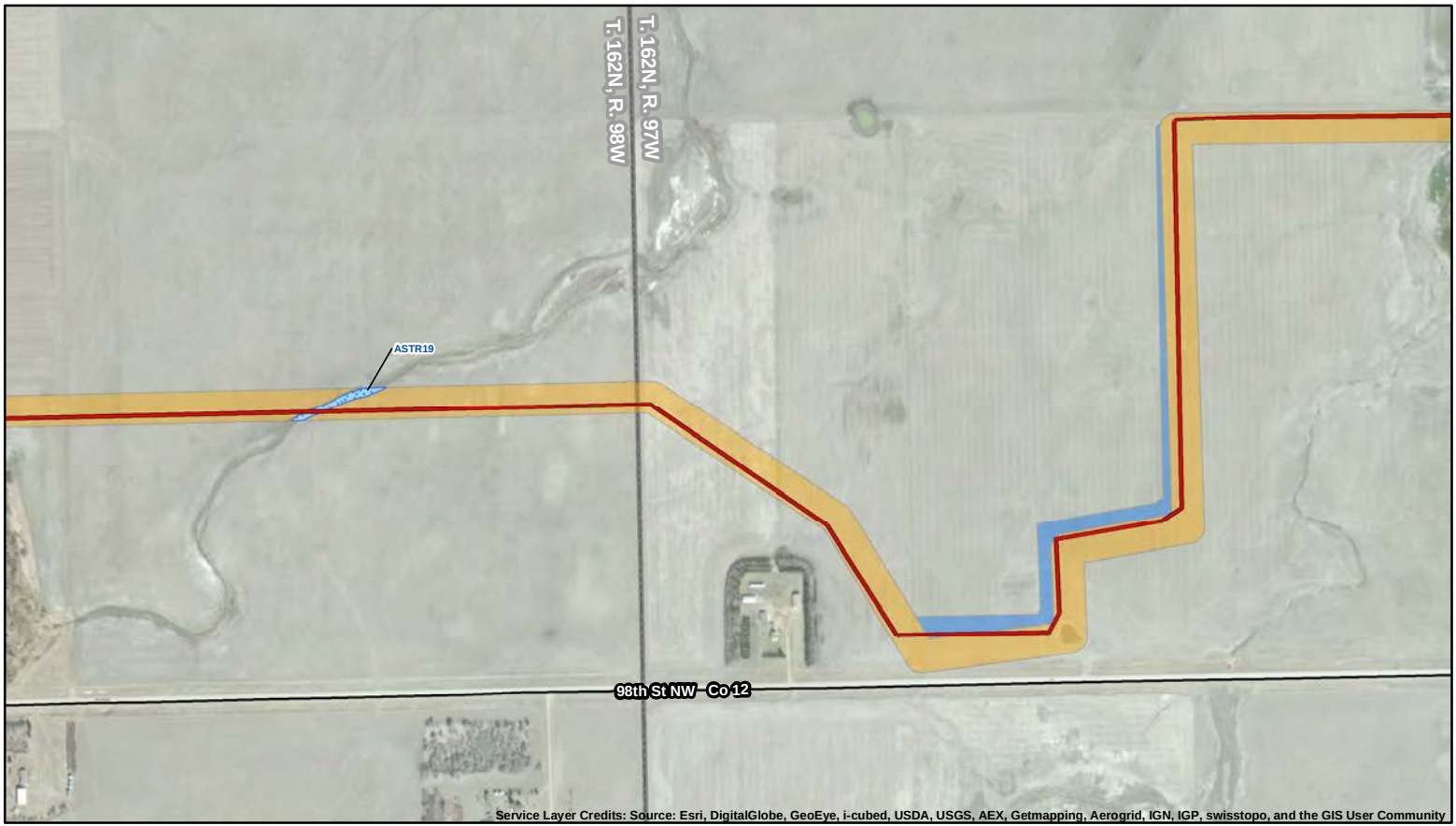
SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

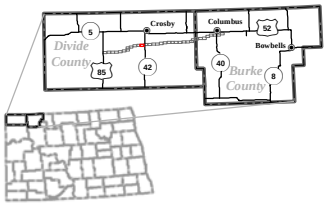
Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Crosby SE (1959)
Township/Range: T162N, R97W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N



Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

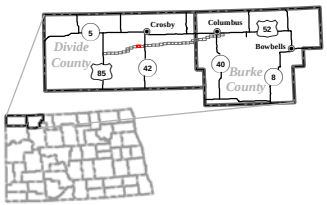
Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Crosby SE (1959)
Township/Range: T162N, R97W & T162N, R98W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N

Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

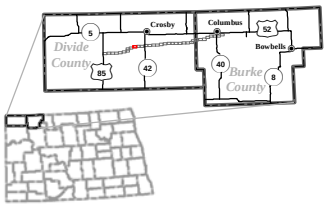
Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Crosby SE (1959)
Township/Range: T162N, R98W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



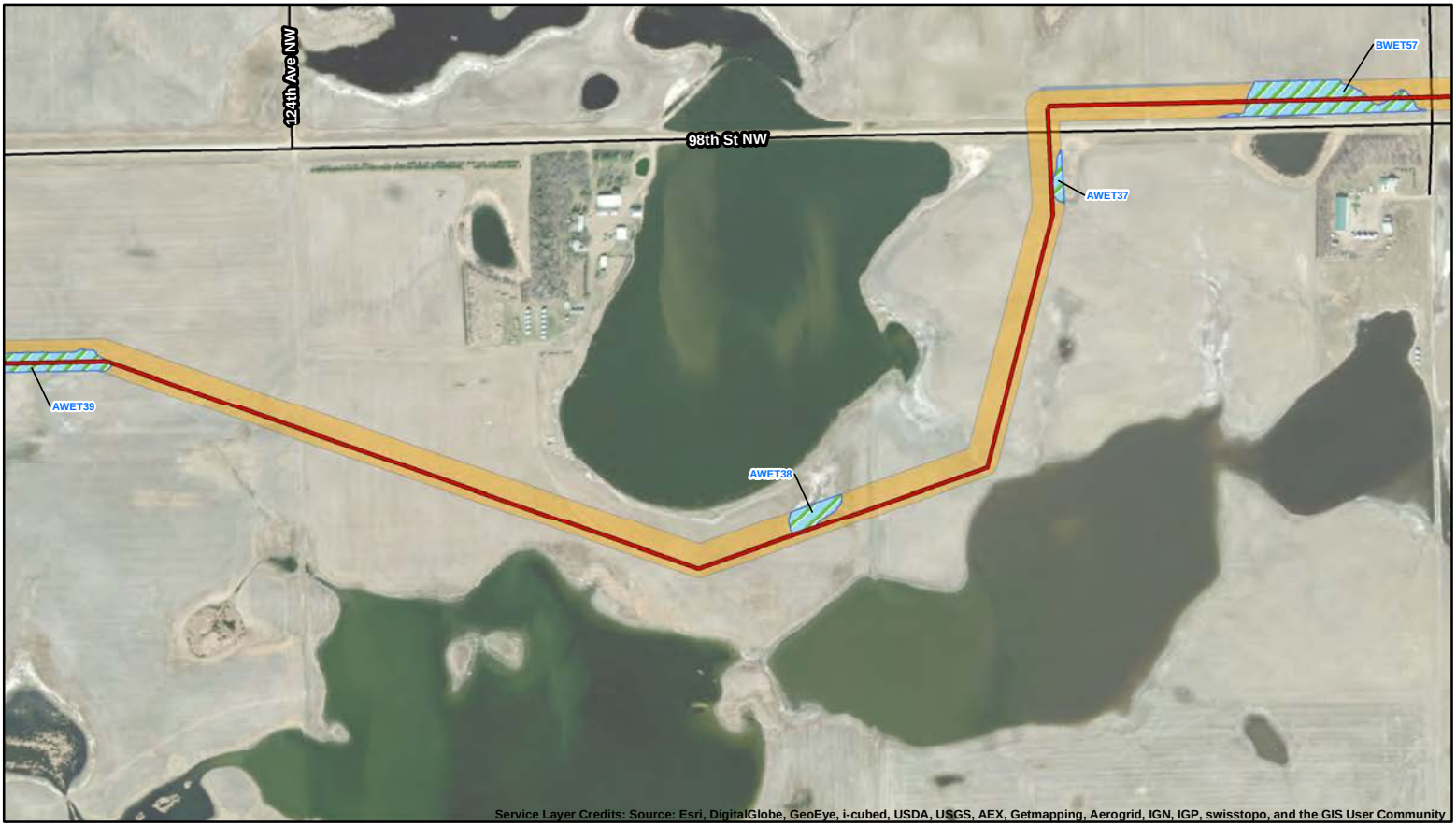
SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

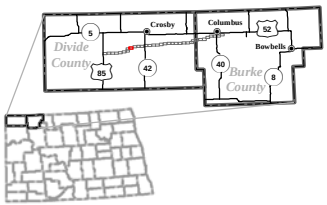
Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Crosby SE (1959), Crosby SW (1959)
Township/Range: T162N, R98W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N



Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



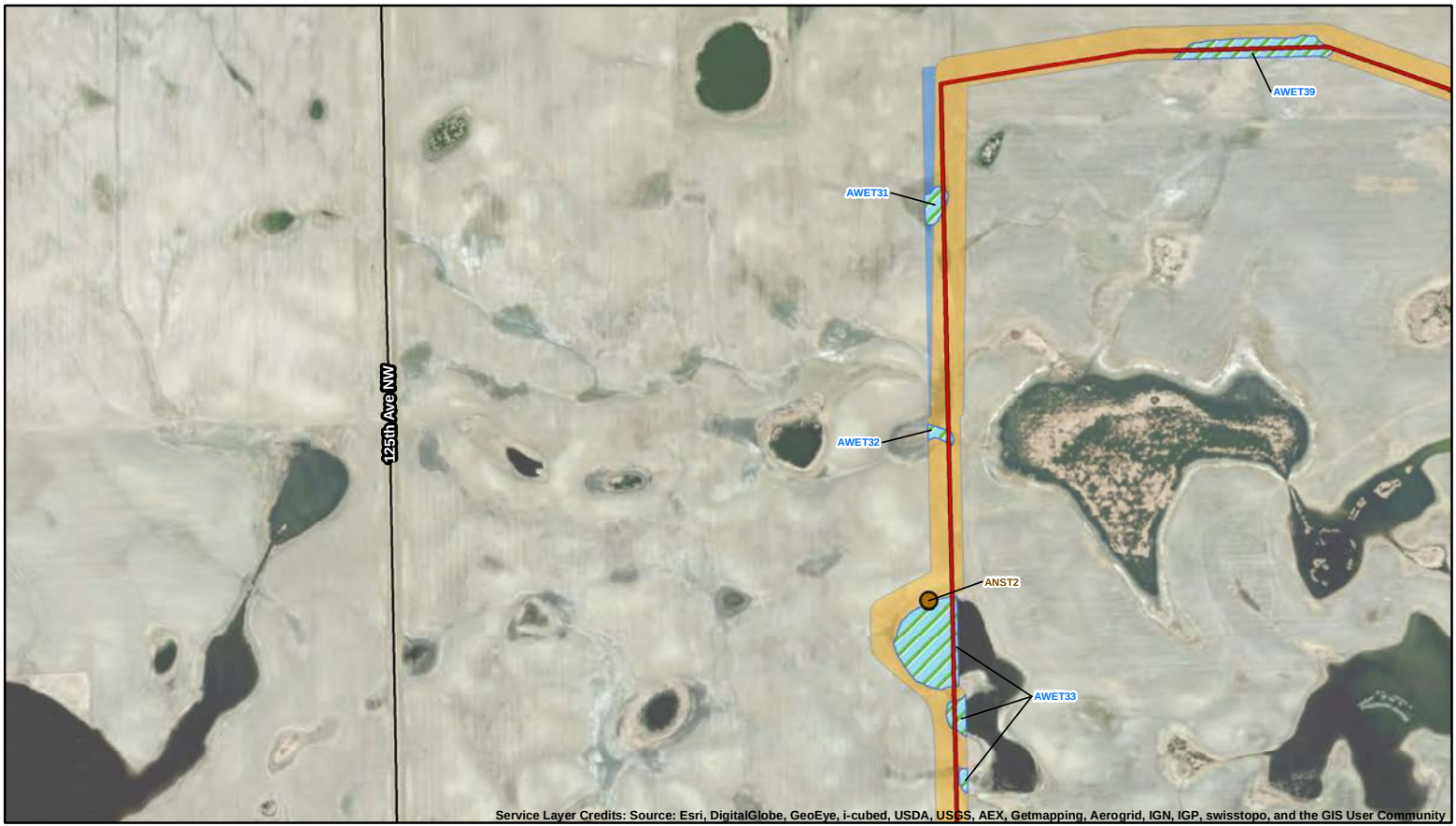
SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

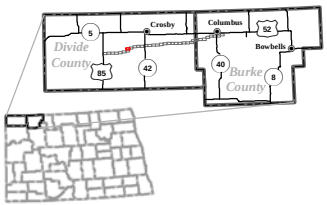
Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Crosby SW (1959)
Township/Range: T162N, R98W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N



Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

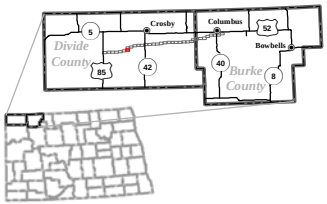
Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Crosby SW (1959)
Township/Range: T162N, R98W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N

Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

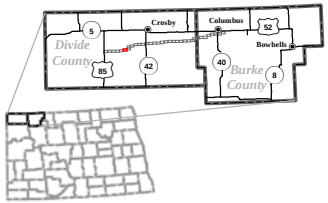
Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Crosby SW (1959)
Township/Range: T162N, R98W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N

Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



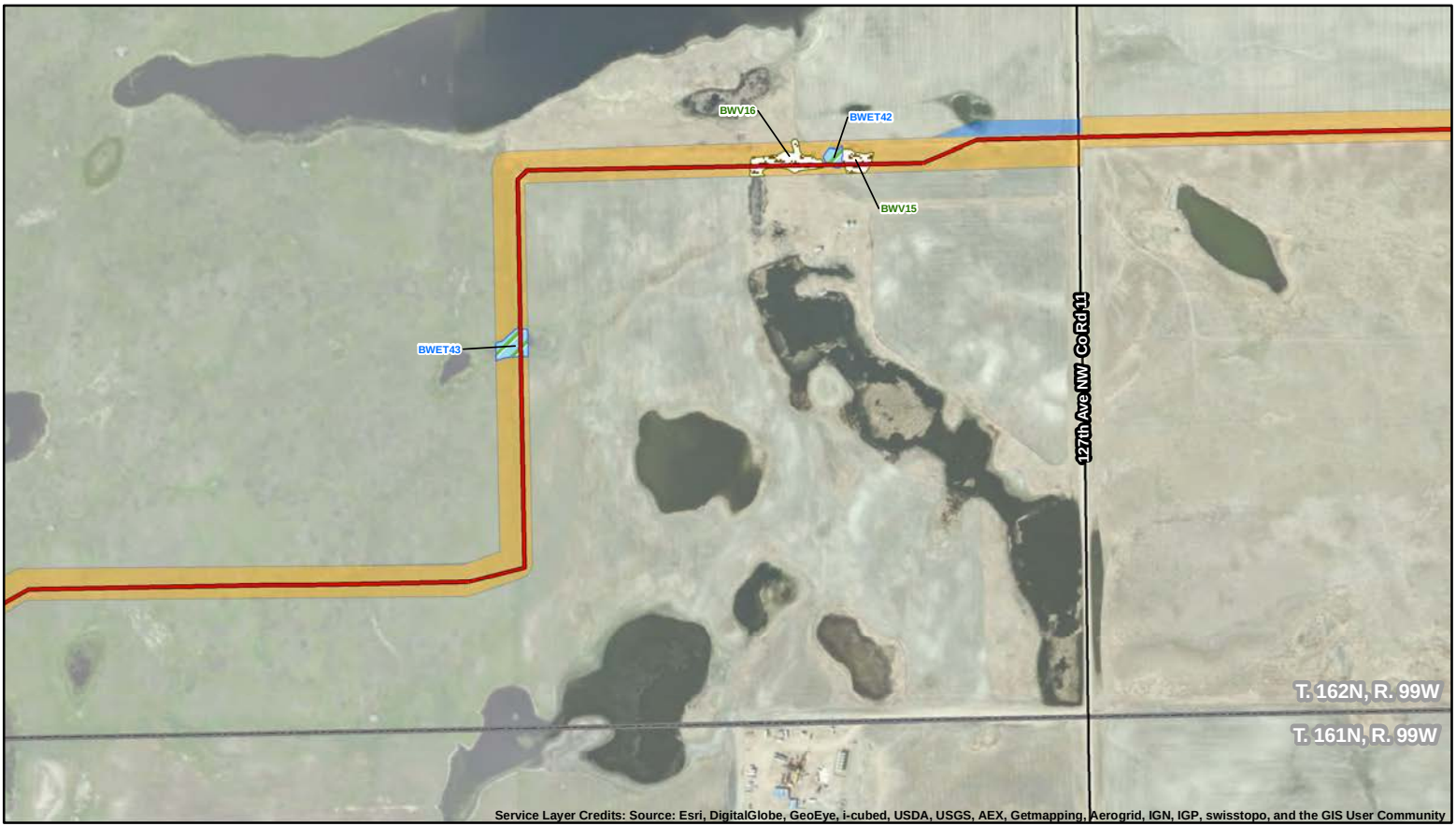
SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

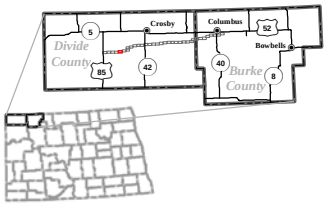
Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Crosby SW (1959)
Township/Range: T162N, R98W & T162N, R99W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N



Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

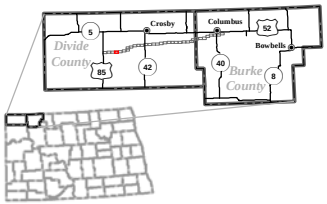
Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Crosby SW (1959), Colgan SE (1984)
Township/Range: T162N, R99W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N

Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

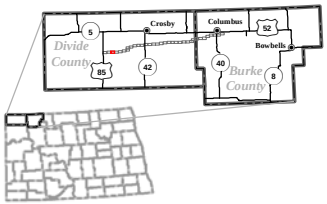
Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Colgan SE (1984)
Township/Range: T162N, R99W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N

Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

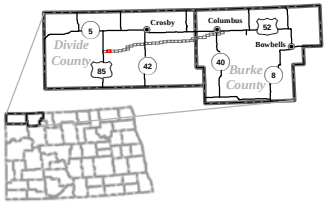
Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Colgan SE (1984)
Township/Range: T162N, R99W & T161N, R99W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N

Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

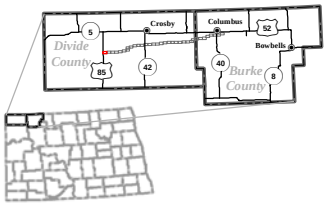
Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Colgan SE (1984)
Township/Range: T162N, R99W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N

Global Stampede

- Upland Data Point
- Nest
- Proposed Pipeline
- Existing Road
- Survey Area
- Previously Inventoried Area
- Township/Range Boundary
- Wetland
- Intermittent Stream
- Waterbody
- Woody Vegetation
- Noxious Weed
- County Boundary



SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

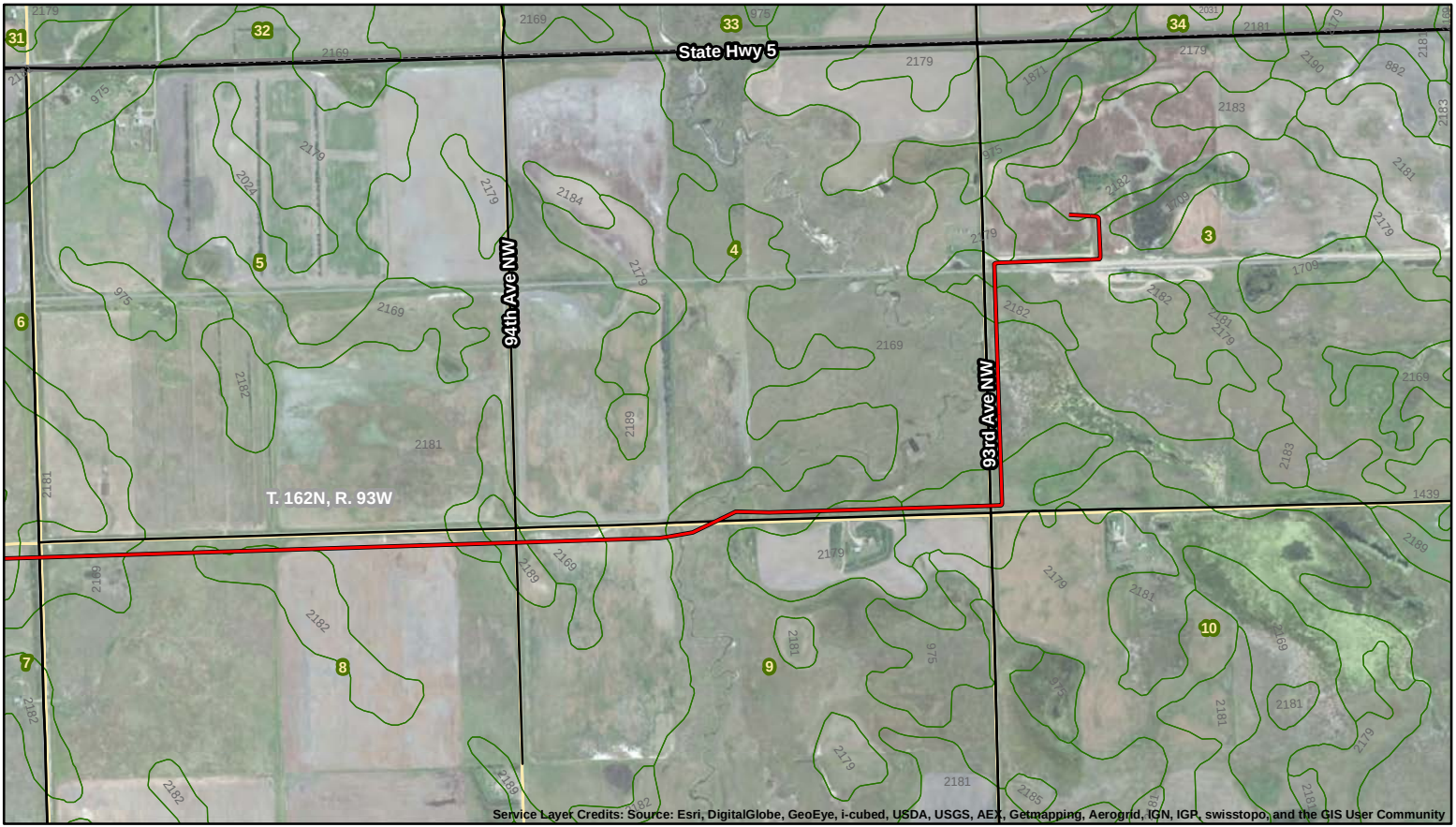
Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

Kilometers
0 0.25 0.5
Miles
0 0.2 0.4

Base Map: Aerial Imagery
Source: ESRI ArcGIS online service
Quadrangle: Colgan SE (1984)
Township/Range: T162N, R99W & T161N, R99W & T161N, R100W
Divide County, North Dakota

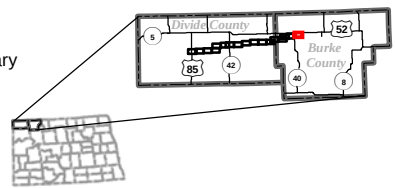
Projection: NAD 1983 UTM Zone 13N

APPENDIX B
Survey Area Soil Series Map



Global Stampede

- Proposed Pipeline
- Existing Road
- Soil Unit Boundary
- Township/Range Boundary
- County Boundary



SWCA®
ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

Kilometers
0 0.5 1

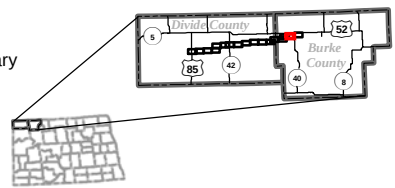
Miles
0 0.5 1

Base Map: Aerial Imagery
Source: esri ArcGIS Online service
Quadrangle: Stampede (1959), Columbus (1959)
Township/Range: T162N, R93W
Burke County, North Dakota

Projection: NAD 1983 UTM Zone 13N

Global Stampede

- Proposed Pipeline
- Existing Road
- Soil Unit Boundary
- Township/Range Boundary
- County Boundary



SWCA®
ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

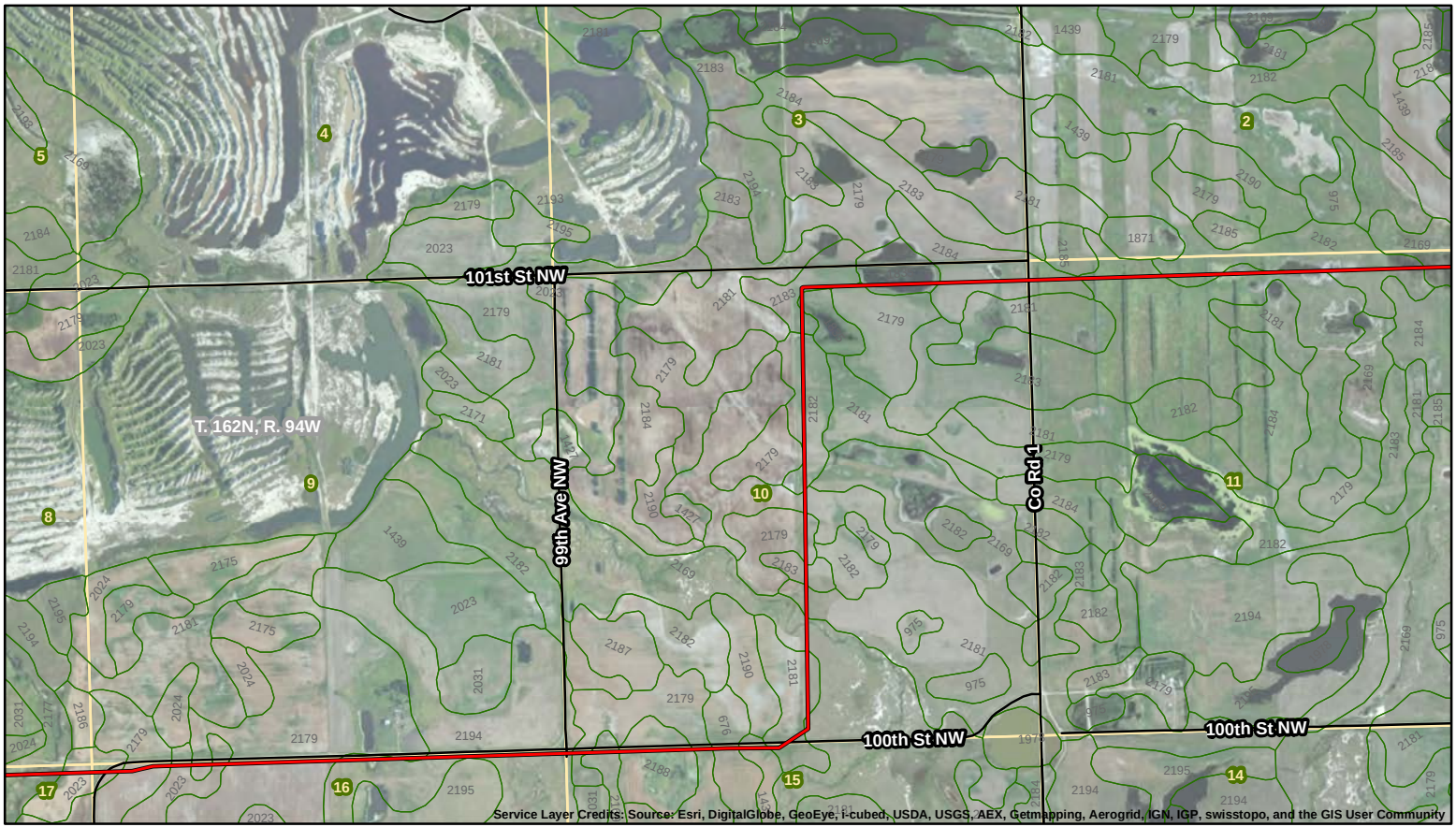
Kilometers
0 0.5 1

Miles
0 0.5 1

Base Map: Aerial Imagery
Source: esri ArcGIS Online service
Quadrangle: Columbus (1959)
Township/Range: T162N, R93W & T162N, R94W
Burke County, North Dakota

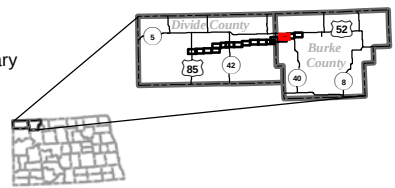
Projection: NAD 1983 UTM Zone 13N

N W E S



Global Stampede

- Proposed Pipeline
- Existing Road
- Soil Unit Boundary
- Township/Range Boundary
- County Boundary



SWCA®
ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

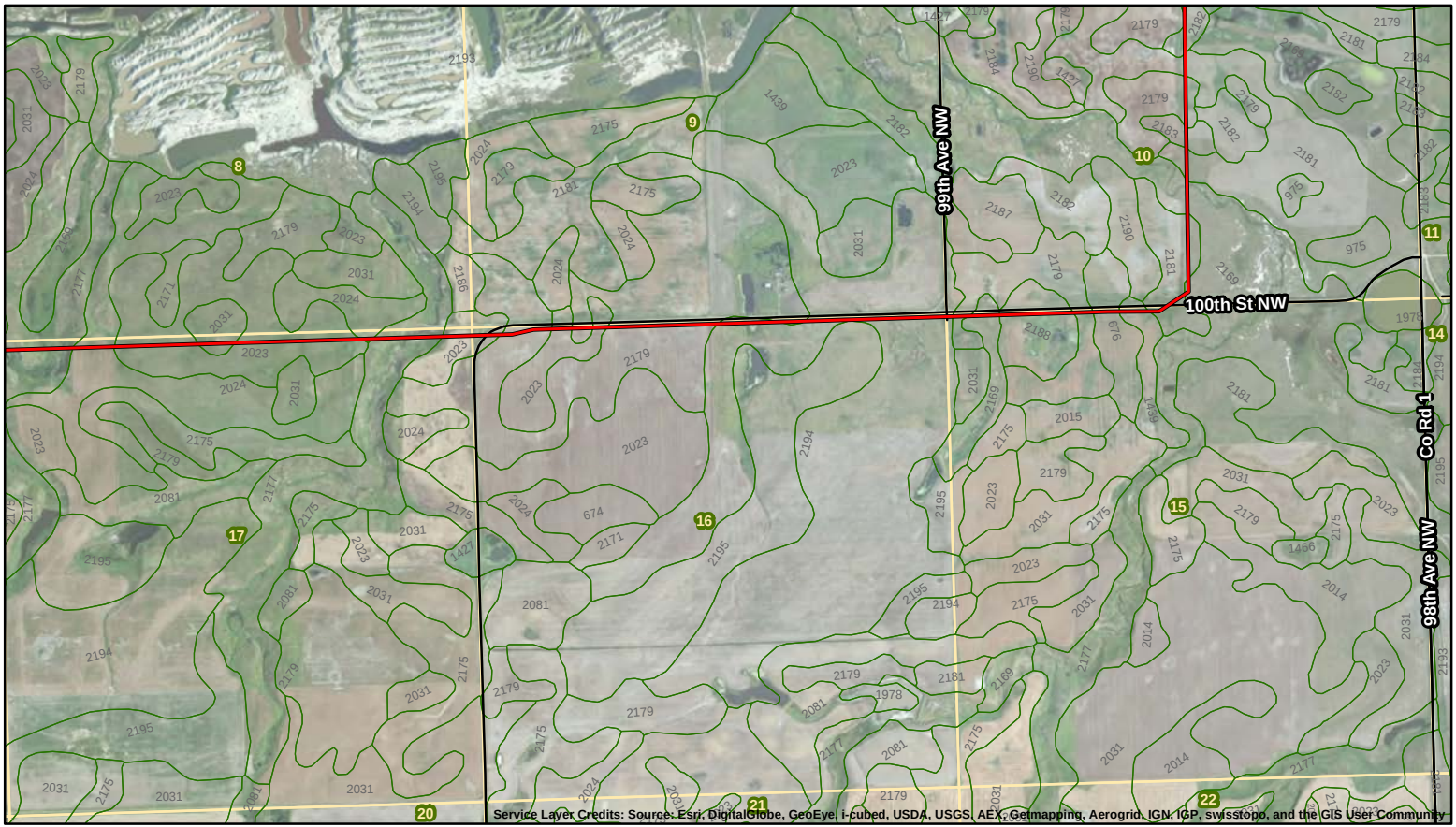
Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

Kilometers
0 0.5 1

Miles
0 0.5 1

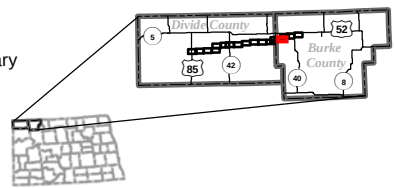
Base Map: Aerial Imagery
Source: esri ArcGIS Online service
Quadrangle: Columbus (1959), Columbus SE (1959), Columbus SW (1959)
Township/Range: T162N, R94W
Burke County, North Dakota

Projection: NAD 1983 UTM Zone 13N



Global Stampede

- Proposed Pipeline
- Existing Road
- Soil Unit Boundary
- Township/Range Boundary
- County Boundary



SWCA®
ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

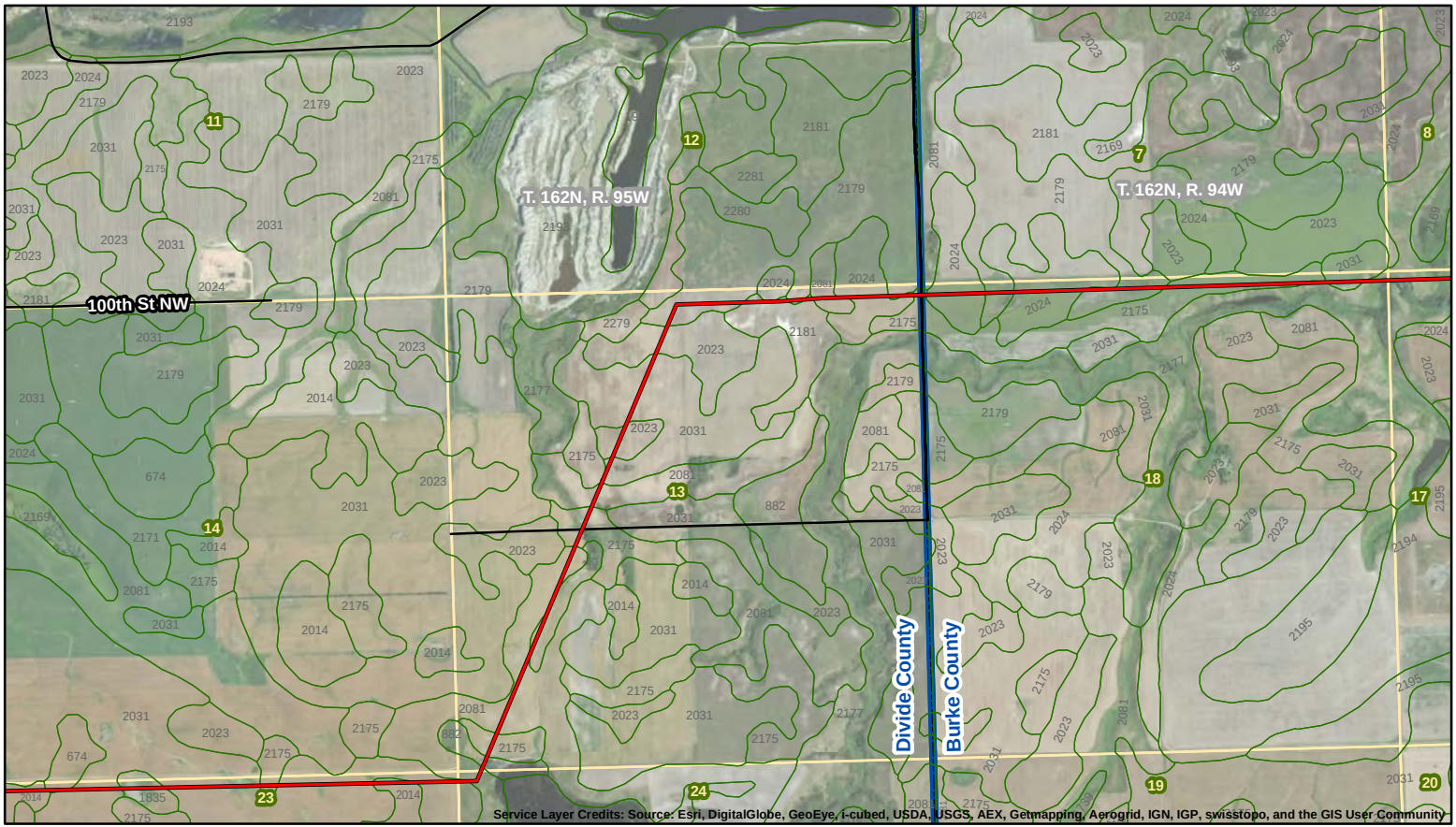
Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

Kilometers
0 0.5 1

Miles
0 0.5 1

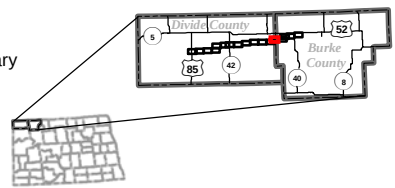
Base Map: Aerial Imagery
Source: esri ArcGIS Online service
Quadrangle: Columbus SE (1959), Columbus SW (1959)
Township/Range: T162N, R94W
Burke County, North Dakota

Projection: NAD 1983 UTM Zone 13N



Global Stampede

- Proposed Pipeline
- Existing Road
- Soil Unit Boundary
- Township/Range Boundary
- County Boundary



SWCA® ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

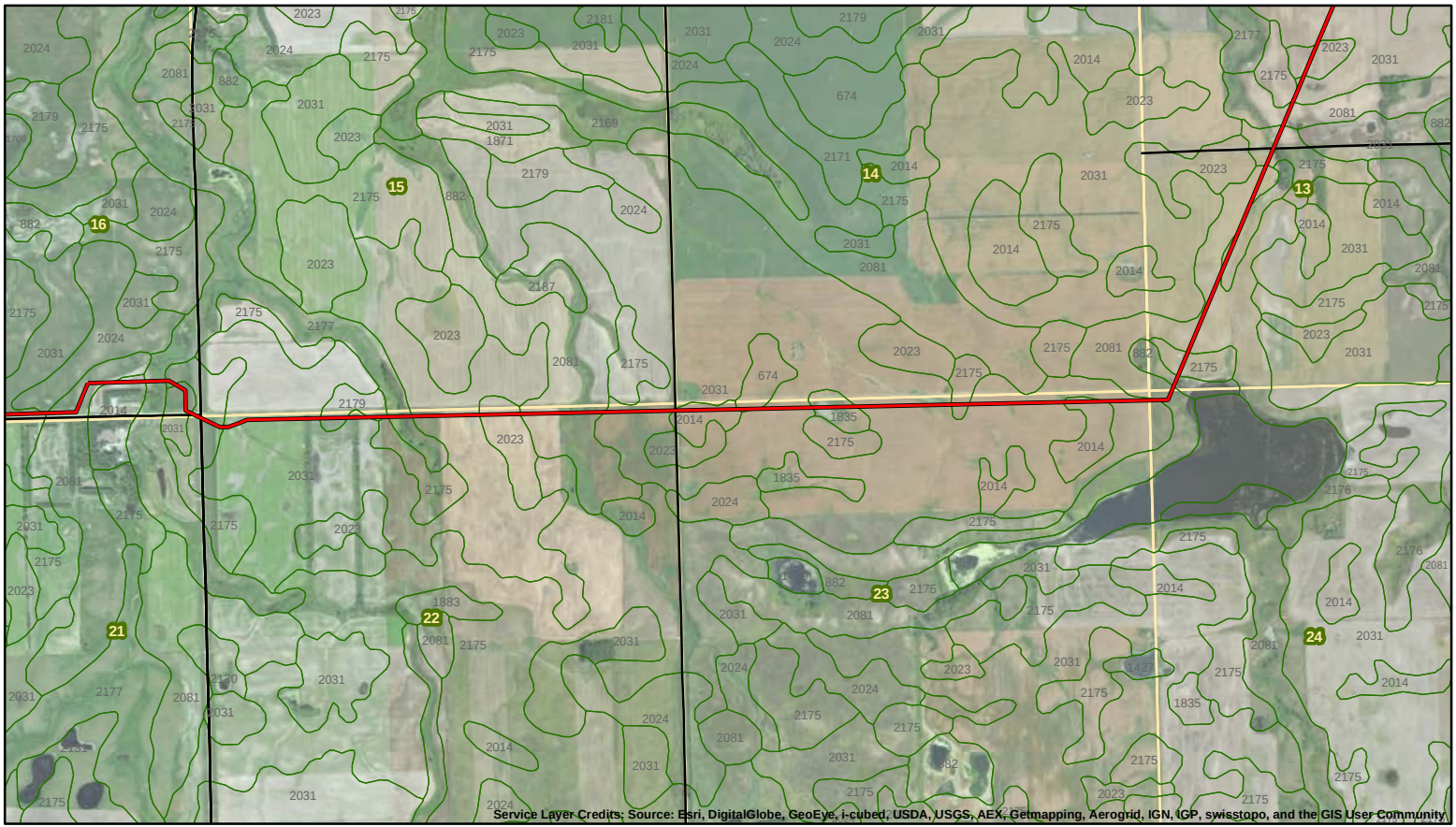
Kilometers
0 0.5 1

Miles
0 0.5 1

Base Map: Aerial Imagery
Source: esri ArcGIS Online service
Quadrangle: Columbus SW (1959)
Township/Range: T162N, R94W & T162N, R95W
Burke and Divide County, North Dakota

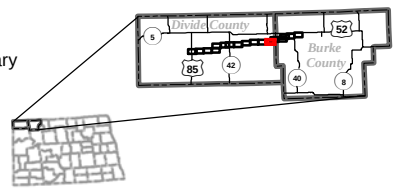
Projection: NAD 1983 UTM Zone 13N

N W E S



Global Stampede

- Proposed Pipeline
- Existing Road
- Soil Unit Boundary
- Township/Range Boundary
- County Boundary



SWCA®
ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

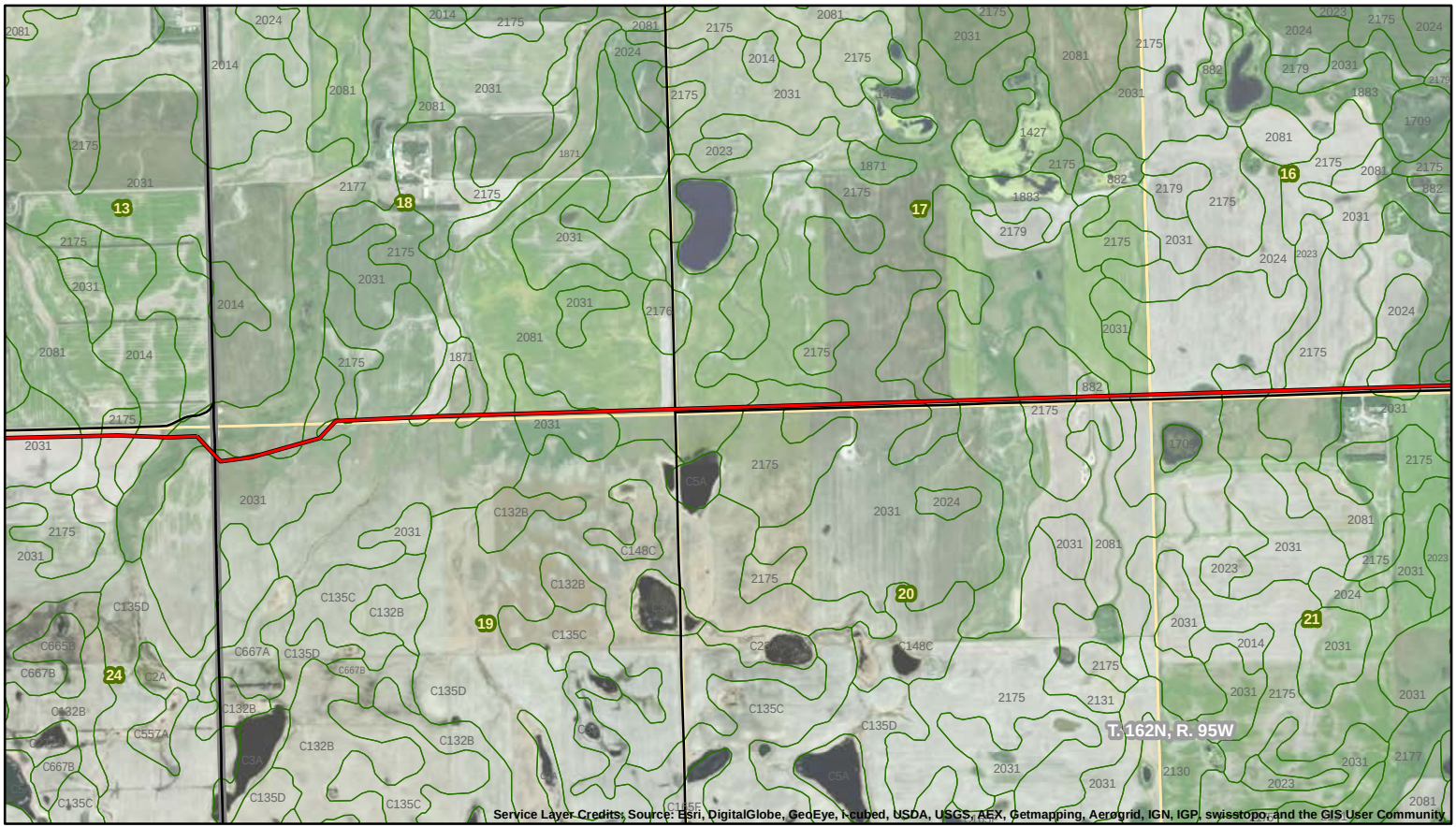
Kilometers
0 0.5 1

Miles
0 0.5 1

Base Map: Aerial Imagery
Source: esri ArcGIS Online service
Quadrangle: Columbus SW (1959), Noonan SE (1959)
Township/Range: T162N, R95W
Divide County, North Dakota

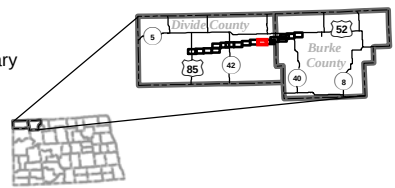
Projection: NAD 1983 UTM Zone 13N

N
W E
S



Global Stampede

- Proposed Pipeline
- Existing Road
- Soil Unit Boundary
- Township/Range Boundary
- County Boundary



SWCA®
ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

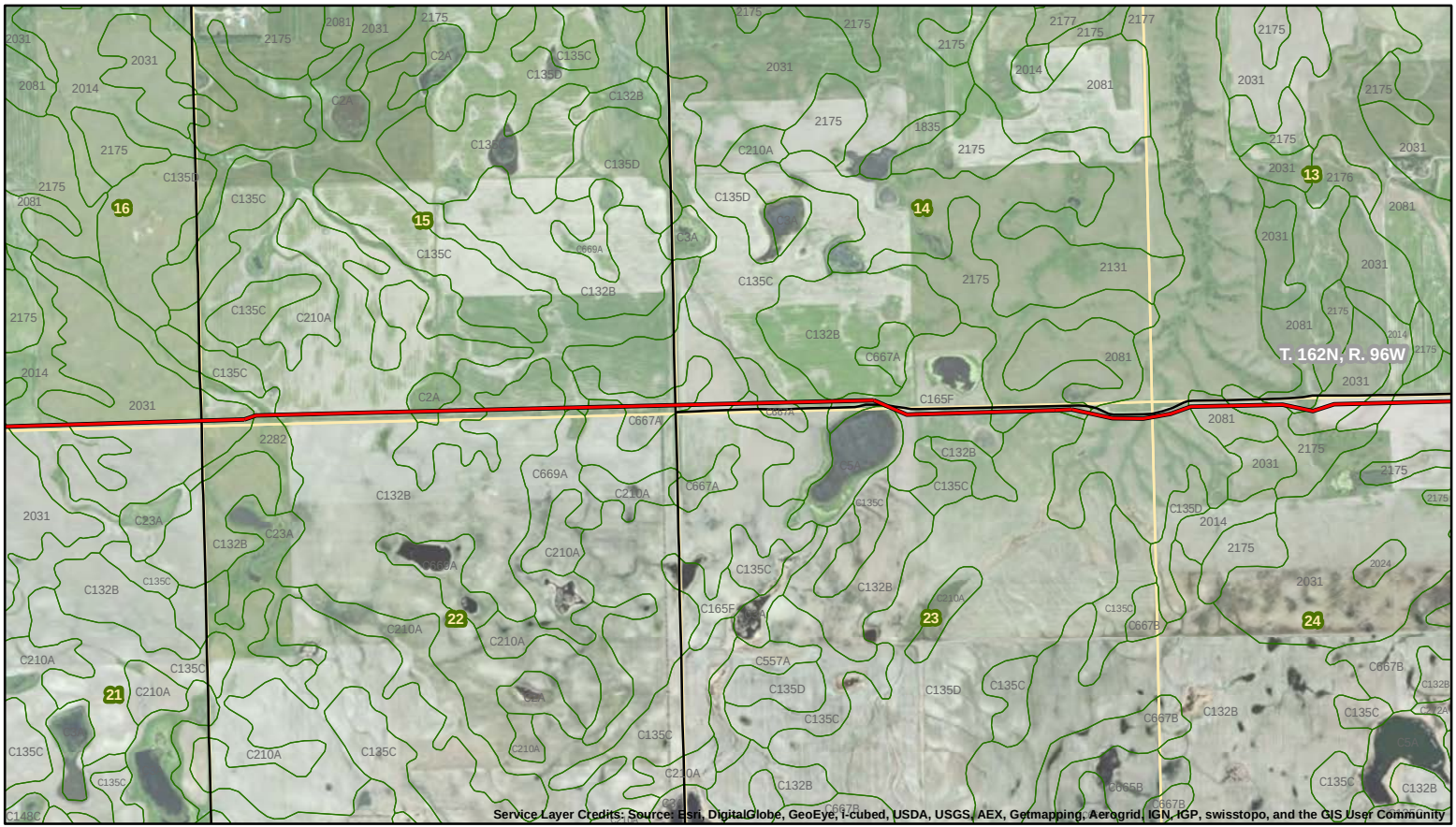
Kilometers
0 0.5 1

Miles
0 0.5 1

Base Map: Aerial Imagery
Source: esri ArcGIS Online service
Quadrangle: Noonan SE (1959)
Township/Range: T162N, R95W & T162N, R96W
Divide County, North Dakota

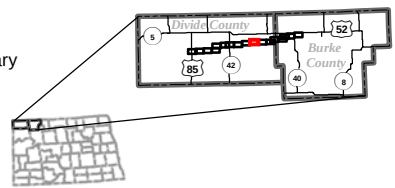
Projection: NAD 1983 UTM Zone 13N

N W E S



Global Stampede

- Proposed Pipeline
- Existing Road
- Soil Unit Boundary
- Township/Range Boundary
- County Boundary



SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

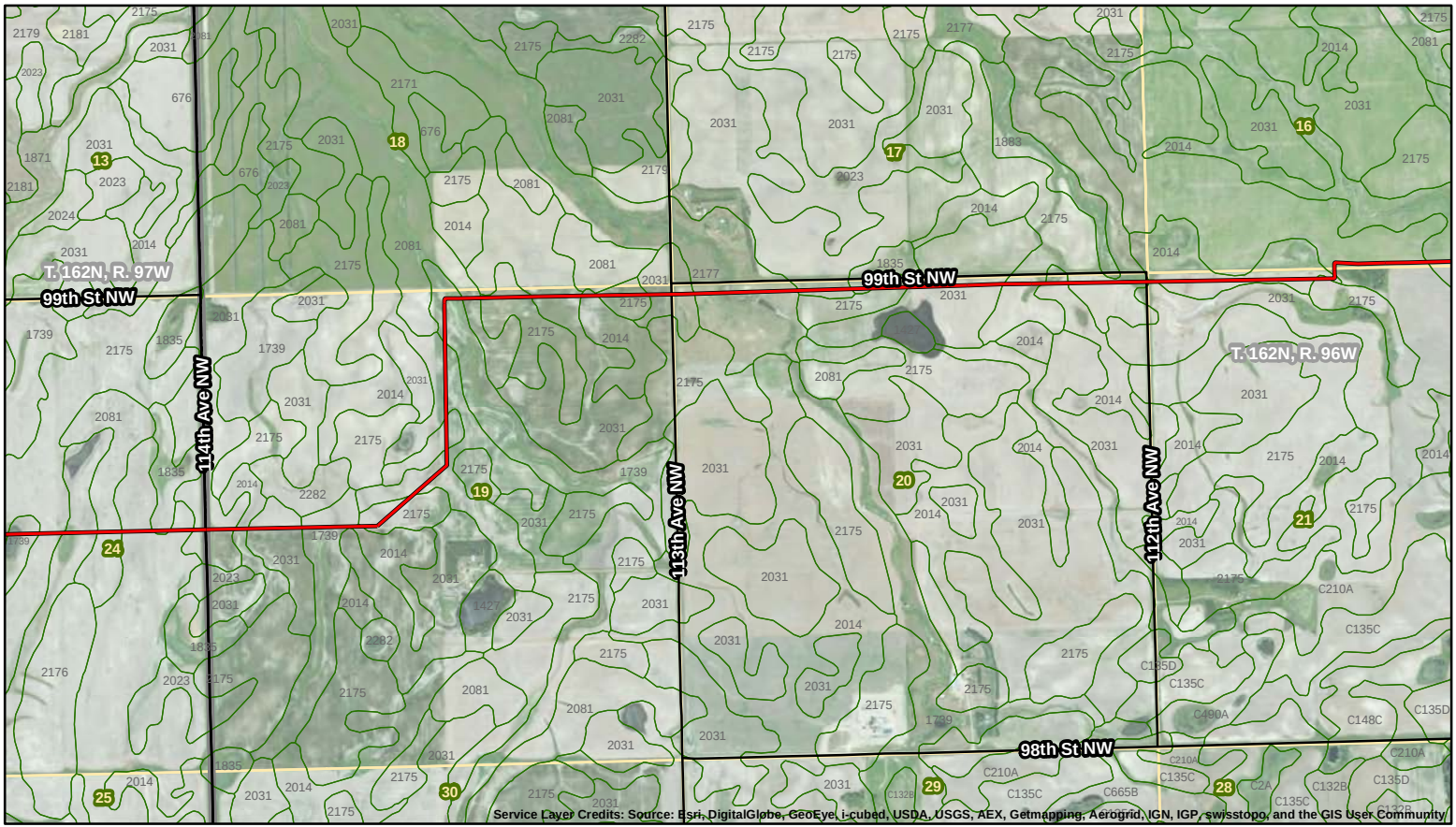
Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

Kilometers
0 0.5 1

Miles
0 0.5 1

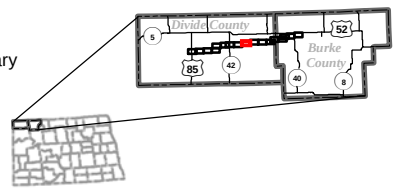
Base Map: Aerial Imagery
Source: esri ArcGIS Online service
Quadrangle: Noonan SE (1959), Noonan SW (1959)
Township/Range: T162N, R96W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N



Global Stampede

- Proposed Pipeline
- Existing Road
- Soil Unit Boundary
- Township/Range Boundary
- County Boundary



SWCA®
ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

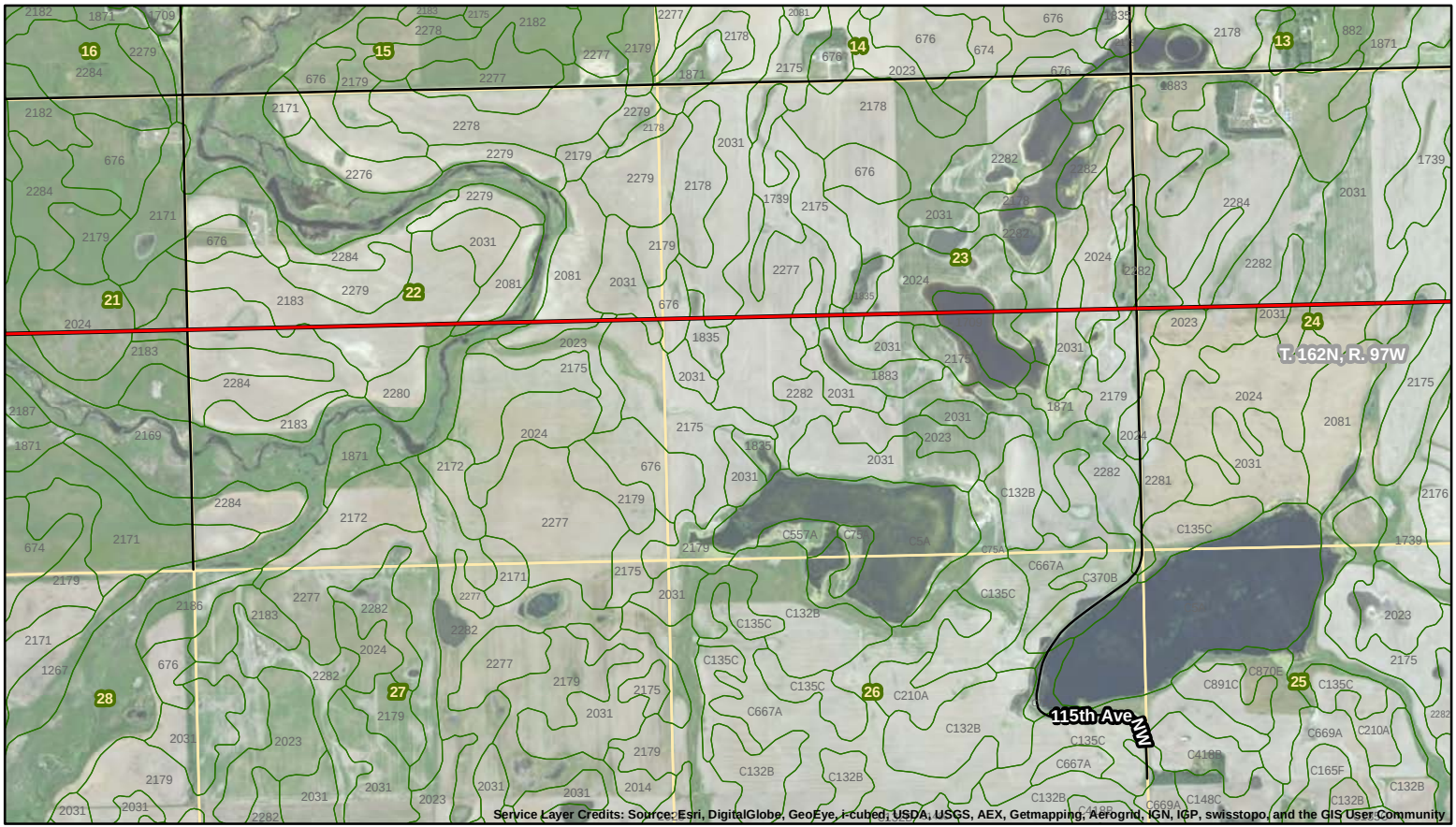
Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

Kilometers
0 0.5 1

Miles
0 0.5 1

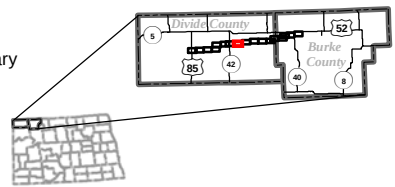
Base Map: Aerial Imagery
Source: esri ArcGIS Online service
Quadrangle: Noonan SW (1959)
Township/Range: T162N, R96W & T162N, R97W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N



Global Stampede

- Proposed Pipeline
- Existing Road
- Soil Unit Boundary
- Township/Range Boundary
- County Boundary



SWCA®
ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

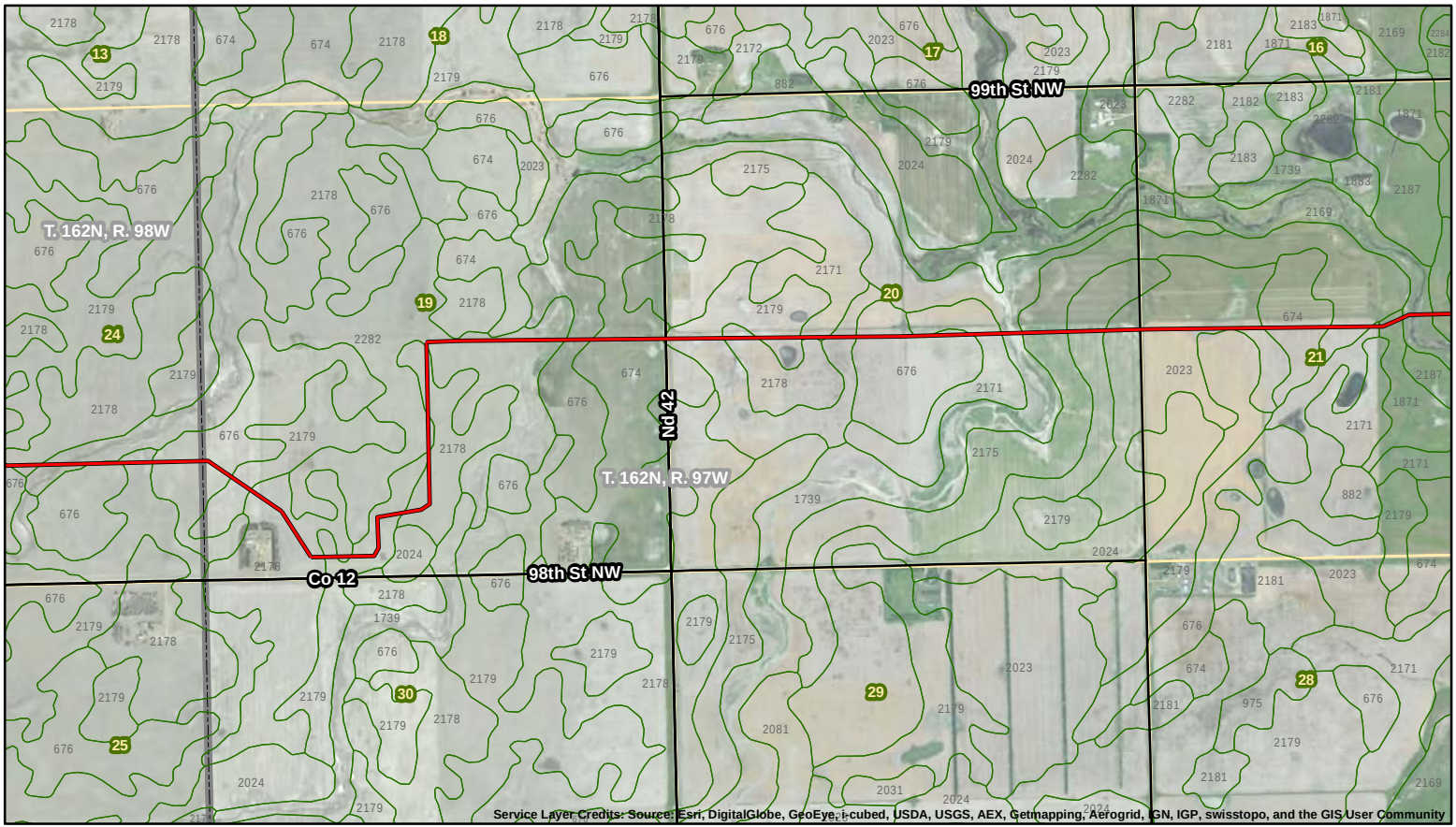
Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

Kilometers
0 0.5 1

Miles
0 0.5 1

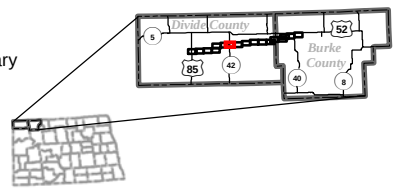
Base Map: Aerial Imagery
Source: esri ArcGIS Online service
Quadrangle: Noonan SW (1959), Crosby SE (1959)
Township/Range: T162N, R97W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N



Global Stampede

- Proposed Pipeline
- Existing Road
- Soil Unit Boundary
- Township/Range Boundary
- County Boundary



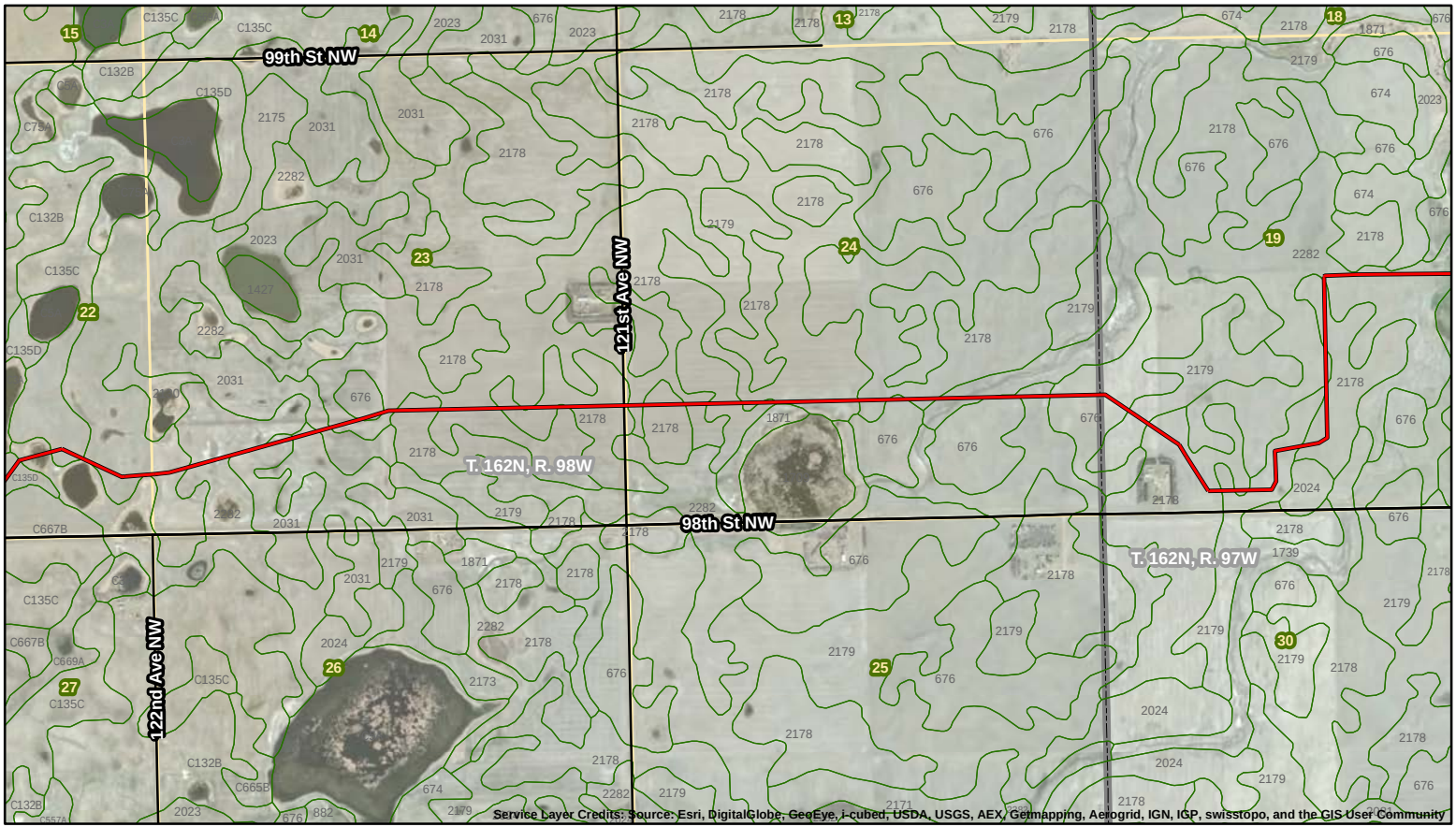
SWCA®
ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

Kilometers
0 0.5 1
Miles
0 0.5 1

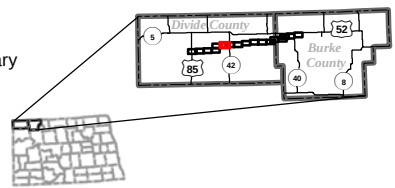
Base Map: Aerial Imagery
Source: esri ArcGIS Online service
Quadrangle: Crosby SE (1959)
Township/Range: T162N, R97W & T162N, R98W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N



Global Stampede

- Proposed Pipeline
- Existing Road
- Soil Unit Boundary
- Township/Range Boundary
- County Boundary



SWCA®
ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

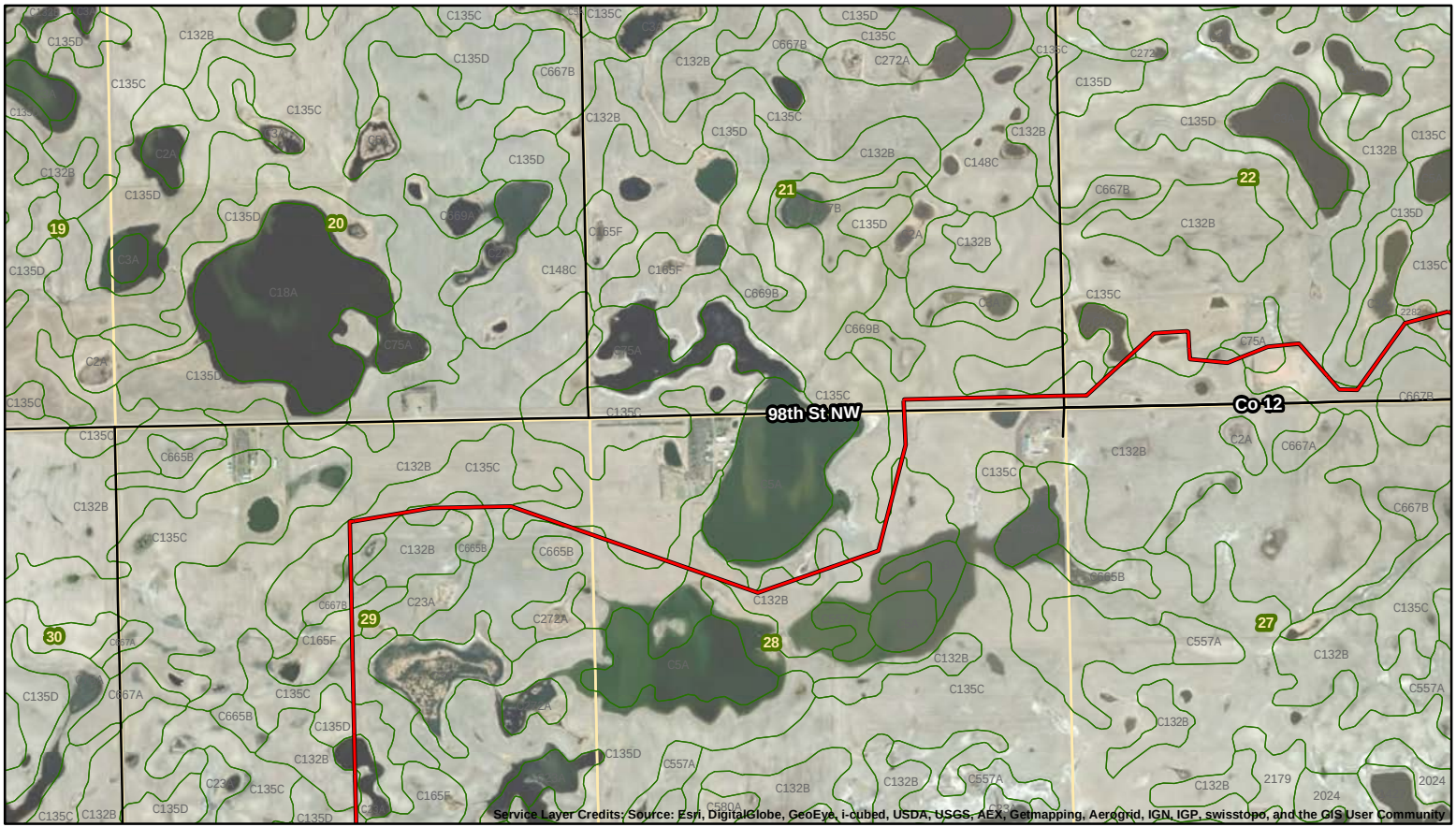
Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

Kilometers
0 0.5 1

Miles
0 0.5 1

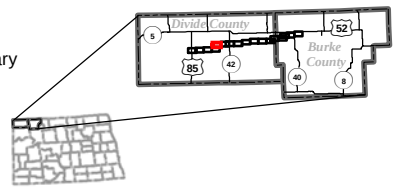
Base Map: Aerial Imagery
Source: esri ArcGIS Online service
Quadrangle: Crosby SE (1959), Crosby SW (1959)
Township/Range: T162N, R97W & T162N, R98W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N



Global Stampede

- Proposed Pipeline
- Existing Road
- Soil Unit Boundary
- Township/Range Boundary
- County Boundary



SWCA®
ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

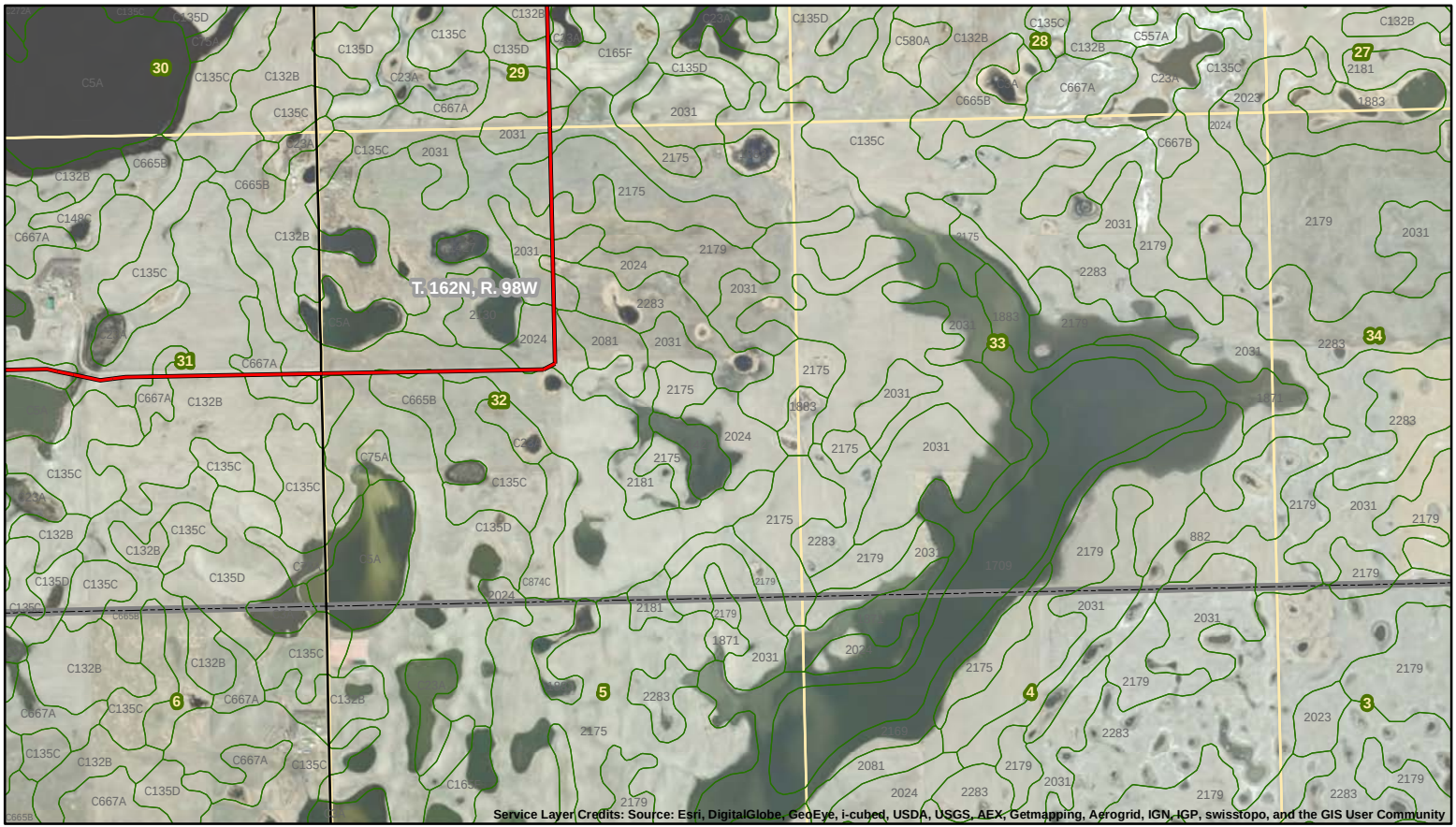
Kilometers
0 0.5 1

Miles
0 0.5 1

Base Map: Aerial Imagery
Source: esri ArcGIS Online service
Quadrangle: Crosby SW (1959)
Township/Range: T162N, R98W
Divide County, North Dakota

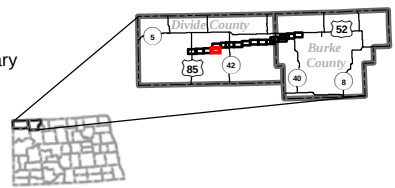
Projection: NAD 1983 UTM Zone 13N

N W E S



Global Stampede

- Proposed Pipeline
- Existing Road
- Soil Unit Boundary
- Township/Range Boundary
- County Boundary



SWCA®
ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

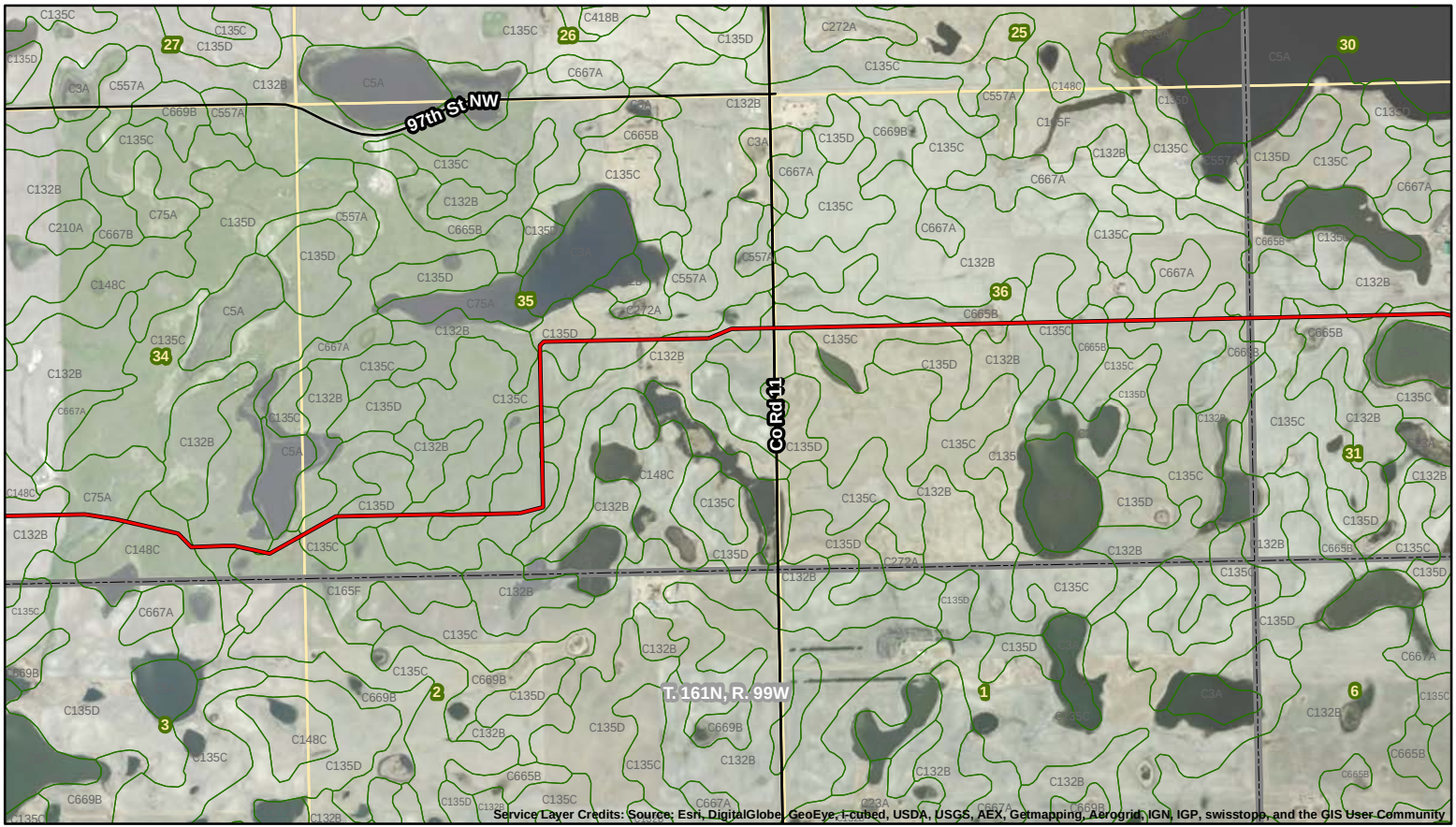
Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

Kilometers
0 0.5 1

Miles
0 0.5 1

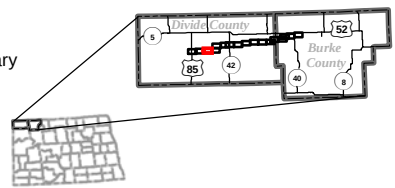
Base Map: Aerial Imagery
Source: esri ArcGIS Online service
Quadrangle: Crosby SW (1959)
Township/Range: T162N, R98W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N



Global Stampede

- Proposed Pipeline
- Existing Road
- Soil Unit Boundary
- Township/Range Boundary
- County Boundary

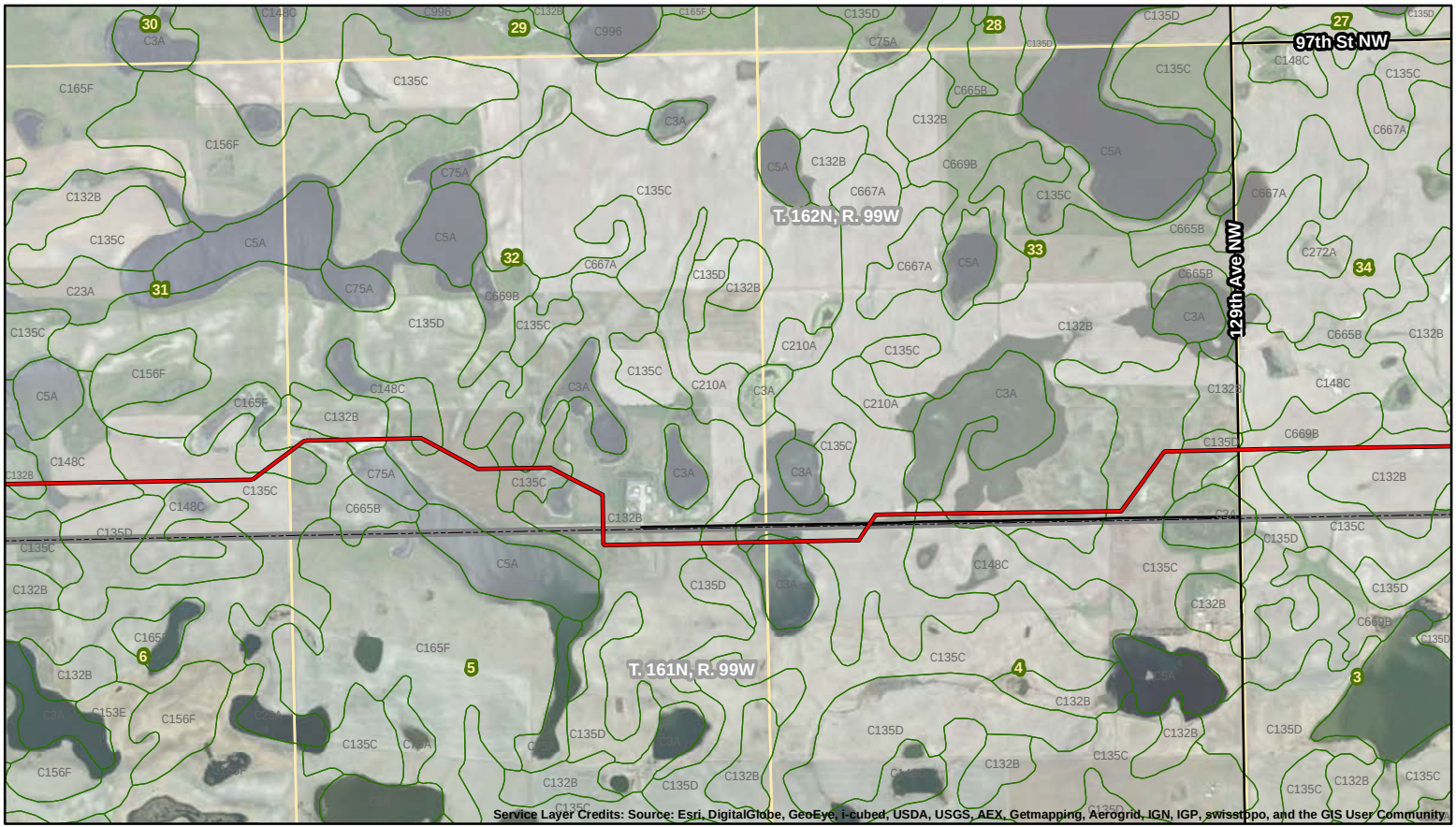


SWCA®
ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501
Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

Kilometers
0 0.5 1
Miles
0 0.5 1

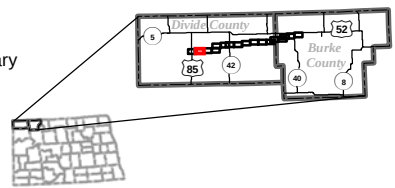
Base Map: Aerial Imagery
Source: esri ArcGIS Online service
Quadrangle: Crosby SW (1959), Colgan SE (1984)
Township/Range: T162N, R98W & T162N, R99W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N



Global Stampede

- Proposed Pipeline
- Existing Road
- Soil Unit Boundary
- Township/Range Boundary
- County Boundary



SWCA ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

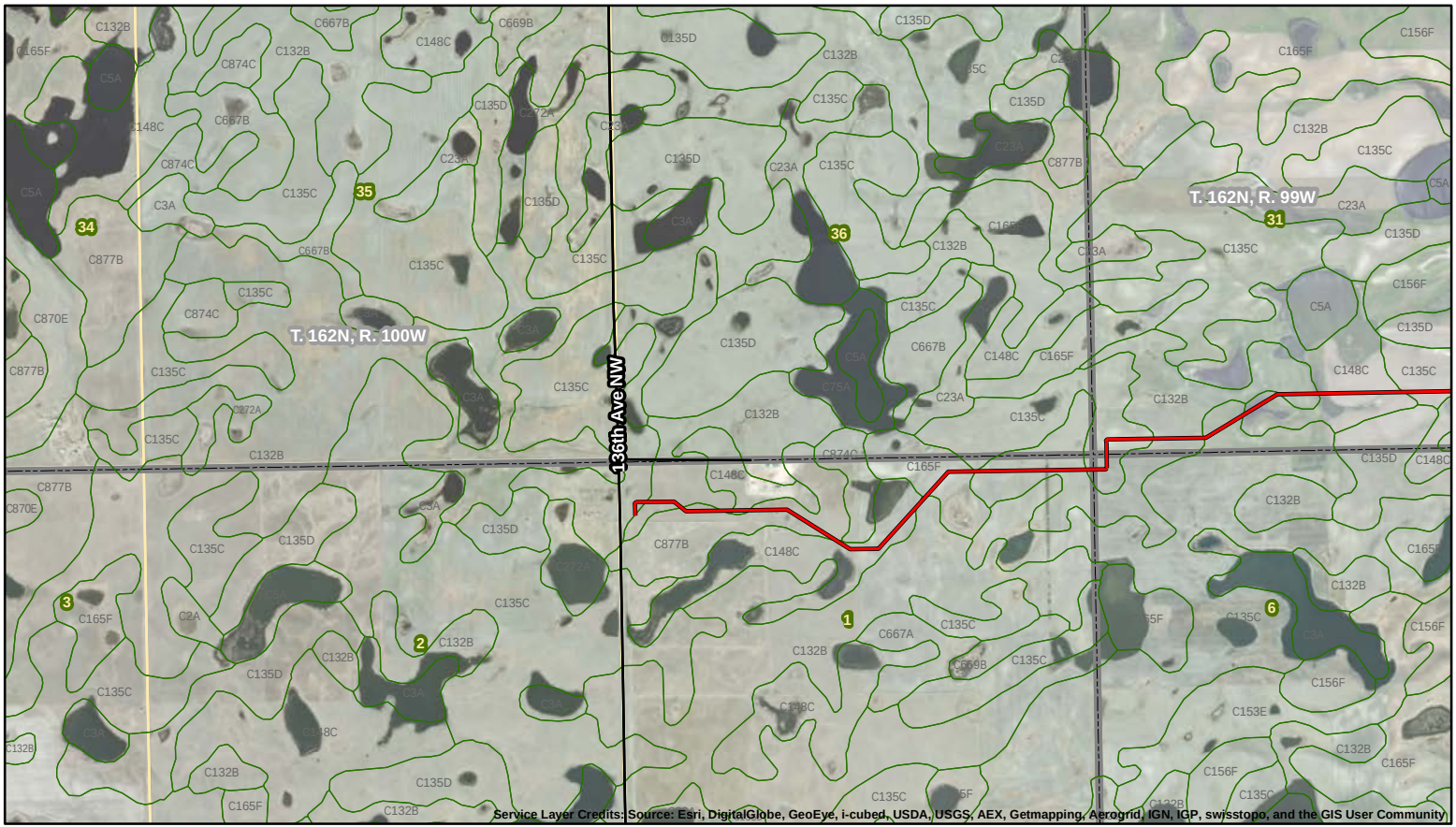
Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

Kilometers
0 0.5 1

Miles
0 0.5 1

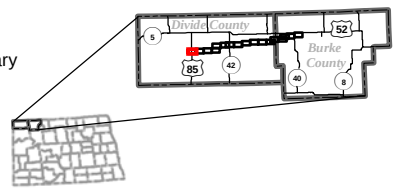
Base Map: Aerial Imagery
Source: esri ArcGIS Online service
Quadrangle: Colgan SE (1984)
Township/Range: T162N, R99W & T161N, R99W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N



Global Stampede

- Proposed Pipeline
- Existing Road
- Soil Unit Boundary
- Township/Range Boundary
- County Boundary



SWCA®
ENVIRONMENTAL CONSULTANTS
116 North 4th Street
Suite 200
Bismarck, ND 58501

Phone: 701.258.6622
Fax: 701.258.5957
www.swca.com

Kilometers
0 0.5 1

Miles
0 0.5 1

Base Map: Aerial Imagery
Source: esri ArcGIS Online service
Quadrangle: Colgan SE (1984)
Township/Range: T162N, R99W & T161N, R99W & T161N, R100W
Divide County, North Dakota

Projection: NAD 1983 UTM Zone 13N

APPENDIX C
Photographs of Project Area

Figure C.1. Semipermanent wetland (BWET1), facing southeast.

Figure C.2. Semipermanent wetland (BWET2), facing east.

Figure C.3. Patch of leafy spurge (BNX1), facing east.

Figure C.4. Semipermanent wetland (BWET6), facing north.

Figure C.5. Woody vegetation, green ash and Siberian peashrub (BWV5), facing west.

Figure C.6. Intermittent stream (BSTR2), facing south.

Figure C.7. Semipermanent wetland (AWET6), facing south.

Figure C.8. Permanent wetland (BWB1), facing northwest.

Figure C.9. Permanent wetland (AWET33), facing east.

Figure C.10. Permanent wetland (BWB3), facing northeast.

This page intentionally left blank.

Appendix E

Cultural Resource Report

Addendum to A Class I and Class III Cultural Resource Inventory of the Meadowlark Midstream Company Global Stampede Pipeline, Burke and Divide Counties, North Dakota, for Pipeline Alignment Reroutes

Prepared for

E3 Environmental, LLC

Prepared by

SWCA Environmental Consultants

October 2014

MANUSCRIPT DATA RECORD FORM

1. Manuscript Number:

2. SHPO Reference #:

3. Author(s): Stephanie Lechert

4. Title: Addendum to A Class I and Class III Cultural Resource Inventory of the Meadowlark Midstream Company Global Stampede Pipeline, Burke and Divide Counties, North Dakota, for Pipeline Alignment Reroutes

5. Report Date: October 22, 2014

6. Number of Pages: 67

7. Type – I, T, E, O: I

8. Acres: 65.76

9. Legal Location(s) (no quarter sections) with Historic Context Study Unit(s): Consult the township tables in *The North Dakota Comprehensive Plan for Historic Preservation: Archeological Component*, (SHSND 2008; available at http://history.nd.gov/hp/hpforms.html) for Study Unit assignments.
Study Units: LM, CB, KN, HE, SM, GA, JA, GR, NR, SR, SO, SH, YE

COUNTY	TWP	RNG	SEC	SU
Burke	162N	93W	3, 4, 9	SO
Burke	162N	94W	10	SO
Divide	162N	95W	15, 16, 21, 22	SO
Divide	162N	96W	14, 15, 16, 19, 20, 21, 23, 24	SO
Divide	162N	97W	19, 21, 22, 23, 24	SO
Divide	162N	98W	21, 22, 29, 31, 32	SO
Divide	162N	99W	31, 32, 33, 34, 35, 36	SO
Divide	161N	99W	4, 5, 6	SO
Divide	161N	100W	1	GA

Addendum to A Class I and Class III Cultural Resource Inventory of the Meadowlark Midstream Company Global Stampede Pipeline, Burke and Divide Counties, North Dakota, for Pipeline Alignment Reroutes

Submitted to:

State Historical Society of North Dakota

Prepared for:

E3 Environmental, LLC
871 Jefferson Avenue
St. Paul, Minnesota 55102

Prepared by:

Stephanie Lechert

Principal Investigator:

William Harding

SWCA Environmental Consultants
116 North 4th Street, Suite 200
Bismarck, North Dakota 58501

SWCA Cultural Resource Report Number 14-539
Addendum to SWCA Cultural Resource Report Number 14-328
Addendum to NDSHPO Manuscript Number 15380

October 22, 2014

ABSTRACT

This report is an addendum to the Class I and Class III cultural resource inventory report for the proposed Global Stampede pipeline (Schleicher et al. 2014), and presents the results of a Class III cultural resource inventory conducted by SWCA Environmental Consultants (SWCA) on September 30 and October 1 and 2, 2014, on behalf of E3 Environmental, LLC, in support of reroutes to the proposed Global Stampede pipeline alignment. An update to the Class I cultural resource inventory was conducted on September 26, 2014. Meadowlark Midstream Company, LLC, proposes to construct the Global Stampede pipeline on privately owned lands in Burke and Divide Counties, North Dakota.

The proposed Global Stampede pipeline would be located on private land in 36 sections, spanning across Township (T) 162 North (N), Range (R) 93 West (W); T162N, R94W; T192N, R95W; T162N, R96W; T162N, R97W; T162N, R98W; T162N, R99W; T161N, R99W; and T161N, R100W; and is situated on the Stampede (1959), Columbus (1959), Columbus SE (1959), Columbus SW (1959), Noonan SE (1959), Noonan SW (1959), Crosby SE (1959), Crosby SW (1959), and Colgan (1984), North Dakota, U.S. Geological Survey 7.5-minute quadrangles. The inventory area for the pipeline reroutes consists of a non-overlapping linear survey corridor up to 110 feet wide to compensate for shifting the proposed centerline. In total, 65.76 acres were inventoried for the project. Portions of the currently proposed Global Stampede pipeline reroutes are located within areas previously inventoried for the original alignment of the Global Stampede pipeline (Schleicher et al. 2014).

During the inventory, SWCA revisited the mapped locations of 12 previously recorded cultural resources (32BK68, 32DV143, 32DV144, 32BKX776, 32DVX205, 32DVX206, 32DVX214, 32DVX219, 32DVX220, 32DVX244, 32DVX246, and 32DVX247). 32BK68 was previously determined eligible for listing in the National Register of Historic Places (NRHP), with concurrence from the North Dakota State Historic Preservation Office on August 29, 2014 (Merlan E. Paaverud, Jr., personal communication 2014). SWCA recommends project disturbance avoid all potentially eligible and unevaluated resources by 50 feet. 32BK68 will be avoided through the use of a horizontal directional drill beneath the site. 32DV143 and 32DV144 were both previously determined not eligible for the NRHP, with concurrence from the North Dakota State Historic Preservation Office on August 29, 2014 (Merlan E. Paaverud, Jr., personal communication 2014). SWCA recommends 32DV143 and 32DV144 both remain not eligible for the NRHP. No further work is recommended for these resources.

The previously recorded site lead resources consist one historic post office site lead (32BKX776), and eight site leads of unknown cultural or temporal origin (32DVX205, 32DVX206, 32DVX214, 32DVX219, 32DVX220, 32DVX244, 32DVX246, and 32DVX247). 32BKX776 is recommended to remain not eligible for the NRHP while the remaining eight previously recorded cultural resource site leads remain unevaluated regarding their eligibility for the NRHP. Although attempts were made to relocate the site leads within the project area, after intensive examination, none were relocated during the current inventory; they may be located within the documented site boundary outside the project area. No further work is recommended for these resources.

One historic isolated find (32DVX435) was newly recorded during the inventory. By definition, isolated finds are considered to lack integrity and are not eligible for the NRHP; therefore, 32DVX435 is not eligible for inclusion in the NRHP. No further work is recommended. With the above stipulations, it is recommended that a determination of *No Significant Sites Affected* and *No Historic Properties Affected* be granted for the project to proceed as planned.

A Class I and Class III Cultural Resource Inventory of the Meadowlark Midstream Company Global Stampede Pipeline, Burke and Divide Counties, North Dakota

Prepared for

E3 Environmental, LLC

Prepared by

SWCA Environmental Consultants

July 2014

MANUSCRIPT DATA RECORD FORM

1. Manuscript Number:

2. SHPO Reference #:

3. Author(s): Jolene Schleicher, Craig Picka, Aidan McCarty, and Carolyn Riordan

4. Title: A Class I and Class III Cultural Resource Inventory of the Meadowlark Midstream Company Global Stampede Pipeline, Burke and Divide Counties, North Dakota

5. Report Date: July 18, 2012

6. Number of Pages: 154

7. Type – I, T, E, O: I

8. Acres: 869.68

9. Legal Location(s) (no quarter sections) with Historic Context Study Unit(s):
Consult the township tables in *The North Dakota Comprehensive Plan for Historic Preservation: Archeological Component*, (SHSND 2008; available online at http://history.nd.gov/hp/hpforms.html) for Study Unit assignments.
Study Units: LM, CB, KN, HE, SM, GA, JA, GR, NR, SR, SO, SH, YE

COUNTY	TWP	RNG	SEC	SU
Burke	162N	93W	3, 4, 7, 8, 9	SO
Burke	162N	94W	10, 11, 12, 15, 16, 17, 18	SO
Divide	162N	95W	13, 16, 17, 18, 19, 21, 22, 23, 24	SO
Divide	162N	96W	14, 15, 16, 19, 20, 21, 23, 24	SO
Divide	162N	97W	19, 20, 21, 22, 23, 24	SO
Divide	162N	98W	21, 22, 23, 24, 28, 29, 31, 32	SO
Divide	162N	99W	31, 32, 33, 34, 35, 36	SO
Divide	161N	99W	4, 5, 6	SO
Divide	161N	100W	1	GA

A Class I and Class III Cultural Resource Inventory of the Meadowlark Midstream Company Global Stampede Pipeline, Burke and Divide Counties, North Dakota

Submitted to:

State Historical Society of North Dakota

Prepared for:

E3 Environmental, LLC
871 Jefferson Street
St. Paul, Minnesota 55114

Prepared by:

Jolene Schleicher, Craig Picka, Aidan McCarty, and Carolyn Riordan

Principal Investigator:

William Harding

SWCA Environmental Consultants
116 North 4th Street, Suite 200
Bismarck, North Dakota 58501

SWCA Cultural Resource Report No. 14-328

July 18, 2014

ABSTRACT

SWCA Environmental Consultants (SWCA) conducted a Class I and Class III cultural resource inventory on behalf of E3 Environmental, LLC (E3) for the Meadowlark Midstream Company Global Stampede pipeline project. This pipeline is approximately 46.1 miles long and is located on private lands in Burke and Divide Counties, North Dakota. The project is located in an area classified as the prairie pothole region, a region spanning from central Alberta, Canada, to north-central Iowa, which is characterized by numerous small depressional wetlands caused by glacial events (U.S. Geological Survey 2006).

E3 retained SWCA to complete a Class I and Class III cultural resource inventory for the proposed project area. The only regulatory agencies to be involved are 1) the North Dakota Public Service Commission under the North Dakota Energy Conversion and Transmission Facility Siting Act (excluding any applicable county or local requirements), and 2) the U.S. Army Corps of Engineers through Section 404 of the Clean Water Act, which regulates discharge into waters of the U.S. regulated by the U.S. Army Corps of Engineers. Therefore, SWCA's Class I and III inventory of the project area assists E3 in meeting the cultural resource requirements within the North Dakota Public Service Commission's Certificate of Corridor Compatibility and Route Permit application. Additionally, SWCA's inventory assisted E3 in achieving compliance with Section 404 of the Clean Water Act, including the Nationwide Permit General Conditions pertaining to Section 106 of the National Historic Preservation Act and the Endangered Species Act.

The proposed Global Stampede pipeline would be located on private land in 52 sections, spanning across Township (T) 162 North (N), Range (R) 93 West (W); T162N, R94W; T192N, R95W; T162N, R96W; T162N, R97W; T162N, R98W; T162N, R99W; T161N R99W; and T161N, R100W.

The Class I inventory was conducted on June 11, 2014, and the Class III inventory was conducted on June 16 through 19, 2014. The Class III survey area consisted of a 150-foot-wide survey corridor centered on the 46.1-mile-long proposed pipeline centerline. The survey corridor was widened in some places to allow for pipeline reroutes. In total, 869.68 acres were inventoried.

During the inventory, SWCA revisited the mapped locations of 10 previously recorded cultural resources (32BK12, 32BKX776, 32DVX206, 32DVX214, 32DVX219, 32DVX220, 32DVX243, 32DVX244, 32DVX246, and 32DVX247) and newly recorded 14 cultural resources (32BK68, 32BK155, 32BK156, 32DV141, 32DV142, 32DV143, 32BK157, 32DV144, 32DV145, 32BKX1003, 32DVX432, 32BKX1004, 32DVX433, and 32DVX434). The previously recorded resources consist of a quarry/mine site (32BK12); and nine site leads of unknown cultural or temporal origin (32BKX776, 32DVX206, 32DVX214, 32DVX219, 32DVX220, 32DVX243, 32DVX244, 32DVX246, and 32DVX247). All 10 previously recorded cultural resources remain unevaluated regarding their eligibility for the NRHP. Although attempts were made to relocate the site and site leads within the project area, after intensive examination, none were relocated during the current inventory; they may be located within the documented site boundary outside the project area. No further work is recommended for these resources. The newly recorded resources are all historic, and consist

of a newly recorded segment of a previously recorded railroad site (32BK68); two homestead and cultural material scatter sites (32BK155 and 32DV143); a building site (32DV142); five cultural material scatter sites (32BK156, 32BK157, 32DV141, 32DV144, and 32DV145); four farm equipment isolated finds (32BKX1003, 32BKX1004, 32DVX432, and 32DVX434); and one wagon isolated find (32DVX433).

The segment of 32BK68 is recommended as eligible for inclusion to the NRHP; therefore, SWCA recommends that all project impacts avoid the site by 50 feet through the use of a horizontal directional drill or bore. Boring the site will avoid the railroad grade. The remaining 13 newly recorded cultural resources are recommended not eligible for the NRHP; therefore, no further work is necessary.

With these stipulations, it is recommended that a determination of *No Significant Sites Affected* and *No Historic Properties Affected* be granted for the project to proceed as planned.

This page intentionally left blank.

Appendix F

10-Year Plan

Meadowlark Midstream Company, LLC ("Meadowlark") hereby submits its ten-year plan pursuant to North Dakota Century Code § 49-22-04.

Introduction

Meadowlark plans to convert the existing Divide Lateral Oil Pipeline (described below) from a gathering pipeline to a transmission pipeline in conjunction with the addition of the Divide Pump Station (described below) to the Divide Lateral Oil Pipeline, which will cause the length of the Divide Lateral Pipeline downstream of the new Divide Pump Station to be a liquid transmission facility under North Dakota Century Code § 49-22-03.12. Installation of the Divide Pump Station is necessary to address demands for service from new customers by increasing the volume of crude oil that can be transported via the Divide Lateral Oil Pipeline. Once the Divide Pump Station is installed, the Divide Lateral Oil Pipeline will be Meadowlark's first transmission facility in North Dakota subject to the provisions of North Dakota Century Code § 49-22-04.

SECTION A: Existing Facilities[1]

Divide Lateral Oil Pipeline

1. Location: Originates in Divide County at the Divide Pump Station site, which is approximately 17 miles northwest of Alamo, North Dakota. From that location, the Divide Lateral Oil Pipeline extends in a south/southeasterly direction into Williams County to its terminus at the existing Colt Rail Terminal ("Colt Hub") located north of Epping, North Dakota. A map showing the location of the Divide Lateral Oil Pipeline is attached hereto as **EXHIBIT "A."**

2. Type and Capacity:
   a. Product Type: Crude oil
   b. Length of Facility: 43.5 miles
   c. Pipe Size: 8.625" diameter, 0.322" wall thickness
   d. Maximum Design Operating Pressure: 1440
   e. Maximum Design Flow Rate: 45,000 barrels per day
   f. Pump Station Specifications: Field gathering injection pumps move product to Colt Hub.
   g. Minimum Cover Over Pipe: 36"
   h. In Service Date: October 2013.

The Divide Lateral Oil Pipeline is not committed to be retired in the next ten years.

SECTION B: Intended Construction of Transmission Facilities During the Next Five Years

Little Muddy Interconnection Pipeline

[1] The Divide Lateral Oil Pipeline currently exists, but will not qualify as a transmission facility under North Dakota Century Code § 49-22-03.12 until installation of the Divide Pump Station.

1. Location: Meadowlark intends to construct, and will seek a route permit for, an approximately 15 mile long pipeline (the "Little Muddy Interconnection Pipeline") beginning in close proximity to the Colt Hub and ending at North Dakota Pipeline Company LLC's ("NDPC") Little Muddy Station located approximately 10.5 miles northwest of Epping, North Dakota, where it will interconnect with NDPC's interstate pipeline. A map showing the anticipated location of the Little Muddy Interconnection Pipeline is attached hereto as **EXHIBIT "A."**

SECTION C: Proposed Transmission Facilities During the Next Ten-Year Time Period

See Section B, above.

SECTION D: Regional Coordination

While Meadowlark coordinates with producers in North Dakota by discussing potential connections with planned and existing wells, Meadowlark has very limited regional coordination with other midstream companies in North Dakota due to confidentiality concerns and potential antitrust issues.

SECTION E: Environmental Information

Meadowlark monitors regulatory developments and has developed working relationships with the U.S. Fish and Wildlife Service, the Bureau of Land Management, the North Dakota Industrial Commission, the North Dakota Public Service Commission, and the North Dakota Department of Health, in an effort to ensure regulatory compliance. Meadowlark continues to develop detailed risk collaborations with local emergency planning groups.

Meadowlark selects pipeline corridors and routing to minimize impact as required by the statutes and rules and regulations of the Public Service Commission. When desirable, Meadowlark may employ local environmentalists and archaeologists to assist with planning. Meadowlark is well prepared to meet any emergency and mitigate the impact of a pipeline failure.

SECTION F: Projected Demand for Service

Drilling activity in the counties where Meadowlark has gathering facilities (Williams and Divide Counties) has dramatically increased, and Meadowlark estimates that gas and crude oil production will increase, resulting in an increased demand for both gas and crude oil gathering services.

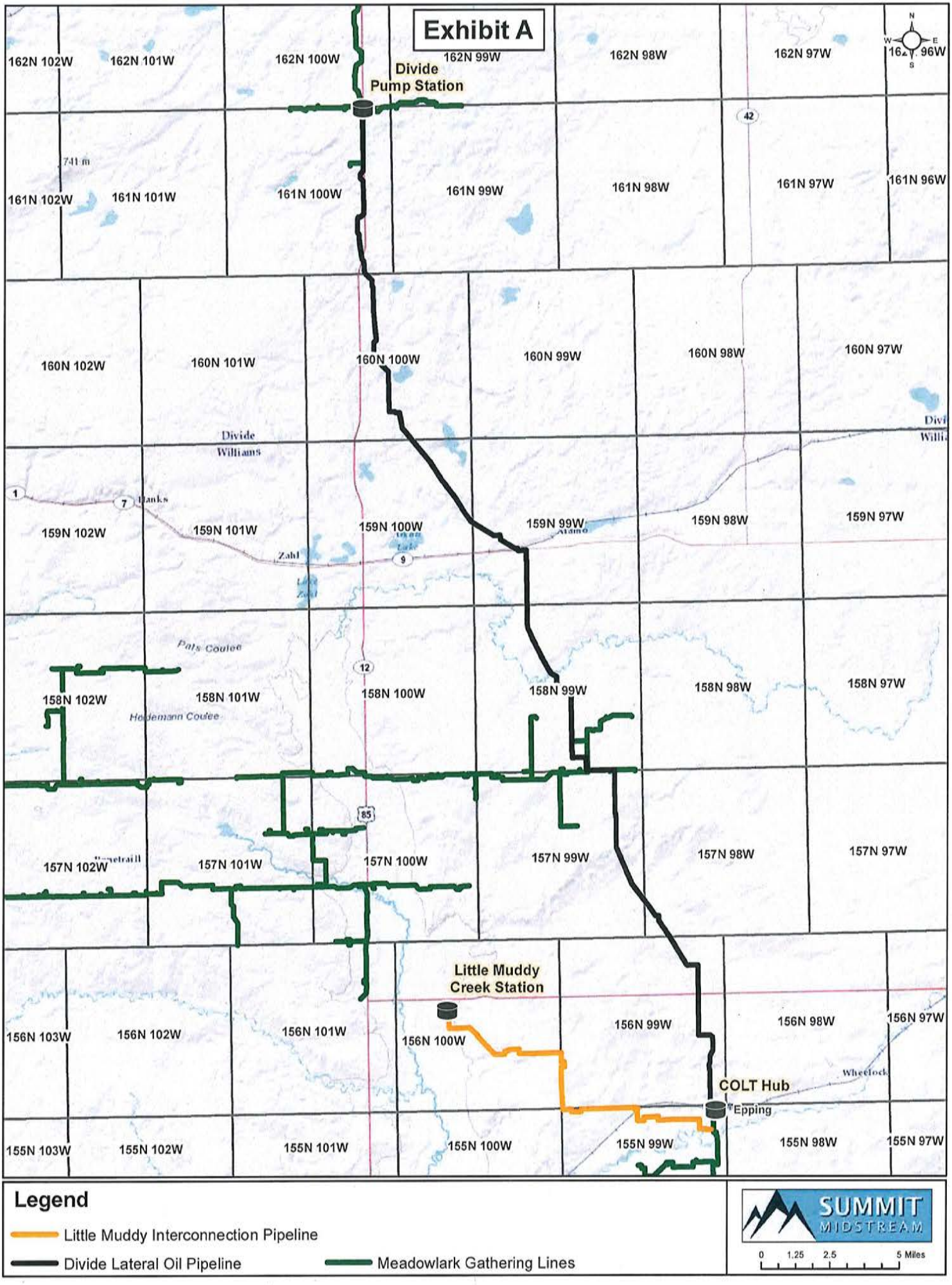


Exhibit A
162N 102W
162N 101W
162N 100W
162N 99W
162N 98W
162N 97W
162N 96W
Divide
Pump Station
161N 102W
161N 101W
161N 100W
161N 99W
161N 98W
161N 97W
161N 96W
160N 102W
160N 101W
160N 100W
160N 99W
160N 98W
160N 97W
Divide
Williams
159N 102W
159N 101W
159N 100W
159N 99W
159N 98W
159N 97W
Banks
Zahl
158N 102W
158N 101W
158N 100W
158N 99W
158N 98W
158N 97W
Pats Coulee
Hedemann Coulee
157N 102W
157N 101W
157N 100W
157N 99W
157N 98W
157N 97W
Little Muddy
Creek Station
156N 103W
156N 102W
156N 101W
156N 100W
156N 99W
156N 98W
156N 97W
COLT Hub
Epping
Wheelock
155N 103W
155N 102W
155N 101W
155N 100W
155N 99W
155N 98W
155N 97W
Legend
Little Muddy Interconnection Pipeline
Divide Lateral Oil Pipeline
Meadowlark Gathering Lines
SUMMIT MIDSTREAM
0 1.25 2.5 5 Miles

Appendix G

Landowner Waivers

Meadowlark Midstream Company, LLC
999 18th Street, Suite 3400S
Denver, CO 80202

Phone: 720.452.6225
Fax: 720.452.6232
www.summitmidstream.com

October 10, 2014

Gene Pulvermacher
PO Box 449
Crosby, ND 58730

RE: Meadowlark Midstream Company, LLC– Global Stampede Pipeline

Mr. Pulvermacher,

Please review the attached site map noting the proposed location of an underground pipeline and associated facilities that are included in the Global Stampede Pipeline Application that Meadowlark Midstream Company, LLC intends to file with the North Dakota Public Service Commission ("Pipeline Project"). The Pipeline Project involves construction of a new approximately 46.1 mile long 10-inch diameter crude oil underground pipeline and associated facilities, including an aboveground tank on the western end of the pipeline. The attached site map indicates that the Pipeline Project will be located within 500 feet of your residence or business.

By signing below you are confirming that you have no objection to the Pipeline Project, or the future operation and maintenance of the Pipeline Project. Your cordial cooperation in this manner is greatly appreciated.

Respectfully,

Nathan Brady
Landman
Meadowlark Midstream Company, LLC

Gene Pulvermacher

Gene Pulvermacher

Date: 10/14/14

Meadowlark Midstream Company, LLC
999 18th Street, Suite 3400S
Denver, CO 80202

Phone: 720.452.6225
Fax: 720.452.6232
www.summitmidstream.com

October 17, 2014

Robert Thompson
9990 Cty Rd 17
Crosby, ND 58730

RE: Meadowlark Midstream Company, LLC– Global Stampede Pipeline

Mr. Thompson,

Please review the attached site map noting the proposed location of an underground pipeline and associated facilities that are included in the Global Stampede Pipeline Application that Meadowlark Midstream Company, LLC intends to file with the North Dakota Public Service Commission ("Pipeline Project"). The Pipeline Project involves construction of a new approximately 46.1 mile long 10-inch diameter crude oil underground pipeline and associated facilities, including an aboveground tank on the western end of the pipeline. The attached site map indicates that the Pipeline Project will be located within 500 feet of your residence or business.

By signing below you are confirming that you have no objection to the Pipeline Project, or the future operation and maintenance of the Pipeline Project. Your cordial cooperation in this manner is greatly appreciated.

Respectfully,

Nathan Brady
Landman
Meadowlark Midstream Company, LLC

Robert A. Thompson
Robert Thompson

Date: 10-17-14

Meadowlark Midstream Company, LLC
999 18th Street, Suite 3400S
Denver, CO 80202

Phone: 720.452.6225
Fax: 720.452.6232
www.summitmidstream.com

October 20, 2014

Leo Logelin & Shawn Logelin
9935 100th St NW
Columbus, ND 58727

RE: Meadowlark Midstream Company, LLC– Global Stampede Pipeline

Mr. Logelin,

Please review the attached site map noting the proposed location of an underground pipeline and associated facilities that are included in the Global Stampede Pipeline Application that Meadowlark Midstream Company, LLC intends to file with the North Dakota Public Service Commission ("Pipeline Project"). The Pipeline Project involves construction of a new approximately 46.1 mile long 10-inch diameter crude oil underground pipeline and associated facilities, including an aboveground tank on the western end of the pipeline. The attached site map indicates that the Pipeline Project will be located within 500 feet of your residence or business.

By signing below you are confirming that you have no objection to the Pipeline Project, or the future operation and maintenance of the Pipeline Project. Your cordial cooperation in this manner is greatly appreciated.

Respectfully,

Nathan Brady
Landman
Meadowlark Midstream Company, LLC

Shawn Logelin **Leo Logelin**

Date: _____

Meadowlark Midstream Company, LLC
999 18th Street, Suite 3400S
Denver, CO 80202

Phone: 720.452.6225
Fax: 720.452.6232
www.summitmidstream.com

September 2, 2014

Bruce D Thompson
9330 101 St NW
Columus, ND 58727

RE: Meadowlark Midstream Company, LLC– Global Stampede Pipeline

Mr.Thompson,

Please review the attached site map noting the proposed location of an underground pipeline and associated facilities that are included in the Global Stampede Pipeline Application that Meadowlark Midstream Company, LLC intends to file with the North Dakota Public Service Commission ("Pipeline Project"). The Pipeline Project involves construction of a new approximately 46.1 mile long 10-inch diameter crude oil underground pipeline and associated facilities, including an aboveground tank on the western end of the pipeline. The attached site map indicates that the Pipeline Project will be located within 500 feet of your residence or business.

By signing below you are confirming that you have no objection to the Pipeline Project, or the future operation and maintenance of the Pipeline Project. Your cordial cooperation in this manner is greatly appreciated.

Respectfully,

Nathan Brady
Landman
Meadowlark Midstream Company, LLC

Bruce D Thompson

Bruce D Thompson

Date: 9/02/2014

Meadowlark Midstream Company, LLC
999 18th Street, Suite 3400S
Denver, CO 80202

Phone: 720.452.6225
Fax: 720.452.6232
www.summitmidstream.com

Aug. 26, 2014

Basin Transload Stampede
10154 93rd Ave NW
Columbus, ND 58727

RE: Meadowlark Midstream Company, LLC– Global Stampede Pipeline

Dear: Basin Transload

Please review the attached site map noting the proposed location of an underground pipeline and associated facilities that are included in the Global Stampede Pipeline Application that Meadowlark Midstream Company, LLC intends to file with the North Dakota Public Service Commission ("Pipeline Project"). The Pipeline Project involves construction of a new approximately 46.1 mile long 10-inch diameter crude oil underground pipeline and associated facilities, including an aboveground tank on the western end of the pipeline. The attached site map indicates that the Pipeline Project will be located within 500 feet of your residence or business.

By signing below you are confirming that you have no objection to the Pipeline Project, or the future operation and maintenance of the Pipeline Project. Your cordial cooperation in this manner is greatly appreciated.

Respectfully,

Nathan Brady
Landman
Meadowlark Midstream Company, LLC

Ray W. Sheldon
Basin Transload

Date: 8/26/2014

Date:

Meadowlark Midstream Company, LLC
999 18th Street, Suite 3400S
Denver, CO 80202

Phone: 720.452.6225
Fax: 720.452.6232
www.summitmidstream.com

_____, 2014

Donna Lagein
10560 99th St NW
Noonan, ND 58765

RE: Meadowlark Midstream Company, LLC– Global Stampede Pipeline

Mrs Lagein,

Please review the attached site map noting the proposed location of an underground pipeline and associated facilities that are included in the Global Stampede Pipeline Application that Meadowlark Midstream Company, LLC intends to file with the North Dakota Public Service Commission ("Pipeline Project"). The Pipeline Project involves construction of a new approximately 46.1 mile long 10-inch diameter crude oil underground pipeline and associated facilities, including an aboveground tank on the western end of the pipeline. The attached site map indicates that the Pipeline Project will be located within 500 feet of your residence or business.

By signing below you are confirming that you have no objection to the Pipeline Project, or the future operation and maintenance of the Pipeline Project. Your cordial cooperation in this manner is greatly appreciated.

Respectfully,

Nathan Brady
Landman
Meadowlark Midstream Company, LLC

Donna Lagein

Donna Lagein

Date: 9-9-14

Meadowlark Midstream Company, LLC
999 18th Street, Suite 3400S
Denver, CO 80202

Phone: 720.452.6225
Fax: 720.452.6232
www.summitmidstream.com

October 10, 2014

Richard Pulvermacher
13025 96th St NW
Ambrose, ND 58833-9739

RE: Meadowlark Midstream Company, LLC– Global Stampede Pipeline

Mr. Pulvermacher,

Please review the attached site map noting the proposed location of an underground pipeline and associated facilities that are included in the Global Stampede Pipeline Application that Meadowlark Midstream Company, LLC intends to file with the North Dakota Public Service Commission ("Pipeline Project"). The Pipeline Project involves construction of a new approximately 46.1 mile long 10-inch diameter crude oil underground pipeline and associated facilities, including an aboveground tank on the western end of the pipeline. The attached site map indicates that the Pipeline Project will be located within 500 feet of your residence or business.

By signing below you are confirming that you have no objection to the Pipeline Project, or the future operation and maintenance of the Pipeline Project. Your cordial cooperation in this manner is greatly appreciated.

Respectfully,

Nathan Brady
Landman
Meadowlark Midstream Company, LLC

Richard Pulvermacher by [illegible] A.I.F
Richard Pulvermacher

Date: 10/14/14