



## **Belle Fourche Pipeline Company**

**6" Skunk Hill to DPR  
Pipeline Conversion Project  
Stark, Dunn, & Billings Counties  
North Dakota**

**Consolidated Application for Certificate of  
Corridor Compatibility and Route Permit**

December 2018

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**REGULATORY CROSS-REFERENCE GUIDE**

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49-22.1-06	Application for a Certificate for a Corridor	
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1.b	Summary of any studies of environmental impacts	5.0
1.c	Need for the facility	2.2
1.d	Site for energy conversion facility	N/A
1.e	Preferred transmission (pipeline) corridor	2.16, Exhibit A
1.f	Analysis of merits and detriments of facility location	4.0
1.g	Mitigating measures	9.0
1.h	Corridor evaluation pursuant to 49-22.1-09 and 49-22.1-03	6.0, 8.0
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1.c	Route evaluation relative to 49-22.1-09 and 49-22.1-03	6.0, 8.0
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AUTHORITY	DESCRIPTION	SECTION
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- A.2: Topographic Mapbook

Exhibit B: Cultural Resources Report

Exhibit C: Agency Consultations

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Exhibit E: ESRI ArcGIS Shapefiles

## **INTRODUCTION**

Belle Fourche Pipeline Company (Belle Fourche), submits this single consolidated application for a Certificate of Corridor Compatibility and Route Permit to the North Dakota Public Service Commission (NDPSC) for the conversion of an approximately 18-mile-long, six (6)-inch existing crude oil gathering pipeline to a transmission line. Belle Fourche is seeking approval for a Certificate of Corridor Compatibility for a Corridor that will align with the centerline of the pipeline route of 200 feet wide. The pipeline is located within Stark, Dunn, and Billings Counties, North Dakota and is known as the Skunk Hill to Dakota Prairie Refinery Pipeline Conversion (Project). The former Dakota Prairie Refinery (DPR) is now known as the Andeavor Dickinson Refinery. The Project originates at the Skunk Hill Pump Station in Billings County, approximately 10.5 miles NNE of Belfield, North Dakota, and runs 18 miles to DPR, which is located five (5) miles SW of Dickinson, North Dakota. The pipeline interconnects with Belle Fourche facilities at Skunk Hill Station and Dickinson Station to supply the Andeavor Dickinson Refinery facility.

Belle Fourche seeks NDPSC approval for utilization of the Project as a transmission line. In accordance with Chapter 49-22.1 of the North Dakota Century Code, Section 69-06-08-02 of the North Dakota Administrative Code, and the NPSC's Energy Conversion and Transmission Facility Siting Guidelines, Belle Fourche provides the information in this application document to support its request for a Certificate of Corridor Compatibility and Route Permit for the Project.

### **1 DESCRIPTION OF PROPOSED FACILITY**

#### **1.1 Type**

The Project originates at the Skunk Hill Pump Station in Billings County approximately 10.5 miles NNE of Belfield, North Dakota and runs 18 miles to the Dickinson Station located five (5) miles SW of Dickinson, North Dakota. The pipeline interconnect with Belle Fourche facilities at Skunk Hill Station and Dickinson Station supplies the Andeavor Dickinson Refinery facility.

The Project was originally constructed in 1995 by Belle Fourche as a gathering line. In 2011, the line was extended into the Skunk Hill Station and served as a gathering line flowing west from Dickinson. In late 2011, the line was extended a few hundred feet into the Bakken Oil Express (BOE) rail facility located west of Dickinson. While still serving as a gathering line, it also reversed and flowed from Skunk Hill to BOE. The last modification to this line was in 2015 when the line was extended one-half (0.5) miles into DPR, west of Dickinson to deliver crude oil supplies to the refinery. The line continues to operate as a crude supply line from Skunk Hill Station to DPR.

#### **1.2 Size**

The Project consists of multiple connecting pipeline segments that have been laid from 1995 to 2015. The entire pipeline has a 6-inch nominal outside diameter with segment wall thicknesses varying from 0.156 to 0.188 inches at road and water body crossings. All pipe in this line is X52 and a majority of the line is coated in a two layer polyethylene tape coating. The maximum allowable operating pressure is 1,100 pounds per square inch gauge (psig).

All valves on the Project are 6-inch 600# American National Standards Institute, flanged end, full port ball valves. These valves were manufactured in accordance with American Petroleum Institute Standard 6D

"API Specification for Steel, Gate, Plug, Ball and Check Valves for Pipeline Service". These valves are of American Society of Mechanical Engineers 16.5 design. The maximum allowable operating pressure of the valve will be 1480 psig. The carbon steel pipe utilized for construction of the Project meets United States Department of Transportation (DOT) regulations, specifically the design criteria outlined in 49 C.F.R. Subpart 195(C). The Project was constructed as a gathering line per 49 C.F.R. Subpart 195(D). The Project will be operated and maintained per 49 C.F.R. part 195.

The maximum temperature of the crude is 80°F, which is within design parameters.

The maximum potential flow rate of the Project is 20,000 barrels per day (bpd).

### **1.3 Length**

The Project is approximately 18 miles in length.

### **1.4 Aboveground Facilities**

The Project's segments are buried underground. Surface structures are limited to pipeline markers, rectifier sites, and block valves. Some small fenced-in enclosures were installed to house associated power and control systems to allow valves to be operated remotely.

Pig launchers and/or receivers were installed at Skunk Hill Station and at DPR when that station was constructed, which upgraded maintenance and monitoring activities associated with this pipeline. In addition to the launcher at Skunk Hill and receiver at DPR, the Project has four block valves. One block valve is located at Dickinson Station, two are midline and the final one is east of DPR. See Exhibit A for valve locations.

## **2 DESIGN OF THE PROPOSED FACILITY**

### **2.1 Design**

The Project is designed to convert an existing approximately 18-mile 6-inch diameter crude oil gathering pipeline into a crude oil transmission pipeline extending from the Skunk Hill Pump Station to the Dickinson Station.

### **2.2 Purpose and Need of the Facility**

The purpose of the Project is to transport crude oil produced in west and northwestern North Dakota to the Andeavor Dickinson Refinery.

The Project will provide needed capacity to transport increased petroleum from western North Dakota where oil production is expected to increase until 2025.

Conversion of the Project will add (1) additional pipeline shipping capacity in North Dakota; (2) more access to liquid delivery options for Belle Fourche customers; and (3) a pipeline transportation alternative to trucking or railing crude oil to other shipping points and markets.

Installed cost of the system is extremely difficult to estimate given construction of multiple sections of the line over different periods of time. Belle Fourche estimates that the cost of the system in today's dollars would be in excess of \$10 million.

### **2.3 General Area to be Served**

The Project will provide needed capacity to transport increased petroleum from western North Dakota where oil production is expected to increase until 2025.<sup>1</sup> The pipeline will transport crude oil from the Skunk Hill connection near Dickinson, North Dakota to the Andeavor Dickinson Refinery.

### **2.4 Capacity**

The maximum potential flow rate of the Project is 20,000 bpd.

### **2.5 Technology to be Deployed/Employed**

The Project is designed, constructed, maintained, and inspected to the DOT Pipeline and Hazardous Materials Safety Administration regulations utilizing industry standards and company policies. The system will be controlled and monitored 24 hours a day, 7 days a week, and 365 days a year by trained control room personnel. Additionally, the system is equipped with a monitoring and alarm system that continuously monitors the flow and pressure of the system and readily signifies anything outside normal operating conditions.

### **2.6 Product**

The proposed Project will transport crude oil produced from the Bakken Formation. As a crude oil transmission facility, the Project will provide needed flexibility and capacity to transport petroleum crude oil from western North Dakota.

### **2.7 Final Destination of Product**

The Project originates at the Skunk Hill Pump Station in Billings County, and runs 18 miles to DPR, which is located five (5) miles SW of Dickinson, North Dakota. The pipeline interconnects with Belle Fourche facilities at Skunk Hill Station and Dickinson Station to supply the Andeavor Dickinson Refinery facility.

Belle Fourche does not own any of the crude petroleum transported in its pipeline system. Belle Fourche does not determine markets or destinations for petroleum commodities. Belle Fourche's business is to provide a service which is available to anyone tendering commodities for transportation. Belle Fourche attempts to anticipate the need for additional pipeline capacity by relying upon forecasts for throughput generated by shippers on the system.

Belle Fourche's system of operating pipelines provides flexibility of transporting North Dakota's crude petroleum to multiple national markets. Once crude petroleum is delivered to DPR and refined, the product is provided to customers nationwide including states such as Colorado, Oklahoma, as well as in-state markets.

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<sup>1</sup> U.S. Energy Information Administration, "U.S. Crude Oil Production to 2025: Updated Projection of Crude Types," *available at* <https://www.eia.gov/analysis/petroleum/crudetypes/pdf/crudetypes.pdf> (accessed Sep 27, 2017).

## **2.8 Width of Right-of-Way (ROW)**

Project work space was approximately 50 feet wide. Additional temporary work space may have been necessary during maintenance and inspection in areas such as steep slopes, and areas adjacent to streams and road crossings, for safety reasons, and construction activities associated with these features.

Belle Fourche notifies landowners during normal operating modifications or maintenance to the Project is carried out within the permanent ROW of the existing pipeline. The width of the ROW was established based on the need to provide adequate space and line separation for future line maintenance.

## **2.9 Requirement For and General Location of Any New Associated Facilities**

Belle Fourche proposes no new changes or additions to the existing pipeline at this time. No new pumping facilities will be needed or other surface facilities will be installed. Pipeline markers, rectifiers, and block valves are already in place for the system, as well as small fenced-in enclosures to house associated power and control systems.

## **2.10 Estimated Distance between Surface Structures for Pipeline Facilities**

The Project is largely underground. Unlike electrical transmission lines, no major features of this system are installed aboveground. Aboveground features are generally limited to minor features such as to pipeline markers, block valves, cathodic protection test sites and rectifier sites, typically miles apart based on convenient access points along a public ROW. Operation and maintenance buildings are located at Belle Fourche's Skunk Hill Station and Dickinson Station.

## **2.11 Maximum Design Operating Pressure and Temperature for Pipeline Facilities**

The maximum allowable operating pressure of the pipeline is 1100 psig. The maximum temperature of the petroleum is 80°F.

## **2.12 Maximum Design Flow Rate for Pipeline Facilities**

The maximum design flow rate of the Project is 20,000 bpd.

## **2.13 Number and General Location for Compressor or Pumping Stations**

No new pumping units will be installed. No new mid-route stations will be necessary at this time. Pumps currently exist at Skunk Hill and Dickinson Station.

## **2.14 Estimated Total Cost of Construction**

Installed cost of the system is extremely difficult to estimate given construction of multiple sections over different period of time. The cost of the system in today's dollars would approximate \$10 million.

## **2.15 Preferred Location of Facility**

The Project is located in Billings, Dunn and Stark Counties. The Project originates at the Skunk Hill Pump Station in Billings County, and runs 18 miles to DPR, which is located five (5) miles SW of Dickinson, North Dakota. The pipeline interconnects with Belle Fourche facilities at Skunk Hill Station and Dickinson Station to supply the Andeavor Dickinson Refinery facility.

The Project is designed and will be operated in a manner that meets or exceeds state and federal engineering, safety and operational design standards.

## **2.16 Preferred Location of Corridor**

Using this existing line for conversion to a transmission line avoids or minimizes potential adverse environmental and human impacts associated with installing a new pipeline. Belle Fourche is seeking approval for a corridor that will align with the centerline of the pipeline route ("Project Route") of 200 feet wide ("Project Corridor").

Underground pipelines minimize potential impacts on human or animal welfare and aesthetics. Conversion of the Project is not expected to cause disruption to the environment, and will not result in long-term changes to the environment.

## **2.17 Description of ROW Preparation and Construction and Reclamation Procedures**

The construction ROW was cleared, grubbed, and graded to allow for pipeline construction. Soil segregation was completed to standard operating procedures. All trenching was performed mechanically with either an excavator or a ditching machine to a depth allowing a minimum of four feet from the top of the pipe to the top of the cover. When rock was present, an excavator with rock teeth was used. Boring and horizontal directional drilling pipe installation was performed if crossing under a road, railroad, pipeline/utility, or areas where trenching was deemed unsafe or impractical. Casing of the pipelines was not used because it leads to corrosion issues. Typically, the ROW was continuously cleared of all construction material, uncovered rocks, and compacted areas. Holes and ruts were filled and graded. Reclamation of the ROW was completed at the end of the pipeline construction.

The Project involves converting the operation status of an existing 6-inch pipeline within a previously acquired ROW. The Project will not involve any new construction. No short-term or long-term impacts are associated with this conversion.

One of the unique aspects to a project involving a conversion of an existing gathering pipeline to transmission pipeline status, is the surface of the pipeline ROW can be surveyed for post construction impacts. As further detailed in other sections of this application, the field surveys performed by Keitu Engineers & Consultants, Inc. (Keitu) documented the effectiveness of Belle Fourche's reclamation efforts.

Consistent with the staged time sequence of construction, areas that have been left undisturbed for more than a decade are almost completely reclaimed with no lingering impact noted. Even areas with the most recent construction occurring just earlier this decade, areas with cultivated crops have been completely returned to their prior land-use and production levels. Of note, especially in these newer areas that are not under active cultivation, in limited areas vegetative cover does not yet exactly match the vegetative

diversity outside of the impacted ROW surface. It is expected with normal vegetation management conditions diversity will increase along ROW.

## **2.18 Landowner Notification, Easement Acquisition, and Compensation**

This project uses an existing ROW and will not require new ROW acquisition. All pipeline easements have been obtained.

## **3 SCHEDULE**

### **3.1 Obtaining Certificate of Corridor Compatibility**

The Certificate of Corridor Compatibility Application is being submitted in December 2018.

### **3.2 Obtaining Route Permit**

The Route Permit Application is being submitted in December 2018.

### **3.3 Completing ROW Acquisition**

This project uses an existing ROW and will not require new ROW acquisition.

### **3.4 Starting Construction**

Construction of the physical facilities is complete. No additional segments, or storage facilities are expected at this time.

### **3.5 Completing Construction**

No new construction will occur as part of the Project.

### **3.6 Testing Operations**

Construction of the physical facilities is complete. No additional testing is expected at this time. See Section 8.12 for additional information on testing.

### **3.7 Commencing Operations**

Belle Fourche would commence operation of the Project as a crude oil transmission pipeline as soon as possible. No additional construction is required.

## **4 ALTERNATIVES**

The pipeline is a permanent, ongoing system. As such, Belle Fourche has a continuing commitment to conduct its operations in an environmentally responsible manner. Substantial, continual effort is placed on pipeline integrity, operational safeguards, emergency response, and landowner relationships, all of which reduce the impact of the pipeline to the environment. The Company supplements the support from

the existing internal environmental staff with engineering and environmental consultants as necessary to assure compliance with environmental regulations and applicable Company policy. A brief discussion of other possible alternatives is provided below.

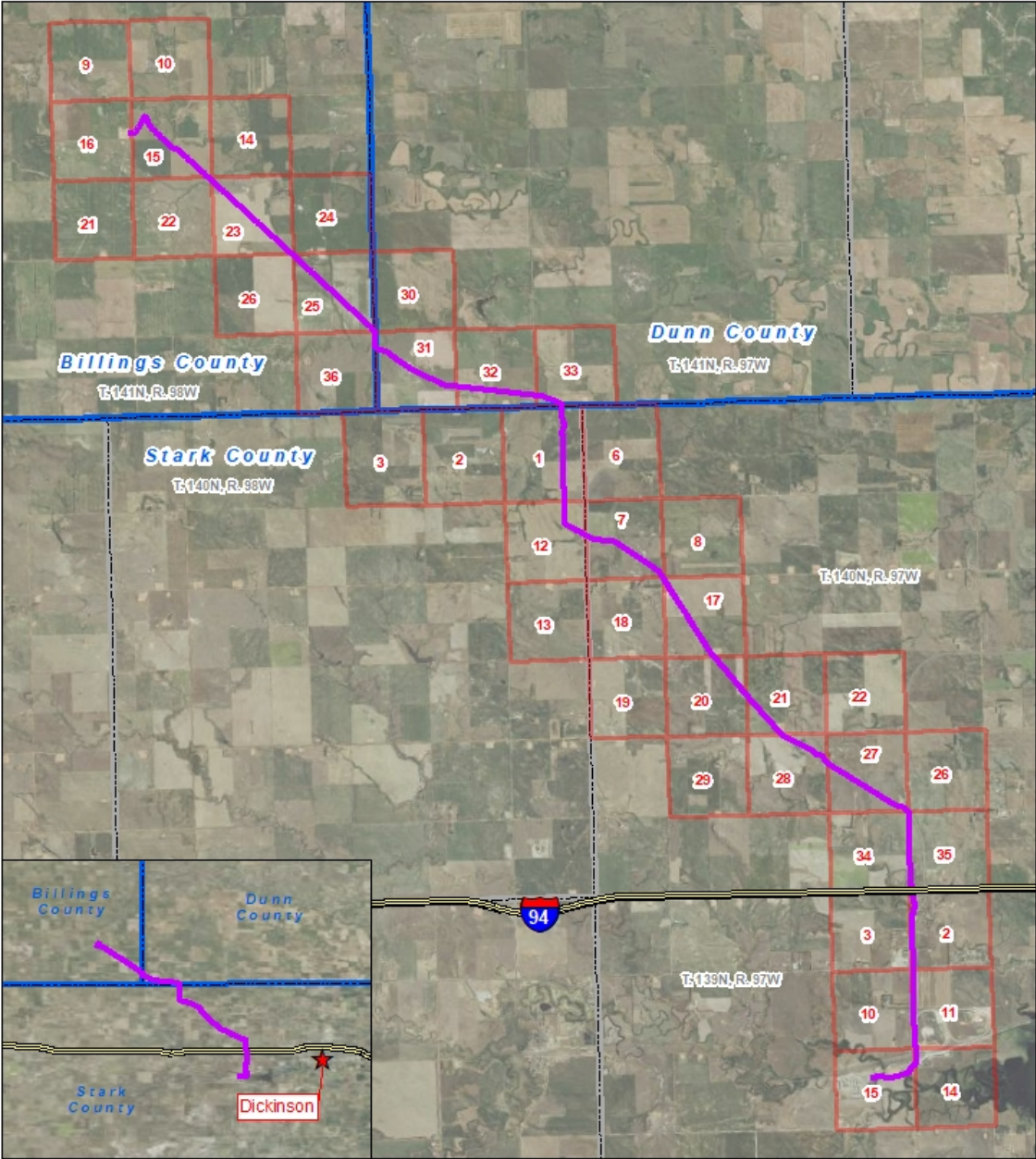
#### **4.1 No Action Alternative**



If the Project operated as a gathering pipeline, there would be utilization limitations and reduced flexibility. Additional production would have to be collected and transported to existing transmission pipeline unloading facilities and/or rail trans-ship facilities. This would result in increased truck traffic and additional wear and tear to county and state roads. Pipeline transportation is preferable because it: (1) reduces truck traffic on the area's road network; (2) provides access to a wider range of markets; and (3) results in a more efficient and safer mode of transportation by reducing costs and the potential for accidents.

#### **4.2 New Pipeline**

Construction of a new pipeline was not a preferred alternative to the Project. Construction of a new pipeline was not preferred because it would create new impacts to the environment, and would result in costs that could otherwise be avoided by re-purposing the existing pipeline.

Figure 1 – General Project Location Map



<p><b>Skunk Hill To DPR 6" Pipeline</b></p> <ul style="list-style-type: none"> <li><span style="color: purple;">—</span> Project Pipeline</li> <li><span style="border-bottom: 2px solid black; width: 20px; display: inline-block;"></span> Interstate</li> <li><span style="border: 2px solid blue; width: 20px; height: 10px; display: inline-block;"></span> County Boundary</li> <li><span style="border: 1px solid gray; width: 20px; height: 10px; display: inline-block;"></span> Township/Range Boundary</li> <li><span style="border: 1px solid red; width: 20px; height: 10px; display: inline-block;"></span> Section Boundary</li> </ul>			 <p><b>Belle Fourche</b> Pipeline Company</p> <p>0 1 2 3 Miles</p> <p>0 2 4 6 Kilometers</p>
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## **5 ENVIRONMENTAL STUDIES**

Studies were undertaken to evaluate the Project's potential impacts on recreational, environmental, and cultural resources. Environmental data collected to date includes information on soils, land use, wetland and water body crossings, protected species, and cultural resources. Belle Fourche will continue to work with appropriate regulatory agencies and will continue to gather comprehensive information as required during the permitting process.

Analysis of the Project entailed both desktop studies and field surveys. A one-mile-wide study corridor was utilized for the entire Project route ("Study Area"). Desktop studies for the one-mile-wide study area reviewed items such as Class I archeological file search and wildlife database search. Surveys were conducted along the entire route in the field on foot within the specified survey corridor ("Survey Area"). Survey areas for the Project were typically 200-foot-wide.

Belle Fourche engaged Keitu and BCA to perform the environmental and cultural resource siting studies for the Project.

BCA performed a Class I archeological file search in August of 2017 using a one-mile-wide survey area on the entire 18 miles of the Project route. A Class III field survey was performed on a 200-foot-wide survey area in September of 2017. The cultural resource location details are not presented in a publicly available document per the request of the State Historical Society of North Dakota. BCA has provided a redacted version of the cultural resource report and is found in Exhibit B. Additional details of these sites will be provided to NDPSC staff upon request.

Keitu conducted field surveys within a 200-foot-wide survey area in June 2017, to identify presence of wildlife and habitat assessment that covered threatened and endangered species, a tree, sapling, and shrub enumeration survey, and a noxious weed survey were also conducted by Keitu.

Keitu conducted a database search using a one-mile-wide study corridor for all other Exclusion or Avoidance Criteria outlined in the North Dakota Administrative Code along the Project Route. Items reviewed included federal and state parks, protected and sensitive plants and animals, and civil and social structures such as recreational areas, rural homes, and farmsteads.

### **5.1 Wetland and Waterbody Inventory**

Belle Fourche, through its consultants, conducted a desktop survey using aerial photographs, USGS topographic maps, and the United States Fish & Wildlife Service (USFWS) National Wetland Inventory identifying wetlands along the pipeline route.

The Project crosses 16 streams according to the USFWS National Wetland Inventory that was last modified February 1, 2018. The table below describes the wetlands found via the National Wetland Inventory within the Project Corridor.

The table below describes the location of the streams within the Project Corridor.

Table 5.1 Streams		
Classification	Stream Name	Length (Feet)
PEM1A	Tributary to Green River	218
R4SBC	Tributary to Green River	503
PEM1C	Tributary to Green River	430
R4SBC	Tributary to Green River	912
PEM1C	Tributary to Green River	311
R4SBC	Tributary to Green River	204
R4SBC	Tributary to Green River	423
R4SBC	Duck Creek	676
R4SBC	Tributary to Duck Creek	225
R4SBC	Tributary to Duck Creek	610
PEM1A	Tributary to Duck Creek	219
R4SBC	Tributary to Duck Creek	205
PEM1C	Duck Creek	214
R4SBC	Tributary to Duck Creek	402
R4SBC	Tributary to Heart River	227
R2UBF	Heart River	238

Conversion of the Project will not result in the permanent drainage or filling of wetlands or waterbodies. Belle Fourche will horizontally directionally drill any future wetlands or waterbodies in the Project corridor if any Project maintenance is needed.

## 5.2 Vegetation Inventory

Botany surveys were performed along the 18 mile pipeline route in Billings, Dunn, and Stark Counties during September 2012, November of 2013, and May 2017. Two surveyors conducted a thorough inspection of private land (starting south and proceeding north along the route), which consisted of cropland, rangeland, and pastureland.

The Project Corridor crosses predominantly agricultural land, which is discussed in detail in section 6.18.1. Crested wheatgrass and smooth brome were primarily found in abundance throughout the majority of the route. Other grasses that were commonly identified were: blue grama (*Bouteloua gracilis*), side oats grama (*Bouteloua curtipendula*), little bluestem (*Schizachyrium scoparium*), prairie junegrass (*Koeleria macrantha*), and needle and thread grass (*Hesperostipa comate*). Other vegetation often found established in the Project area include alfalfa (*Medicago sativa*), cudweed sagewort (*Artemisia ludoviciana*), fringed sagewort (*Artemisia frigida*), curlycup gumweed (*Grindelia squarrosa*), kochia (*Kochia scoparia*), purple prairie clover (*Dalea purpurea*), prairie coneflower (*Ratibida columnifera*), prairie rose (*Rose arkansana*), prickly pear cactus (*Opuntia humifusa*), rubber rabbitbrush (*Ericameria nauseosa*), silver leaf scurfpea (*Pediomelum argophyllum*), skeletonweed (*Chondrilla juncea*), wild licorice (*Glycyrrhiza lepidota*), yarrow (*Achillea millefolium*), silver buffaloberry (*Shepherdia argentea*), chokecherry (*Prunus virginiana*), cottonwood (*Populus deltoides*), and western snowberry (*Symphoricarpos occidentalis*).

Noxious weeds that were identified on the survey were field bindweed (*Convolvulus arvensis*), absinth wormwood (*Artemisia absinthium*), Canada thistle (*Cirsium arvense*), and leafy spurge (*Euphorbia esula*). Field bindweed occurrences were primarily along access roads and well sites. Canada thistle, absinth wormwood, and leafy spurge were found in small populations spread throughout rangeland and pastures.

There were no sensitive, threatened, or endangered plant species detected in the survey corridor.

### 5.3 Wildlife Inventory

Investigations were conducted on potential impacts the Project could inflict upon wildlife and plant species. Prior to field surveys, information was gathered from a variety of sources to compile the existing conditions of plant and wildlife within the proposed route. These sources included GIS database review, literature, and personal communications with the North Dakota Game & Fish (NDGF), the USFWS, and the North Dakota Parks and Recreational Department (NDPRD). Prior to field surveys, Keitu review in-house GIS data that includes information updated annually from the United States Forest Service (USFS), USFWS, NDGF, and United States Army Corps of Engineers (USACE) on known locations of sensitive species. Field surveys were conducted on foot and via all-terrain vehicle. Field data was collected with a Trimble GEOXH 6000 GPS.

Common terrestrial wildlife identified in the Project area include coyote (*Canis latrans*), ground squirrel (*Uroditellus richardsonii*), ring-necked pheasant (*Phasianus colchicus*), sharp-tailed grouse (*Tympanuchus phasianellus*), Hungarian partridge (*Perdix perdix*), various songbirds, migratory waterfowl, raptors, and deer. Sharp-tail grouse is on the North Dakota Wildlife Species of Concern List.

One prairie dog town was located while conducting the wildlife survey, and is located nearly a mile from the Project corridor. Prairie dog towns support a large community of wildlife species and are prone to disruption by construction projects. The black-footed ferret also inhabits prairie dog colonies. Disruptions of prairie dog colonies should be avoided to prevent any impact on habitat or potential occurrences. The route does not invade any prairie dog towns and there should be no effect to this species or its habitat.

An aerial raptor survey was conducted in the winter of 2014 along with two separate ground raptor surveys in the fall of 2013 and summer 2012 to locate any raptors as well as suitable nests. These surveys were originally conducted to support previously filed applications for Belle Fourche's 10-inch Crude Oil Loop Pipeline PSC #14-135 and Bridger Pipeline's 16-inch Crude Oil Pipeline PSC #15-097. Keitu reviewed information gathered from the 2012, 2013, and 2014 surveys prior the 2017 field surveys. The survey methods for the 2014 aerial raptor survey followed the USFWS technical guidance on inventory and monitoring protocols. Three surveyors (seated in rear-left, rear-right and front-left positions of the helicopter) to locate currently active or inactive raptor nests. Complete coverage of the ROW was obtained by traversing the ROW centerline in a perpendicular manner while visually scanning all areas of potential nesting habitat, to provide complete coverage of the Project Corridor. A second pass was conducted in a similar manner in the opposite direction to get full field of view and line of sight in all possible raptor nest locations. When a possible nest was discovered, the helicopter would slow to a hover, at a distance great enough to prevent flushing and in the shortest amount of time needed to determine the condition, type of nest, contents, and obtain accurate GPS location coordinates. Late winter timing of the survey facilitated locating nests in deciduous trees before "leaf out" occurred. Heavily wooded areas are within the survey area and multiple passes were taken when necessary. Only nests large enough to support raptors were recorded during the survey.

The North Dakota raptor species of concern detailed by the NDPRD, Natural Heritage Inventory (NHI) with potential to be located in Stark, Billings, and Dunn Counties include the following: bald eagle (*Haliaeetus leucocephalus*), golden eagle (*Aquila chrysaetos*), Swainson's hawk (*Buteo swainsoni*), merlin (*Falco columbarius*), prairie falcon (*Falco mexicanus*), turkey vulture (*Cathartes aura*), American peregrine falcon (*Falco peregrinus anatum*), and the burrowing owl (*Athene cunicularia*).

The following state-listed Species of Concern were identified in the Study Corridor during the survey conducted in the summer of 2012, winter of 2014, and spring of 2017: golden eagle (*Aquila chrysaetos*) and rough-legged hawk (*Buteo lagopus*).

Although raptors of concern were spotted during the survey, due to the range of these raptors, it is not uncommon for one to be seen at a distance greater than one mile from their nests, making it quite probable that the raptor species seen during the survey were in fact nesting outside the Corridor. Nesting behavior was not observed anywhere inside the Survey Corridor.

Findings are electronically presented as ESRI ArcGIS software compatible data files in Exhibit E.

#### **5.4 Federally Protected Species Review**

Contacts have been made with the NDGF, USFWS, and the NDPRD Natural Heritage Inventory to identify species and ecologically significant habitats within the ROW and the Project Corridor. Possible areas of concern discussed were federally listed endangered, threatened, candidate, sensitive, or watch species, state-listed protected species, and critical habitat that is located on or within the pipeline route.

The NDGF was provided with the proposed route and after review stated, "We do not believe this project will have significant adverse effects on wildlife or wildlife habitat, including species of conservation priority, provided these recommendations were implemented where appropriate during project construction."

The USFWS was provided with the proposed route and is currently under review. Areas that are analyzed by the USFWS include federally listed endangered, threatened, candidate species, and designated critical habitat in North Dakota.

A field survey was conducted in June 2017 using a 200-foot-wide survey area for botany and wildlife. No sensitive wildlife or botany issues were identified. The results of this field survey are presented in Section 5 as part of this consolidated permit application.

Due to a lack of suitable habitat, the proposed Project likely did not result in take of the northern long-eared bat, the gray wolf, or black-footed ferret. The whooping crane, interior least tern, piping plover, and rufa red knot have the potential to occur within the Study Area as migrants. However, due to the low probability of occurrence and only temporary disturbance during construction, adverse impacts to these species was unlikely to have occurred. Field surveys confirmed a lack of suitable habitat for the Dakota skipper; therefore, impacts to this species were unlikely to have occurred.

##### **5.4.1 Migratory Bird Treaty Act**

Migratory birds are federally protected by the MBTA, which prohibits the taking, killing, possession, and transportation of migratory birds, their eggs, parts, and nests, except when specifically permitted by

regulations. Both native prairie and non-native grasslands provide breeding, nesting, foraging, brood-rearing, and dispersal habitat for many species of migratory birds in North Dakota. The migratory bird nesting season in North Dakota is February 1 to July 15.

#### 5.4.2 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) prohibits the take of a bald or golden eagle including their parts, nests, or eggs without a permit. Take is defined by the BGEPA as to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb. Impacts resulting from human activity occurring around previously used bald or golden eagle nesting sites is also addressed in the BGEPA.

Bald eagles breed throughout North Dakota and commonly nest in trees near large bodies of water, but may also nest in other tall structures, such as rocky outcrops, cliffs, utility poles, and communication towers. Golden eagles are uncommon in North Dakota but may breed in the far western portions of the state, nesting between early April and late July. They typically nest in incised landscapes, including the badlands and buttes overlooking grassland and prairie habitat, but may also nest in large trees. The eagle nesting season in North Dakota is February 1 to July 31.

#### 5.5 Tree/Shrub Inventory

Tree rows and woody areas occur in limited amounts, as isolated islands or rows throughout the Study Area. The route crosses through wooded areas on rangeland. Wooded habitat provides shelter and safety for a number of wildlife species. Any trees will continue to be protected to the extent practicable in a manner compatible with safe operation, maintenance, and inspection of the pipeline.

Impacts on wooded areas due to conversion activity are not anticipated. During original construction, impacts to wooded areas was limited to clearing only what was necessary to accommodate bi-weekly aerial surveys required by the US DOT.

#### 5.6 Noxious Weed Inventory

North Dakota law (North Dakota Century Code § 4.1-47-02) requires every person to do all things necessary and proper to control the spread of noxious weeds and makes it illegal for any person to distribute, sell, or offer for sale within this state a noxious weed. Noxious weeds listed under North Dakota state law are shown in Table 5.6.1.

Species	Habitat	Impact
Absinth Wormwood	Generally found on dry soils in pastures, cropland, farmsteads, shelterbelts, roadsides, fence rows and waster areas. Infestation occurs on over-grazed or disturbed areas.	Reported to contaminate the milk produced by cattle. Species inhibits growth in desirable forage.
Dalmatian Toadflax	Most competitive in drought prone areas. Often found in soils varying from coarse gravels to sandy loams. Establishes on rangelands, pastures, disturbed areas, and roadsides.	Unpalatable to livestock and will flourish over native species. No record of occurrence in the county.
Field Bindweed	Species is drought tolerant and tends to invade cultivated fields, pastures, roadsides, and waste areas.	Extremely difficult to control. The extensive root system and twine-like growth disrupts harvesting operations and replaces desirable vegetation.

<b>Table 5.6.1 State Noxious Weeds</b>		
<b>Species</b>	<b>Habitat</b>	<b>Impact</b>
Leafy Spurge	Species adapts to a variety of habitats such as river banks, floodplains, slopes, open woodlands, roadsides, and grasslands. Species commonly associates itself with invasive such as Kentucky bluegrass and smooth brome.	Contains milky latex which causes oral and digestive irritation in cattle. The plant also replaces desirable forage.
Purple Loosestrife	Establishes in wetland habitats.	Quickly displaces native wetland vegetation and has the potential to cause a severe impact on wildlife. Roots of the plant can cause obstruction of water flow in ditches and canals.
Saltcedar	Occurs in moist areas, along lakes and waterways. Often associated with cottonwoods. Alkali, saline, and drought tolerant	Displaces native vegetation by releasing salts to inhibit the growth of vegetation.
Diffused Knapweed	Occurs in excessively grazed and disturbed areas.	No known occurrences in the county.
Russian Knapweed	Occurs in poorly drained, saline, or alkaline soils. Establishes is cultivated land, alfalfa fields, pastures, waste sites, and along roadsides and ditches.	Most distributed knapweed and most difficult to control. Inhibits growth in crop plants and other desirable plant species.
Spotted Knapweed	Establishes on roadsides, construction sites, overgrazed land, and waterways. Adapts best in semi-arid areas.	Reduces livestock and wildlife forage and increases surface water runoff, soil erosion, and stream sedimentation.
Canada Thistle	Occurs in stream banks, long ditches, roadsides, cultivated fields, pastures, construction sites, and other disturbed areas.	Displaces desirable plant species and is unpalatable to livestock. Infestations decreases land value for crop production and grazing.
Musk Thistle	Occurs on pastures, rangelands, disturbed sites, grain fields, stream banks, and soils with high sand content.	Corrupt pastures and reduce grazing in the vicinity. Currently inhabits in the northeast corner of ND.
Yellow starthistle	Occurs on pastures, rangelands, grain fields, cultivated land, and roadsides.	Toxic to horses and can cause injury to livestock and wildlife when grazing upon. Reduces cropland yields. No record of occurrence in the county.
Yellow Toadflax	Yellow toadflax occurs in a wide range of habitats but is limited by wet or dark conditions. The plant is often found in well-drained, relatively coarse textured soils.	Often displaces desirable forage plants on rangeland and is generally avoided by cattle.
Information provided by the North Dakota Department of Agriculture		

Local weed boards in North Dakota may develop a list of additional weeds for enforcement within the respective county's jurisdiction. The Billings, Dunn, and Stark County Weed Boards has designated an additional five species of invasive weeds that are not listed as noxious weeds by the North Dakota Department of Agriculture. Those species are shown in Table 5.6.2.

<b>Table 5.6.2 County Noxious Weeds</b>		
<b>Species</b>	<b>Habitat</b>	<b>Impact</b>
Common Burdock	Farmlands, pastures, waste places, open or disturbed woods, road sides, fence rows, barnyards, abandoned fields, and stream banks.	As farmers have adopted no-till farming, this plant can cause economic yield losses if not controlled.
Houndstongue	Disturbed areas, trails, roadsides, logging areas, abandoned cropland, rangelands, pastures, riparian areas, and borders of wooded areas.	Causes loss of pasture and range for grazing animals, increases cattle marketing costs, and reduces fitness in livestock.

Table 5.6.2 County Noxious Weeds		
Species	Habitat	Impact
Black Henbane	Common in disturbed open sites in rangeland and pastures, along fence rows, roadsides, riparian areas and waste areas. Found on heavily grazed sites.	Capable of forming dense infestations, replacing desirable native species, impacting agricultural production, and reducing plant biodiversity.
Hoary Cress	Commonly grow in disturbed, alkaline soils with moderate moisture. Hay fields and rangeland meadows. Acidic soils with limited moisture. Roadsides, ditch banks, and unshaded disturbed areas.	Reduces biodiversity by displacing plants from plant communities and eventually animals that are dependant upon those plants for food and habitat.
Field Bindweed	Cultivated fields, pastures, gardens, lawns, waste places, roadsides, railways, vineyards, and orchards.	Out-competes desirable plant species for soil moisture. Reduces crop yields.
Information provided by the Billings, Dunn, and Stark County Weed Boards.		

A formal noxious weed inventory was not conducted prior to the original construction of the pipeline.

Noxious weeds that were identified in the survey area were field bindweed (*Convolvulus arvensis*), absinth wormwood (*Artemisia absinthium*), Canada thistle (*Cirsium arvense*), and leafy spurge (*Euphorbia esula*). Field bindweed occurrences were primarily along access roads and well sites. Canada thistle, absinth wormwood, and leafy spurge were found in small populations spread throughout rangeland and pastures.

Belle Fourche will continue to implement mitigation requirements to avert the infestation of noxious weeds on previously reclaimed or disturbed land. Belle Fourche or the assigned contractor will implement weed treatments such as mowing prior to seed development or herbicide application to areas of noxious weed infestation prior to soil disturbing work for maintenance. Belle Fourche will use mechanical, chemical or biological management approaches, seeding, and erosion control blankets to prevent or minimize erosion, sedimentation, and the growth of the noxious weeds on applicable areas where maintenance activities occur.

During maintenance activities, Belle Fourche or their assigned contractor will clean the tracks, tires, and blades of equipment by hand (track shovel) or compressed air to remove excess soil prior to movement of equipment out of weed or soil-borne pest infested areas or utilize cleaning stations to remove vegetative materials using water under high pressure.

Belle Fourche or the assigned contractor will use mulch and straw or hay bales that are Certified Weed Free in the State of North Dakota for temporary erosion and sediment control. If seeding is needed for maintenance activities, weed-free native grass seed mixtures were used for all re-vegetation activities.

Typical agricultural herbicides, developed in consultation with county or state regulatory agencies, will be used as necessary. Herbicide types will be determined based on the weed species requiring control. Belle Fourche or the assigned contractor will apply herbicides, where required, within one week, or as deemed necessary for optimum mortality success, prior to disturbing the area by clearing, grading, trenching, or other soil disturbing work. Herbicides will be applied by applicators appropriately licensed or certified by the State of North Dakota. Belle Fourche will implement mitigation or protection measures in the use of pesticides and herbicides along the pipeline corridor to reduce potential impacts to avian and wildlife species. Belle Fourche or the assigned contractor will not use herbicides in or within 100 feet of a wetland or waterbody.

## 6 CRITERIA

### 6.1 Exclusion Areas

Exclusion Areas are geographic areas that must be excluded in the consideration of a route for a transmission facility. A corridor may contain an Exclusion Area; however, Exclusion Areas may not encompass more than 50 percent of the Project corridor width at any point, unless there is no reasonable alternative. Exclusion and Avoidance Areas are shown in Tables 6.1 and 6.8 below.

Exhibit A contains maps depicting Exclusion and Avoidance Areas along the Study Area.

<b>Table 6.1 Exclusion Areas</b>			
<b>Exclusion Area</b>	<b>Located Within the Project Corridor</b>	<b>Crossed by Project Route</b>	<b>Description of Exclusion Area and Proposed Buffer</b>
Designated or registered national: parks; memorial parks; historic sites and landmarks; natural landmarks; monuments; and wilderness areas	None	None	
Designated or registered state: parks; historic sites; monuments; historical markers; archeological sites; and nature preserves	None	None	
County parks and recreational areas; municipal parks; and parks owned or administered by other governmental subdivisions	None	None	
Areas critical to the life stages of threatened or endangered animal or plant species	None	None	
Areas where animal or plant species that are unique or rare to this state would be irreversibly damaged	None	None	
Areas within one thousand two hundred feet of the geographic center of an ICBM launch or launch control facility	None	None	
Areas within thirty feet on either side of a direct line between ICBM launch and launch control facilities to avoid microwave interference	None	None	

### 6.2 Federal Resource Review

Review of digital data available from the United States National Park Service, the USFS, and the USFWS shows that there are no national parks, national memorial parks, national historic sites and landmarks, national wilderness areas, or national monuments located within the Project Corridor or crossed by the Project Route. The nearest federally managed park land is the Theodore Roosevelt National Park (North Unit) located approximately 13 miles west of the Project. Direct impacts to national parks, historic sites, monuments, or wilderness areas as a result of the proposed Project are not anticipated.

### **6.3 State Resource Review**

Review of digital data available from the NDPRD indicates that there are no designated or registered state parks, historic sites, monuments, historical markers, or nature preserves within the Project Corridor, or crossed by the Project Route. As indicated in Section 5.1, the original construction of the Project pipeline did not adversely affect cultural resources eligible for inclusion on the National Register of Historic Places, and no historic properties will be affected. Therefore, there will be no direct impacts to state parks, historic sites, monuments, historical markers, or nature preserves.

### **6.4 County Resource Review**

Review of publicly available data shows that there are no county parks and recreational areas, municipal parks, or parks owned or administered by other governmental subdivisions within the Project Corridor, or crossed by the Project Route. Therefore, no direct impacts are anticipated.

### **6.5 Areas of Critical Habitat**

A pedestrian botany and wildlife survey was conducted in June 2017. No critical habitat was documented within the Project Corridor nor is crossed by the Project Route.

### **6.6 Areas Where Unique or Rare Species Would Be Irreversibly Damaged**

Based upon agency correspondence and field surveys, the proposed Project will not result in irreversible impacts that are detrimental to sensitive plant and animal species or their habitats (see Section 7.1.4 herein).

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

Based on available information, the Air Force has no Intercontinental Ballistic Missile (ICBM) launch or launch control assets within the Project area. An email was sent to the U.S. Air Force on June 22, 2017 and an email response was received on June 26, 2017 that there are no assets near the Project.

### **6.8 Avoidance Areas**

Avoidance Areas are areas that may not be considered in the routing of a transmission facility unless it is shown that there is no reasonable alternative under the circumstances. A buffer zone of a reasonable width to protect the area must be included. A corridor may contain Avoidance Areas as long the Avoidance Areas do not encompass more than 50 percent of the Project Corridor width at any point, unless no reasonable alternative exists. The following table identifies and discusses Avoidance Areas within the Study Area.

One Avoidance Area was identified (see Table 6.8 below). Four (4) rural residences and/or farmhouses and two (2) businesses were identified within 500 feet of the Project Route. The residences and businesses do not encompass more than fifty percent of the width of the corridor in any location. Belle Fourche is in the process of obtaining waivers from the residence and business landowners.

<b>Table 6.8 Avoidance Areas</b>			
<b>Avoidance Area</b>	<b>Located within the Project Corridor</b>	<b>Crossed by Project Route</b>	<b>Description of Avoidance Area and Proposed Buffer</b>
National Historic Districts, Wildlife Areas, Wild, Scenic, or Recreational Rivers, Wildlife Refuges, Grasslands	None	None	
State Wild, Scenic or Recreational Rivers, Game Refuges, Game Management Areas, Management Areas, Forests, Forest Management Lands, Grasslands	None	None	
Historical Resources not specifically designated as Exclusion or Avoidance Areas	None	None	
Geologically Unstable Areas	None	None	
Within 500 Feet of a Residence, School, or Place of Business	Yes (Six (6) Residences and Businesses) with in the Corridor	Yes (Six (6) Residences and Businesses) with in the Route	Pursuant to N.D.C.C. § 49-22.1-03, Belle Fourche will obtain landowner waivers
Reservoirs and Municipal Water Supplies	None	None	
Water Sources for Organized Rural Water Districts	None	None	
Irrigated Land	None	None	
Areas of Recreational Significance Not Designated as Exclusion Areas	None	None	

## 6.9 Federal Resource Review

A review of public available data and field studies of Project area was conducted to confirm the presence or absence of registered historic districts, wildlife areas, wild, scenic or recreational rivers, wildlife refuges, or grasslands within the Study Area or crossed by the Project Route. This review confirmed the absence of designated or registered national historic districts, wildlife areas, wild, scenic or recreational rivers, wildlife refuges, or grasslands within the Project Corridor or crossed by the Project Route.

## 6.10 State Resource Review

A review of publicly available information was conducted and confirmed the absence of designated or registered state wild, scenic, or recreational rivers, forests, forest management lands, or grasslands within the Project Corridor or crossed by the Project Route.

## 6.11 Historical Resources Not Designated as Exclusion/Avoidance Areas

The original construction of the pipeline did not adversely affect cultural resources eligible for inclusion on the National Register Historic Places. Beaver Creek Archaeology, Inc. (BCA) of Bismarck, North Dakota was engaged to review existing site file data maintained by the State Historical Society of North Dakota, North Dakota State Historic Preservation Office (NDSHPO) to determine if any portion of the pipeline route was surveyed previously for cultural resources. Topographic maps and aerial photography were reviewed to determine the amount of pedestrian survey as advised by the SHPO State Archaeologist. Unplowed regions, landforms such as prominent hills, terraces, and any other water related landform were surveyed. After determining the areas for inventory, the proposed corridor was inventoried by walking parallel pedestrian transects 20 meters apart across the Area of Potential Effect.

The file search revealed 24 sites, six site leads, and 26 isolated finds within a one-mile radius of the survey area. Twelve of the previously recorded cultural resources are located within project area. Ten ineligible sites and two site leads were previously recorded within the project area corridor. Site form updates were completed and submitted on the following: 32SK9, 32BI1116, 32BIx36, 32BIx919, 32BIx920, 32DU1789, 32SK795, 32SK1070, 32SKx121, 32SKx122, 32SKx284, and 32SKx363.

The twelve cultural resources with submitted updates are: historic dumps 32BI1116 and 32SK1070, historic cultural material scatter 32DU1789, prehistoric isolated finds 32BIx919, 32BIx920, 32BIx36, 32SKx284, and 32SKx363, Great Northern Railroad 32SK795, foundations 32SK9, and Quarry Mine 32SKx122 and 32SKx121.

During the intensive pedestrian survey, no new cultural resources were encountered and no sign of site impact was seen on the previously recorded sites on file with the SHPO. As a result, BCA recommends a finding of No Historic Properties Affected for this project. The SHPO reviewed the Class I and Class III Inventory Reports and concurred with the "No Significant Sites Affected" determination.

A copy of BCA's report is presented in Exhibit B.

## **6.12 Geologically Unstable Areas**

A desktop review of the North Dakota Geological Survey landslide mapping data was completed and it was confirmed that the Project Corridor did not intersect any known landslide prone landscape areas.

Potential geologic hazards along the Project route include seismic hazards, landslides, subsidence, and flooding. The potential for geologic hazards is reduced because the Project is located in relatively flat and stable terrain as opposed to active mountain belts or coastal area.

There are three major phenomena associated with seismic hazards: faults, seismicity, and ground motion. A fault is a fracture along which the blocks of crust on either side have moved relative to one another parallel to the fracture. Rapid slippage of blocks of crust past each other can cause energy to be released, resulting in an earthquake. No active faults have been identified in the Project Study Area, according to the USGS Geologic Hazards Science Center. An active fault is one in which movement can be demonstrated to have taken place within the last 10,000 years.

North Dakota historically contains little earthquake activity and is therefore not in an area of seismicity. The USGS ground motion hazard mapping indicates that potential ground motion hazard in the Project Study Area is low. The hazard map uses estimated peak ground acceleration expressed as a percentage of the acceleration due to Earth's gravity.

In North Dakota, most flooding occurs in the spring, when the winter snow cover melts. While flooding is generally considered a geologic hazard, the potential for a flood to negatively impact the Project is minimal. The pipeline is waterproof and, thus, the only hazard that exists is scouring.

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

There are four residences and two businesses within five hundred feet of the Project Route. The table below describes the location of those sites. Belle Fourche is in the process of obtaining waivers from the residence and business landowners. Obtained waivers can be found in Exhibit D.

<b>Table 6.13 Residences or Businesses</b>	
<b>Location</b>	<b>Landowner</b>
T. 139N, R. 97W, Section 15	Roger and Bernadine Privatsky
T. 139N, R. 97W, Section 2	Thomas and Donna Dukart
T. 140N, R. 98W, Section 1	Charles and Irena Meduna
T. 139N, R. 97W, Section 2	Terry and Cindy Taylor
T. 139N, R. 97W, Section 3	116 Block LLC
T. 139N, R. 97W, Section 2	Paul and Jodene Kessel

**6.14 Reservoirs and Municipal Water Supplies**

The closest city to the Project is Dickinson, North Dakota. The City of Dickinson receives its water supply from the Southwest Water Authority pipeline which is fed by the Missouri River (Lake Sakakawea). The Southwest Water Authority pipeline has multiple back-up options and redundancies built in to their system throughout the state.

Within the Study Area, the Sentinel Butte-Tongue River aquifer system is the most common water well. These water wells are most likely used for private domestic, livestock and industrial purposes.

The proposed Project will not adversely affect any reservoirs or municipal water supplies.

**6.15 Water Sources for Organized Rural Water Districts**

Within the Stark, Dunn and Billings Counties groundwater uses are intended for public, domestic, livestock and industrial purposes. Most all groundwater is derived from precipitation. Excess water infiltrates down until it reaches the zone of saturation, at which time it becomes accessible to wells. Most aquifers occur in the Fox Hills and Hell Creek Formations and in the Cannonball, Ludlow, Tongue River, and Sentinel Butte Formations. Maximum potential yields of these aquifers range from around 50 gal/min to as much as 300 gal/min. The water from these aquifers are commonly soft to very hard and contain sodium bicarbonate.

The closest city to the Project area is Dickinson, North Dakota. The City of Dickinson receives its water supply from the Southwest Water Authority pipeline which is fed by Lake Sakakawea. The city is not supplied by an aquifer system but retains wells from the Sentinel Butte aquifer system in case of emergency.

This Project is not expected to impact North Dakota ground water quality.

## **6.16 Irrigated Land**

Conversion activity will not impact irrigated lands. Land that is most efficient for irrigation is relatively level and has soils that are well drained and highly permeable. The route crosses silt and clay soils which contain low permeability, making them unsuitable for irrigated agriculture. Additionally, the pedestrian botany and wildlife survey of the pipeline ROWs confirmed the absence of known irrigated land within the vicinity of Project corridor.

## **6.17 Areas of Recreational Significance but Not Designated Exclusion Areas**

Areas of recreational significance are not located within the Project Corridor or crossed by the Project Route.

## **6.18 Selection Criteria**

The NDPSC's rules specify Selection Criteria to be considered in designating a pipeline corridor or route. Specifically, the NDPSC considers whether adverse effects from the location, construction, and maintenance of the facility as they relate to these criteria, will be at an acceptable minimum, and whether these effects will be managed and maintained at an acceptable minimum.

The Selection Criteria that were considered for the Project include:

- Agricultural Production
- Family Farms and Ranches
- Land Suitable for Irrigation
- Surface Drainage and Groundwater Flow Patterns
- Sound Sensitive Areas
- Visual Effects
- Extractive and Storage Resources
- Wetlands, Woodlands, and Wooded Areas
- Communication or Electric Control Facilities
- Human Health and Safety
- Animal Health and Safety
- Plant Life

The following sections discuss the potential impacts and measures to avoid or minimize the impacts related to each of the Selection Criteria.

### **6.18.1 Agricultural Impacts**

A significant quantity of the pipeline route crosses agricultural and pasture lands where crop and livestock production are the extensive economic activity. The primary crops cultivated in the area include wheat, grain, corn, and alfalfa.

The Project will not generate negative effects for agricultural land use such as landscape modifications or an introduction of noxious weeds or invasive species when agricultural areas are reclaimed, because new construction will not occur during the Project. Belle Fourche will also continue to implement mitigation.

Noxious weeds that have been recorded in the county, and that are a concern on farm and pasture land, are absinth wormwood, field bindweed, leafy spurge, purple loosestrife, Canada thistle, musk thistle, yellow starthistle, diffuse knapweed, Russian knapweed, spotted knapweed, yellow toadflax, Dalmatian toadflax, and saltcedar. Noxious weeds listed under North Dakota state law are shown in Table 3.

During the construction of the pipeline, impacts to agricultural production and ranching operations were minimized to the greatest extent possible. Belle Fourche consulted with landowners and negotiated easements with landowners along the pipeline ROW. Upon completion of pipeline construction, (with the exception of existing aboveground facilities) lands were restored to pre-disturbance contours, elevations, and land use.

The location of pipeline markers is defined under 49 Code of Federal Regulation (CFR) part 195 for pipelines. Belle Fourche has worked with country officials and local landowners to ensure that pipeline markers are located in acceptable locations as required. The pipeline markers are placed in full view so as not to be accidentally damaged or cause damage to landowner or county-owned equipment.

No impacts to irrigated land will occur from the proposed Project. The pipeline construction techniques used during the original construction of the pipeline did not modify existing surface drainage patterns. Upon completing or the pipeline construction, disturbed areas were restored to pre-disturbance contours and topography and revegetated.

Well data from the U.S. Geological Survey and North Dakota State Water Commission (NDSWC) indicates that's groundwater supplies through the Project area is sufficiently below the surface as such that impacts from previous construction are not anticipated.

#### **6.18.2 Family Farms and Ranches**

The conversion activity will not alter the patterns of landownership or create long-term disruptions of family farming operations. The conversion zone will be within an existing ROW. Belle Fourche's crop loss compensation program will compensate landowners if any crop damage were to occur during conversion. Crop damage resulting from future pipeline maintenance and repairs will also be addressed by Belle Fourche. All maintenance equipment used will be limited to access routes in agreement with the landowners to minimize disruption to soil, drainage, and crops.

Conversion to a transmission line has minimal impact to the maintenance activity required, which could have an indirect short-term disruption to livestock operations, and inconvenience to farm activities. Belle Fourche will work to minimize interference while in operation.

#### **6.18.3 Land Suitable for Irrigation**

Conversion activity will not impact irrigated lands. Land that is most efficient for irrigation is relatively level and has soils that are well drained and highly permeable. The route crosses silt and clay soils which contain low permeability, making them unsuitable for irrigated agriculture.

No existing aboveground irrigation systems have been identified along the Project Route.

#### **6.18.4 Surface Drainage and Groundwater Flow Patterns**

The Project does not alter surface drainage patterns. In the unlikely case streams, swales, ditches, or other natural drains were altered during the Project, they were restored as best as practical to pre-construction conditions. No disruption to surface flow patterns were identified during the field surveys.

Groundwater moves under the influence of gravity from areas of higher potential (recharge) to areas of lower potential (discharge). The rate of ground-water flow is indicated as only a few feet per year in the principal aquifers. Information concerning groundwater is generally available in or can be estimated from North Dakota county groundwater resource studies. The groundwater flow patterns from aquifer systems in the Project area that contain usable water are summarized as follows:

Within the Project area, the Sentinel Butte-Tongue River aquifer system is the most common water well. Most groundwater uses are intended for public, domestic, livestock and industrial purposes. The closest city to the Project area is Dickinson, North Dakota. The City of Dickinson receives its water supply from the Southwest Water Authority pipeline which is fed by the Missouri River (Lake Sakakawea). The city is not supplied by an aquifer system but retains wells from the Sentinel Butte aquifer system in case of emergency.

In Stark County, the Tongue River, Fox Hills and Hell Creek aquifer system's gradient is south to north at about 19 ft/mi. In Billings County, the Sentinel Butte, Bullion Butte, Slope, Cannonball and Ludlow aquifer systems have a general movement from south to north with an average hydraulic gradient of 10 ft/mi. Further aquifer details are provided in B.4.I Water Resources-Groundwater.

Groundwater flow was not altered by the pipeline construction. There were no reports of accidental discharges during pipeline construction in 1995, 2011, or 2015.

#### **6.18.5 Sound-Sensitive Land Uses**

There are four (4) inhabited residences and two (2) business locations within 500 feet of the Pipeline Route (see Table 6.13). Construction is completed for this project therefore noise will not affect any residences or business in the area.

No noise is generated along the ROW during normal operation of the pipeline. No additional pump stations or noise increases at the pump station are proposed as part of the Project in North Dakota.

#### **6.18.6 Visual Effect on Adjacent Areas**

The existing aboveground structures associated with the pipeline are finished with "earth-toned" painted surfaces. These structures are common throughout the landscape and not considered to be obtrusive. The only aboveground facilities that were constructed as part of the Project are pipeline appurtenances such as mainline valves, line markers, and cathodic protection equipment. Mainline valves are located at existing aboveground facility sites. Line markers are located along public roadways, and typically imbedded in an existing fence line. Similarly, existing cathodic protection test stations and rectifiers are also located at the fence line or boundary of the public road ROW and private land.

Other than these permanent above ground facilities, the Project will result in only short-term visual effects related to maintenance activities.

#### **6.18.7 Extractive and Storage Resources**

No extractive or storage resources were identified which would be affected by the Project. Due to the narrow and linear nature of the pipeline ROW, future extractive development will not be substantially affected by the Project.

#### **6.18.8 Wetlands, Woodlands, and Wooded Areas**

Belle Fourche, through its consultants, conducted a desktop survey using aerial photographs and USGS topographic maps identifying wetlands along the Project Corridor.

No wetlands or waterbodies were permanently drained or filled as part of the Project, and no future effects are anticipated. Conversion of the Project will not result in the permanent drainage or filling of wetlands.

No fertilizer, lime, or mulch would be applied in wetlands as part of the Project. The long-term operation and maintenance of the pipeline will not have adverse effects on wetland function or value as all features through wetlands are underground.

Tree rows and woody areas occur in limited amounts, as isolated islands or rows throughout the Project area. The route crosses through wooded areas on rangeland. Wooded habitat provides shelter and safety for a number of wildlife species. Any trees will continue to be protected to the extent practicable in a manner compatible with safe operation, maintenance, and inspection of the pipeline.

Impacts on wooded areas due to conversion activity are not anticipated. During original construction, impacts to wooded areas was limited to clearing only what was necessary to accommodate bi-weekly aerial surveys required by the DOT.

#### **6.18.9 Radio and TV Reception and Other Communication or Electronic Facilities**

No impacts on television or radio reception or communication or electronic control facilities are anticipated as a result of the Project.

#### **6.18.10 Human Health and Safety**

Belle Fourche, Bridger Pipeline, LLC, and Butte Pipeline Company are all part of the True Companies of Casper, Wyoming operating in western North Dakota, eastern Montana and Wyoming. By building and operating this extensive network, Belle Fourche has become one of the largest pipeline companies in North Dakota and experienced in managing construction and operating pipeline systems that protect the public's health and safety.

#### **6.18.11 Animal Health and Safety**

No impacts on domestic animals and wildlife are expected during the course of the Project. No impacts to domestic animals and wildlife were reported during the original construction of this pipeline.

### **6.18.12 Plant Life**

The Project is not anticipated to impact plant life, however in areas where vegetation has to be removed to perform inspection or maintenance activities, it will be reestablished to regulation standards from county agencies and the satisfaction of landowners. Permanent impacts on vegetation are not anticipated.

## **6.19 Policy Criteria**

### **6.19.1 Location and Design**

The conversion of the pipeline from a gathering system to transmission pipeline facility is not anticipated to result in additional construction. Using an existing line for transmission line service avoids or minimizes potential adverse environmental and human impacts associated with a new route and new construction.

The Project is designed and will be operated in a manner that meets or exceeds state and federal engineering, safety and operational design standards.

### **6.19.2 Training and Utilization of In-State Labor**

No training of local labor is anticipated as a direct result of Project.

### **6.19.3 Economies of Construction and Operation**

The Project is believed to be the most cost-effective and operationally sound means of meeting Belle Fourche's delivery obligations.

### **6.19.4 Use of Citizen Coordinating Committees**

Citizen coordinating committees were not utilized for the Project.

### **6.19.5 Commitment of Portion of Transmitted Product for Use In-State**

Belle Fourche does not own any of the crude petroleum or NGL transported in its pipeline system and does not determine markets or destinations for petroleum commodities.

### **6.19.6 Labor Relations**

The Project will have no anticipated effect on labor relations within North Dakota.

### **6.19.7 Coordination of Facilities**

The existing 6-inch line and associated pumping, control and operating systems is used in conjunction with other segments of the Belle Fourche pipeline network to optimize system capacity.

**6.19.8 Monitoring Impacts**

As there is no new construction associated with this Project, no environmental monitors are necessary. Belle Fourche will continue to deploy Best Management Practices and environmental inspection to mitigated impacts associated with ongoing maintenance. Belle Fourche will continue to deploy Best Management Practices and environmental inspection to mitigated impacts associated with ongoing maintenance.

**6.19.9 Using Existing and Proposed ROWs and Corridors**

The Project is on an existing ROW and uses existing pipeline.

The conversion of the pipeline from a gathering to transmission function do not require the installation of additional pipe. Additional temporary workspace will be kept to the minimum necessary to safely conduct work for any future maintenance or construction.

**6.19.10 Other Existing or Proposed Transmission Facilities**

Belle Fourche is not aware of any other petroleum transmission system projects currently underway in the vicinity. Drilling activity in the service area of the pipeline has declined under current market conditions and as other areas in the state are currently more profitable. However as oil prices have recovered from 2016 lows, production has continued to increase.

No specific Transmission Facilities are planned for the next 10 years. However, given the production activity in our service area of Western North Dakota and the demand for crude oil transportation by pipeline, major new pipeline projects by Belle Fourche are likely.

**7 AGENCY NOTIFICATIONS AND PERMITTING**

In June 2017, Keitu contacted federal, state, and local agencies within the one-mile Study Area that may be affected by the Project. Letters and/or emails were submitted with an accompanying overview map of the Project. A summary of these consultations is provided in Table 7, and further details on each consultation are included in the following sections. Sample notifications and responses are in Exhibit C.

<b>Table 7 Agency Notifications</b>			
<b>Agencies Contacted</b>	<b>Form of Contact</b>	<b>Date of Contact</b>	<b>Date of Reply</b>
US Army Corps of Engineers	Mailed Letter	6/22/2017	
ND Parks and Recreation	Mailed Letter	6/22/2017	
ND Game and Fish Department	Mailed Letter	6/22/2017	7/27/2017
Lake Ilo National Wildlife Refuge	Mailed Letter	6/22/2017	
ND Game & Fish	Mailed Letter	6/22/2017	7/24/2017
U.S Army Corps of Engineers	Mailed Letter	6/22/2017	
U.S. Fish and Wildlife Service	Mailed Letter	6/22/2017	
Dunn County Planning Department	Mailed Letter	6/22/2017	
Dunn County Commission	Mailed Letter	6/22/2017	
Stark County Planning Department	Mailed Letter	6/22/2017	6/26/2017

<b>Table 7 Agency Notifications</b>			
<b>Agencies Contacted</b>	<b>Form of Contact</b>	<b>Date of Contact</b>	<b>Date of Reply</b>
Stark County Commission	Email	6/22/2017	
Billings County Planning Department	Mailed Letter	6/22/2017	
Billings County Commission	Mailed Letter	6/22/2017	
Minot Air Force Base - Cable Affairs	Email	6/22/2017	6/26/2017
NDIC Pipeline Authority	Mailed Letter	6/22/2017	
ND State Water Commission	Mailed Letter	6/2/2017	7/7/2017
ND Department of Health	Mailed Letter	6/22/2017	7/6/2017
ND DOT District 5	Mailed Letter	6/22/2017	
ND Department of Trust Lands	Mailed Letter	6/22/2017	
NDSU Extension Service	Mailed Letter	6/22/2017	
ND Department of Agriculture	Mailed Letter	6/22/2017	
ND State Historic Preservation Office	Contacted by Beaver Creek Archaeology, Inc.		9/25/2017

### **7.1 U.S. Fish and Wildlife Service**

The USFWS administers several programs designed to identify and protect plant and animal species listed under the Endangered Species Act, critical habitats for listed species, migratory birds, bald and golden eagles, as well as wetland and grassland easements. A notification letter was sent to the USFWS on June 22, 2017 which included a description of the project, site map, and a request for comments regarding issued under USFWS jurisdiction.

To date, a formal written response has not been received from the USFWS – Bismarck Ecological Services Office or Lake Ilo National Wildlife Refuge.

### **7.2 U.S. Army Corps of Engineers**

The USACE is responsible for administering federal laws that regulate certain activities in the waters of the United States. The authority applicable to this responsibility is Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344), which prohibits the discharge of dredged or fill material into waters of the United States without authorization in the form of a USACE permit. A notification letter was sent to the USACE on June 22, 2017 which included a description of the project, site maps, and a request for comments regarding issues under USACE jurisdiction.

To date, no formal written response has been received from USACE.

### **7.3 Department of Defense- Air Force Cable Affairs**

The United States Department of Defense possesses assets associated with intercontinental ballistic missiles and launch facilities in North Dakota. A notification email was sent to the U.S. Air Force which included a description of the project, site map, and a request for comments regarding issues under U.S. Air Force jurisdiction.

The United States Department of Defense – Air Force Cable Affairs confirmed on June 26, 2017 they have no assets near the Project.

#### **7.4 North Dakota State Historic Preservation Office**

According to the North Dakota Energy Conversion and Transmission Facility Siting Act, among the “*factors to be considered [by the Commission] in evaluating applications and designation of sites, corridors, and routes,*” is the effect of the proposed site or route on existing scenic areas, historic sites and structures, and paleontological or archaeological sites. The agency responsible for these sites is the NDSHPO. BCA was contracted to conduct a Class III Cultural Resource Inventory of the Project corridor.

The NDSHPO review and concurred with a “No Significant Sites Affected” determination provided the project is of the nature stated and it takes places in the plotted location in the documentation. Response was received September 25, 2017.

#### **7.5 North Dakota Game and Fish Department**

The NDGF has oversight of the State’s game species, State Conservation Priority Species, Wildlife Management Areas, and Private Land Open to Sportsman lands. A notification letter was sent to the NDGF on June 22, 2017 which included a description of the Project, site maps, and a request for comments regarding issues under NDGF jurisdiction.

A formal response was received on July 24, 2017 stating the NDGF do not believe this project will have significant adverse effects on wildlife or wildlife habitat, including species of conservation priority, provided their recommendations were implemented where appropriate during project construction.

#### **7.6 North Dakota Parks and Recreation Department**

The NDPRD, Natural Resource Division has authority and expertise regarding recreation and biological resources in North Dakota, with a particular emphasis on rare species and ecological communities. The NDPRD maintains a database detailing the location and recorded occurrences of animal and plant species of special concern. The NDPRD is also responsible for the management of state park lands and Land and Water Conservation funded recreation projects. A notification letter was sent to the NDPRD on June 22, 2017 which included a description of the Project, site maps, and a request for comments regarding issues under NDPRD jurisdiction.

A formal response was received on July 5, 2017 stating the NDPRD recommends that the project be accomplished with minimal impacts and that all efforts be made to ensure that critical habitats not be disturbed in the project area to help secure rare species conservation in North Dakota.

#### **7.7 North Dakota Department of Trust Lands**

The North Dakota Department of Trust Lands was sent a notification letter on June 22, 2017 which included a description of the Project, site map, and request for comments regarding the presence of Mineral Trust Lands and School Trust Lands in the Project Area.

To date, no formal written response has been received from the North Dakota Department of Trust Lands.

## **7.8 North Dakota State Water Commission**

The NDSWC was sent a notification letter on June 22, 2017 which included a description of the Project, site map, and a request for comments regarding issues under NDSWC jurisdiction.

A written response was received from the NDSWC on July 7, 2017 that the project has been review by NDSWC staff. There are floodplains identified where the project is located and recommendation to work with Stark County.

## **7.9 Dunn County Planning Department**

A notification letter was sent to the Dunn County Planning Department on June 22, 2017 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the Dunn County Planning Department.

To date, no formal written response has been received from Dunn County Planning Department.

## **7.10 Dunn County Commission**

A notification letter was sent to the Dunn County Commission on June 22, 2017 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the Dunn County Commission.

To date, no formal written response has been received from Dunn County Commission.

## **7.11 Stark County Planning Department**

A notification letter was sent to the Stark County Planning Department on June 22, 2017 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the Stark County Planning Department.

Stark County Planning Department replied via email on June 26, 2017 stating an application to the County for zoning approval is not required.

## **7.12 Stark County Commission**

A notification letter was sent to the Stark County Commission on June 22, 2017 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the Stark County Commission.

To date, no formal written response has been received from Stark County Commission.

### **7.13 Billings County Planning Department**

A notification letter was sent to Billings County Planning Department on June 22, 2017 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the Billings County Planning Department.

To date, no formal written response has been received from Billings County Planning Department.

### **7.14 Billings County Commission**

A notification letter was sent to Billings County Commission on June 22, 2017 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the Billings County Commission.

To date, no formal written response has been received from Billings County Commission.

### **7.15 North Dakota Industrial Commission Pipeline Authority**

A notification letter was sent to the North Dakota Industrial Commission Pipeline Authority on June 22, 2017 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the North Dakota Industrial Commission Pipeline Authority.

To date, no formal written response has been received from North Dakota Industrial Commission Pipeline Authority.

### **7.16 North Dakota Department of Health**

A notification letter was sent to the North Dakota Department of Health on June 22, 2017 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the North Dakota Department of Health.

To date, no formal written response has been received from North Dakota Department of Health.

### **7.17 North Dakota Department of Transportation District 5**

A notification letter was sent to the North Dakota DOT District 5 on June 22, 2017 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the North Dakota DOT District 5.

To date, no formal written response has been received from North Dakota DOT District 5.

### **7.18 North Dakota State University Extension Service**

A notification letter was sent to the North Dakota State University Extension Service, Soil Specialist on June 22, 2017 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the North Dakota State University Extension Service.

To date, no formal written response has been received from North Dakota State University Extension Service.

### **7.19 North Dakota Department of Agriculture**

A notification letter was sent to the North Dakota Department of Agriculture on June 22, 2017 which included a description of the Project, site map, and a request for comments regarding issues under the jurisdiction of the North Dakota Department of Agriculture.

To date, no formal written response has been received from North Dakota Department of Agriculture.

## **8 OTHER FACTORS CONSIDERED**

### **8.1 Public Health, Welfare, Natural Resources, and the Environment**

A discussion of the effects of the location, construction, and operation of the pipeline on public health and welfare, natural resources, and the environment is included in Section 6.

Keitu Engineers and Consultants, Inc. (Keitu) conducted field surveys within a 200-foot-wide survey corridor in June 2017, to identify presence of wildlife and habitat assessment that covered threatened and endangered species, a tree, sapling, and shrub enumeration survey, and a noxious weed survey were also conducted by Keitu. A Class III Cultural Resource Inventory was conducted in July 2017. Refer to Sections 5, 6, and 7.

### **8.2 New Transmission Technologies and Systems Designed to Minimize Adverse Environmental Effects**

The Project does not include new energy conversion or transmission technologies. The pipeline design is consistent with existing pipeline technologies. However, Belle Fourche is constantly evaluating new energy conservation technologies to reduce the energy consumed in its operations.

Conversion of the existing 6-inch gathering line to a transmission line connects Skunk Hill Pump station to the Andeavor Dickinson Refinery and the Four Bears Pipeline System. This addition to the Four Bears pipeline network will add additional operating flexibility to the system and improves the overall efficiency of the pipeline network in North Dakota. As such, a more efficient operating system will lower overall energy consumption by the state's pipelines.

However the key energy economic impact will be the substitution of the most energy efficient mode of crude oil transportation, i.e. pipeline for on-road transport via cargo tanker truck or via surface transportation by rail. Converting the existing line will open the 20,000 barrels per day gathering capacity of the existing system (which may or may not be operated at full capacity by Belle Fourche) to other crude oil companies wishing to use pipeline transportation for their product.

Beyond the direct energy benefit of using a more efficient mode of transportation, energy conservation is a major concern at Belle Fourche. Energy/power costs represent the largest single recurring expense in pipeline operation. Attention is continually being directed toward energy conservation.

Belle Fourche's energy conservation goal is to minimize power/energy unit costs, through the implementation of internal programs directed at continuous improvement of energy utilization efficiency. The following provides a brief explanation of the programs reviewed during the Project development phase:

#### Pipeline Control Center

Belle Fourche control operators are trained in applied hydraulics and pipeline control. They are trained to operate the pipeline at a natural flow rate using efficient combinations of pumps, thereby minimizing energy consumption. Operators have the capability to start and stop pumps and monitor pipeline operating conditions to assist in achieving an energy efficient operation.

#### Energy Efficient Pumps and Motors

For new installations, Belle Fourche purchases high efficiency pumps and motors at a premium initial cost in an effort to conserve long range energy requirements. Specifically, a high polish is used on the pump impeller, and motors are custom designed for high efficiency. Pumps are hydraulically designed and selected to obtain a high best efficiency point (BEP) at the desired flow rates. The forecasts are continually being evaluated and if the flow rate is outside the BEP range, impeller changes are typically implemented for improved efficiency. Installation of variable speed drives is used to minimize starting current and maximize pump efficiency in all operating conditions.

#### Drag Reducing Agents (DRA)

Belle Fourche currently uses drag reducing agents in selected segments of its pipeline system. Injection of DRA reduces flow turbulence of liquid hydrocarbons which results in reduced pressure loss between stations. This allows a high flow rate (increased throughput) at the same operating pressure, or a decrease in operating pressure while maintaining flow rate. These two scenarios allow increased throughput or decreased power use. The flexibility furthers opportunities to shift power use to improve economics or accommodate the utilities. In these cases, the economic benefits realized with the implementation of the DRA program have outweighed the material cost of the DRA. As a result, lower unit energy costs and greater efficiency have occurred.

### **8.3 Beneficial Uses of Waste Energy from a Proposed Energy Conversion Facility**

The Project does not involve new energy conversion facilities; no usable waste energy will result from the Project.

### **8.4 Unavoidable Adverse Direct and Indirect Environmental Effects**

Unavoidable adverse direct and indirect environmental effects during the actual construction of this system may have included short-term or temporary effects on vegetation, wildlife, agricultural operations, transportation, and noise levels as described in Section 6. However, because the Project is limited to only new designations for an existing pipeline, no new impacts are expected.

No discernable long-term impacts to wildlife or wildlife habitat were noted anywhere within the Project's impact area.

## **8.5 Corridor or Route Alternatives Developed During the Hearing that Minimize Adverse Effects**

The Project Corridor provides an established, direct route between Skunk Hill Station and DPR. This corridor was originally selected to avoid or minimize environmental and socioeconomic impact and largely parallels the Dickinson Line Loop pipeline route. Conversion of an existing gathering line to transmission line status will avoid installation/construction of a new pipeline for this same purpose. The Project Route utilizes Belle Fourche's existing ROW.

## **8.6 Irreversible and Irretrievable Commitments of Natural Resources if Designated**

The Project would require minimal irreversible and irretrievable commitments of natural resources because the Project is a conversion of an existing pipeline. Areas impacted by the original construction were returned to their pre-disturbance use, with the exception of the small areas where aboveground facilities are located.

## **8.7 Direct and Indirect Economic Impacts of the Facility**

The Project presents an optimization of existing pipeline capacity to meet the needs for additional liquid petroleum transportation and supply/purchase options to this region. Belle Fourche's proposal represents an optimal use of existing pipelines on an existing route.

## **8.8 Existing Plans for Other Developments in the Vicinity**

Belle Fourche is not aware of other development by state, local or governmental entities at or in the vicinity of the Project Corridor.

## **8.9 Effect of the Proposed Route on Existing Scenic Areas, Historic Sites and Structures, and Paleontological or Archeological Sites**

During the intensive pedestrian survey, no new cultural resources were encountered and no sign of site impact was seen on the previously recorded sites on file with the SHPO. As a result, BCA recommends a finding of No Historic Properties Affected for this project. The SHPO reviewed the Class I and Class III Inventory Reports and concurred with the "No Significant Sites Affected" determination. Section 6.11 describes BCA's findings and a copy of BCA's report is presented in Exhibit B.

## **8.10 Effect of the Proposed Route on Areas That Are Unique Because of Biological Wealth or Because They Are Habitats for Rare and Endangered Species**

Contacts have been made with the NDGF, the USFWS, and the NHI to identify species and ecologically significant habitats within the ROW and the Project corridor. Possible areas of concern discussed were federally listed endangered, threatened, candidate, sensitive, or watch species, state-listed protected species, and critical habitat that is located on or within the pipeline route.

The NDGF was provided with the proposed route and after review stated, "We do not believe this project will have significant adverse effects on wildlife or wildlife habitat, including species of conservation

priority, provided these recommendations were implemented where appropriate during project construction.”

The FWS was provided with the proposed route and is currently under review. Areas that are analyzed by the FWS include federally listed endangered, threatened, candidate species, and designated critical habitat in North Dakota.

A field survey was conducted in June 2017 using a 200-foot-wide corridor for botany and wildlife. No sensitive wildlife or botany issues were identified within the Project Corridor. The results of this field study are presented in Section 5 submitted as part of this consolidated application.

The NHI listed Species of Concern in the state that have been identified within the Project area (see Section 5.3). The field study concluded that the Project area is within safe distance from the species listed and will not have an effect on the species or their habitat.

### **8.11 Problems Raised by Federal, State, and Local Agencies**

No problems or concerns other than those identified in section 8.10 have been raised by commenters or identified by Belle Fourche, or its consultants.

### **8.12 Policies and Commitments to Limit Environmental Impact**

Belle Fourche is a liquids pipeline operator that gathers and transports crude oil in the Williston Basin and the Powder River Basin.

Belle Fourche, Bridger Pipeline, LLC and Butte Pipeline Company are all part of the True Companies of Casper, Wyoming. True Companies operates pipeline systems in western North Dakota, eastern Montana and Wyoming. The True Companies have been family owned and operated since 1948, and now have over 1,000 employees in Wyoming, Colorado, Montana, North Dakota, Utah, Texas, Louisiana, Mississippi, New Mexico, Missouri, Oklahoma and Arizona.

Belle Fourche works to protect the environment, home to its employees and customers. Protection of the environment is an integral element in the conduct of Belle Fourche. Environmental protection efforts will span the entire Project, from planning through conversion, and into full operation.

The major causes of pipeline leaks in the United States are corrosion (both internal and external), excavation damage, pipe and weld failure, incorrect operations, or natural causes (e.g. floods or outside force). To prevent these categories of failures, Belle Fourche will improve or maintain the Project to meet or exceed industry and governmental requirements and standards. Specifically the steel pipe meets US DOT Pipeline and Hazardous Material Safety Administration federal codes under 49 CFR Part 195 (referred to hereafter as PHMSA regulations) and follow standards issued by the American Society of Mechanical Engineers, National Association for Corrosion Engineers and API. As a safety factor, the Project is designed to withstand pressures over and above its normal operating pressures and will operate according to codes and regulations. All pipe is inspected and integrity-tested at the factory and transported per the highest technical standards. PHMSA conducts regularly scheduled field inspections of the pipeline facilities to ensure compliance with federal regulatory requirements, including the integrity testing of the pipeline through the use of internal inspection devices.

The existing pipeline will continue to be subjected to careful testing to verify its integrity and compliance with specifications. The line is subjected to hydrostatically testing per DOT/PHMSA regulations to an accurate and safe maximum allowable operating pressure.

As previously mentioned, the existing gathering pipeline has been maintained and inspected according to PHMSA regulations, industry codes and prudent pipeline operating techniques and will continue to be examined under the same scrutiny. All of Belle Fourche's mainline liquids pipelines are externally coated to resist corrosion, internally inspected at regular intervals using in-line inspection technology, and equipped with a cathodic-protection system to prevent external corrosion. Belle Fourche's cathodic protection system and internal inspection program were implemented prior to these techniques becoming a regulatory standard.

The Belle Fourche System ROWs are patrolled and inspected by air at least every three weeks but not less than 26 times per year to watch for abnormal conditions or dangerous activities, e.g., unauthorized excavation, along the routes of the lines. Belle Fourche also conducts extensive public education and outreach programs that exceed industry (API Recommended Practice 1162) and PHMSA (49 CFR 195.440) requirements concerning public awareness of pipelines and pipeline-safety matters. All Belle Fourche lines are marked with signage and warnings, per federal regulations, at road and highway crossings, railroad crossings, and other locations to alert the public to the presence of underground lines and to provide information, contact numbers, and emergency data.

Pipeline workers and contractors performing critical tasks are qualified under Occupational Safety and Health Administration safety standards and PHMSA "operator qualification" rules and are subjected to federal drug and alcohol testing requirements. Belle Fourche meets, and often exceeds, these requirements so that human error in construction and operation is minimized.

## **9 MITIGATION MEASURES**

### **9.1 Measures to Preserve the Human Environment**

Noise and dust pollution will not be generated by the Project.

Road crossing permits were obtained prior to construction, when and where required.

### **9.2 Measures to Protect Terrain and Geological Resources**

Restoration of the Project area will not be conducted because no construction activities are necessary for the Project. Should any restoration become necessary, it will be compatible with the safe operation, maintenance, and inspection of the pipeline.

### **9.3 Measures to Protect Soils**

If or when construction or maintenance activities are required, temporary erosion and sedimentation control measures may include installation of silt fence, straw bales, slope breakers, trench breakers, erosion control fabric and mulch, in any Project areas deemed susceptible to soil erosion.

#### **9.4 Measures to Protect Vegetation and Wildlife**

Belle Fourche already maintains the ROW to the extent necessary to assure suitable access for safe operation and maintenance of the pipeline. No changes to the current conditions are expected.

Belle Fourche and its contractors will effectively control or limit the spread of invasive plant species through control treatments and avoiding existing populations where possible. Treatments will be initiated prior to activity to disperse propagules in the area of disturbance. Monitoring and treatment should then be conducted on an annual basis to ensure a high degree of control and maximize treatment effectiveness.

No permanent revegetation will be necessary after completion of the Project.

Belle Fourche will take appropriate precautions to protect livestock and crops affected by maintenance and inspection of this project. Operation of the pipeline is not anticipated to significantly affect terrestrial wildlife, fisheries resources, or other aquatic species.

Shelter belts and trees will be protected by Belle Fourche to the extent possible in a manner compatible with the safe operation, maintenance, and inspection of the pipeline.

#### **9.5 Measures to Protect Land Use Permits**

Belle Fourche will obtain and comply with applicable county permits regulating zoning and land use for any necessary maintenance or future construction activities. Since portions of the pipeline were constructed as far back as the 1990s, at the time of the original construction, several areas of the current pipeline did not require county use permits. For the more recent additions, county road and conditional use permits were obtained.

### **10 DEVELOPMENT**

#### **10.1 Present and Future Natural Resource Development in the Area**

Belle Fourche has consulted with federal, state, and local agencies regarding the Project. As a result of these consultations, Belle Fourche was not made aware of any current or future developments of natural resources in the area that would affect the proposed Project.

## 11 QUALIFICATIONS OF PREPARERS

The qualifications of the personnel who contributed to the consolidated application are as follows:

(1) Tad True, Vice President – Belle Fourche Pipeline Company

Degree: Bachelor of Business Administration, University of Notre Dame  
Experience: 13-year experience in petroleum transportation field

(2) Robert Stamp, Commercial/Engineering Supervisor – Belle Fourche Pipeline Company

Degree: Bachelor of Mechanical Engineering, Valparaiso University  
Experience: 28-year experience in petroleum transportation field as well as regulatory affairs and compliance.  
Professional License  
Registered Professional Engineer: Wyoming

(3) Ken Dockweiler, Director – Land, Government, and Compliance - Belle Fourche Pipeline Company

Experience: 27-year experience in petroleum transportation field with 16 years focused in regulatory affairs and compliance.

(4) Kathleen Spilman, Managing Director – Keitu Engineers & Consultants, Inc.

Degrees: Bachelor of Science - Chemical Engineering, University of North Dakota Masters in Management, University of Mary  
Experience: 36-year experience in petroleum refining and fuels transportation field as well as regulatory affairs and compliance.  
Professional License  
Registered Professional Engineer: North Dakota, Montana

(5) Karine Finken, Project Manager — Keitu Engineers & Consultants, Inc.

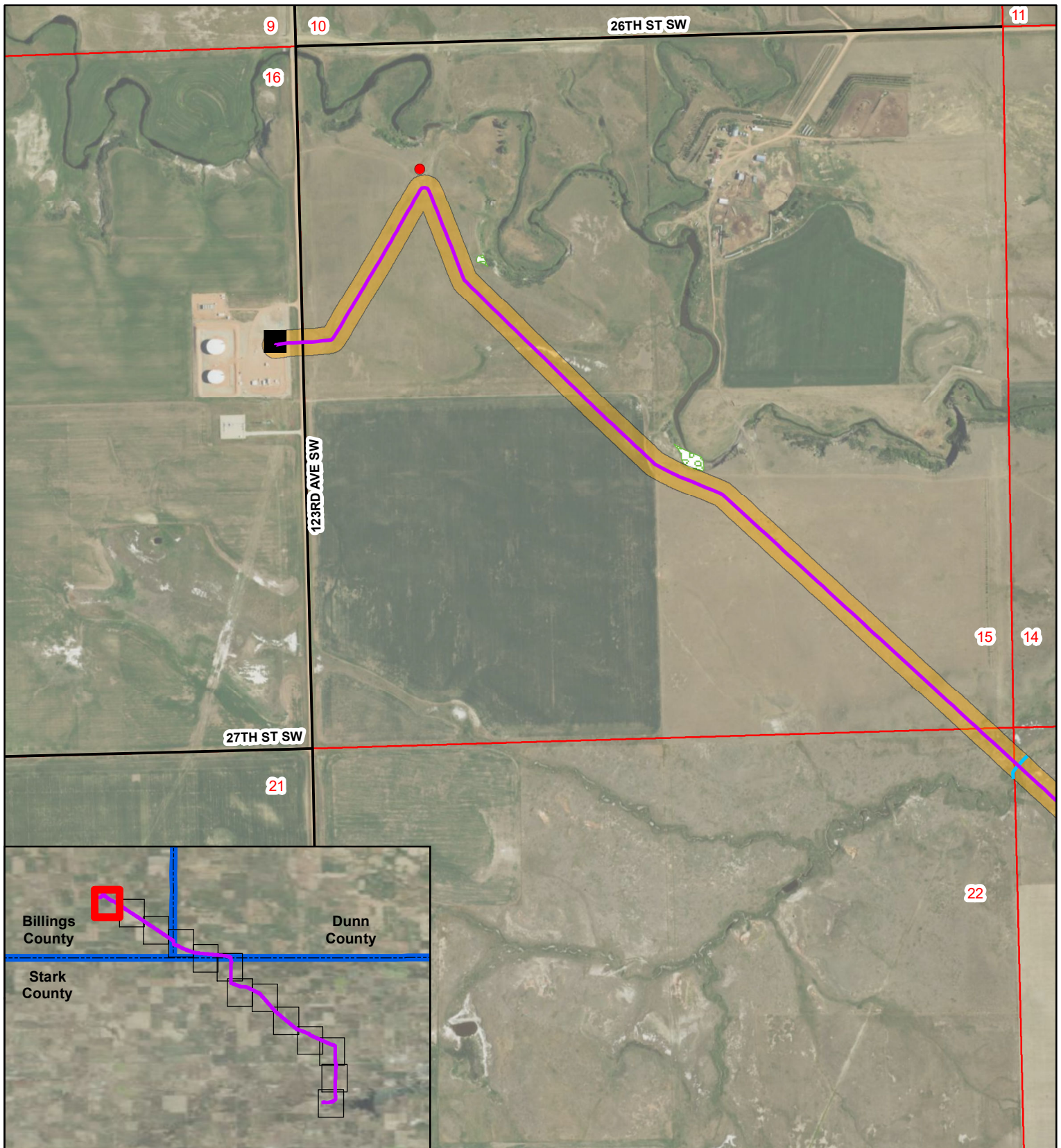
Degree: Bachelor of Science – Natural Resource Management, University of Minnesota - Crookston  
Experience: 7-year experience in natural resource management

(6) Jaimee Antognazzi, Operations Manager - Keitu Engineers & Consultants, Inc.

Degree: Bachelor of Science – Environmental Health, Dickinson State University  
Experience: 11 years' experience in regulatory affairs and compliance.  
Professional Certification: Certified Safety Professional

**Exhibit A.1**  
**Aerial Mapbook**

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### Skunk Hill To DPR 6" Pipeline

- |                             |                    |                         |
|-----------------------------|--------------------|-------------------------|
| Water Wells                 | Existing Road      | County Boundary         |
| Noxious Weeds               | Site Boundary      | Section Boundary        |
| Block Valve                 | Woody Vegetation   | Township/Range Boundary |
| Proposed 6" Pipeline        | Pipeline Corridor  |                         |
| Named Streams and Drainages | Residence/Building |                         |
| Interstate                  |                    |                         |

Page 1 of 13  
T. 141N, R. 98W

Billings County, North Dakota  
Projection: NAD 1983 UTM Zone13N  
Base Map: 2016 Aerial Imagery  
Source: USDA/FSA - Aerial Photography Field Office

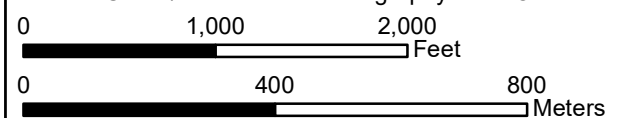
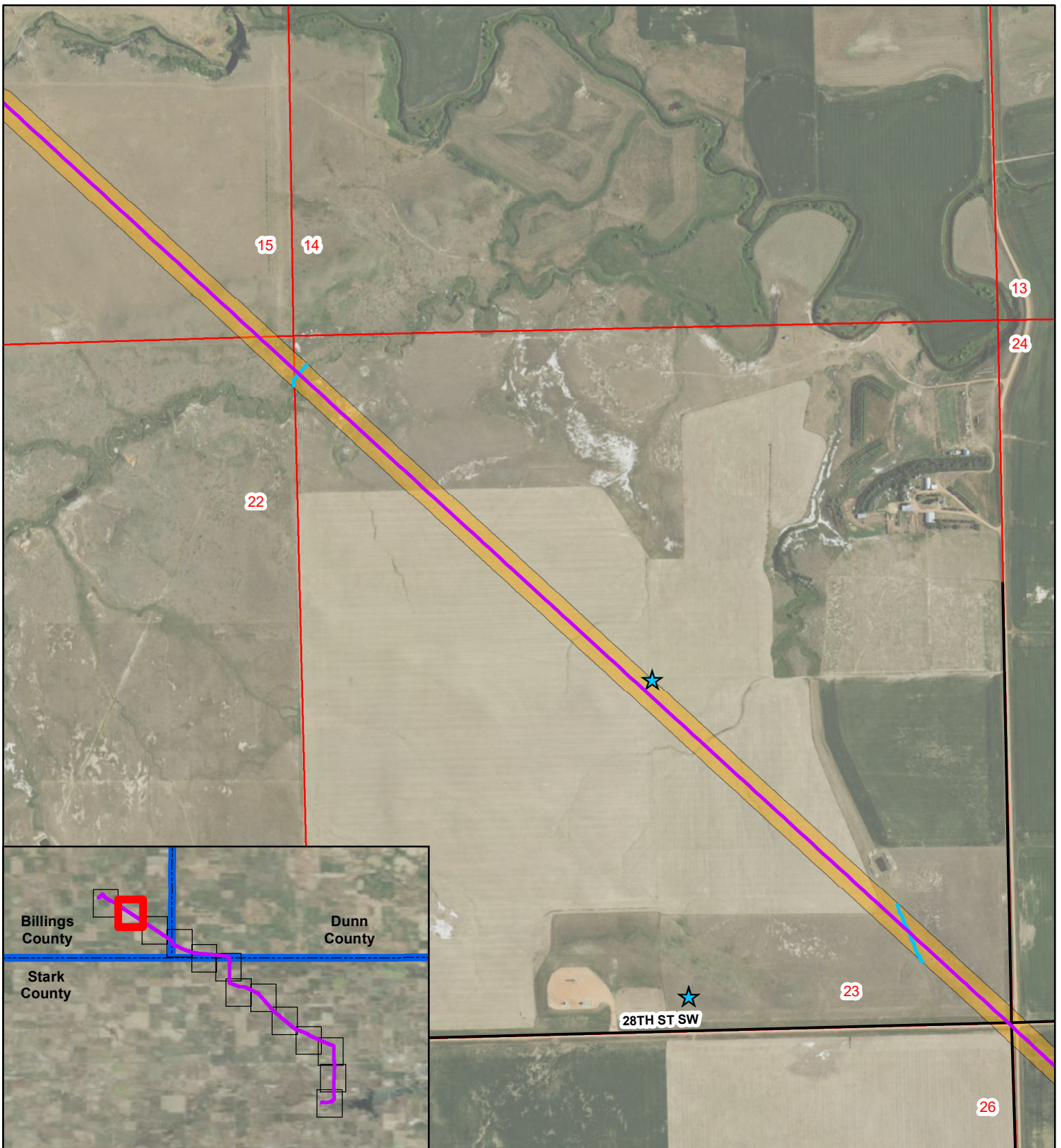


Figure: A.1



### Skunk Hill To DPR 6" Pipeline

- |                               |                      |                           |
|-------------------------------|----------------------|---------------------------|
| ★ Water Wells                 | — Existing Road      | ▭ County Boundary         |
| ● Noxious Weeds               | - - - Site Boundary  | ▭ Section Boundary        |
| ■ Block Valve                 | ▨ Woody Vegetation   | ▭ Township/Range Boundary |
| — Proposed 6" Pipeline        | ▨ Pipeline Corridor  |                           |
| — Named Streams and Drainages | ▨ Residence/Building |                           |
| — Interstate                  |                      |                           |

Page 2 of 13  
T. 141N, R. 98W

Billings County, North Dakota  
Projection: NAD 1983 UTM Zone 13N  
Base Map: 2016 Aerial Imagery  
Source: USDA/FSA - Aerial Photography Field Office

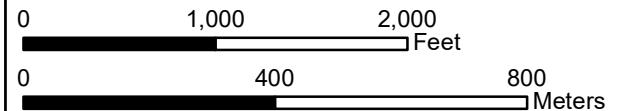
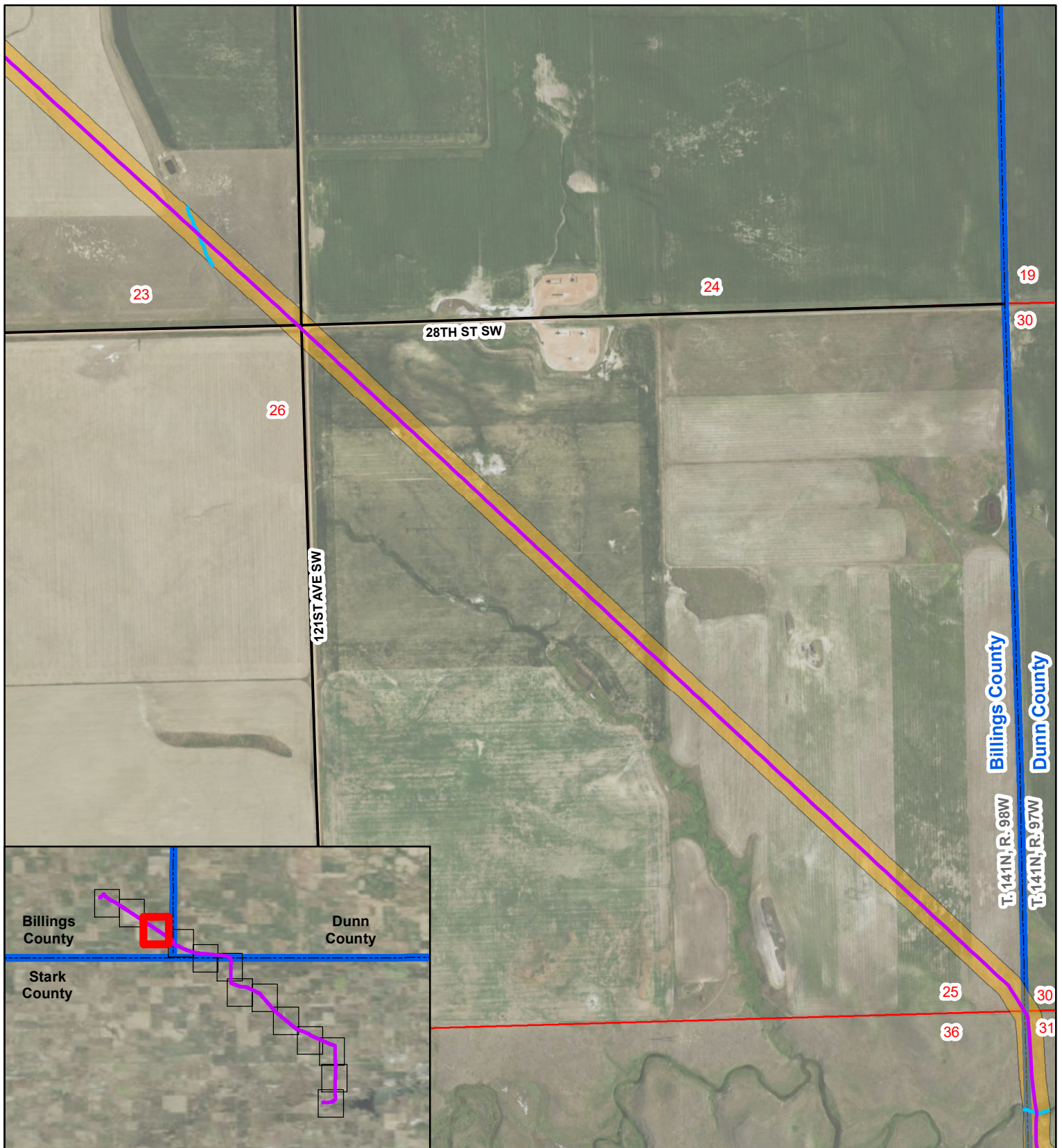


Figure: A.1



### Skunk Hill To DPR 6" Pipeline

- |                               |                      |                           |
|-------------------------------|----------------------|---------------------------|
| ★ Water Wells                 | — Existing Road      | ▭ County Boundary         |
| ● Noxious Weeds               | - - - Site Boundary  | ▭ Section Boundary        |
| ■ Block Valve                 | ▨ Woody Vegetation   | ▭ Township/Range Boundary |
| — Proposed 6" Pipeline        | ▨ Pipeline Corridor  |                           |
| — Named Streams and Drainages | ▨ Residence/Building |                           |
| — Interstate                  |                      |                           |

Page 3 of 13

T. 141N, R. 98W

Billings County, North Dakota

Projection: NAD 1983 UTM Zone13N

Base Map: 2016 Aerial Imagery

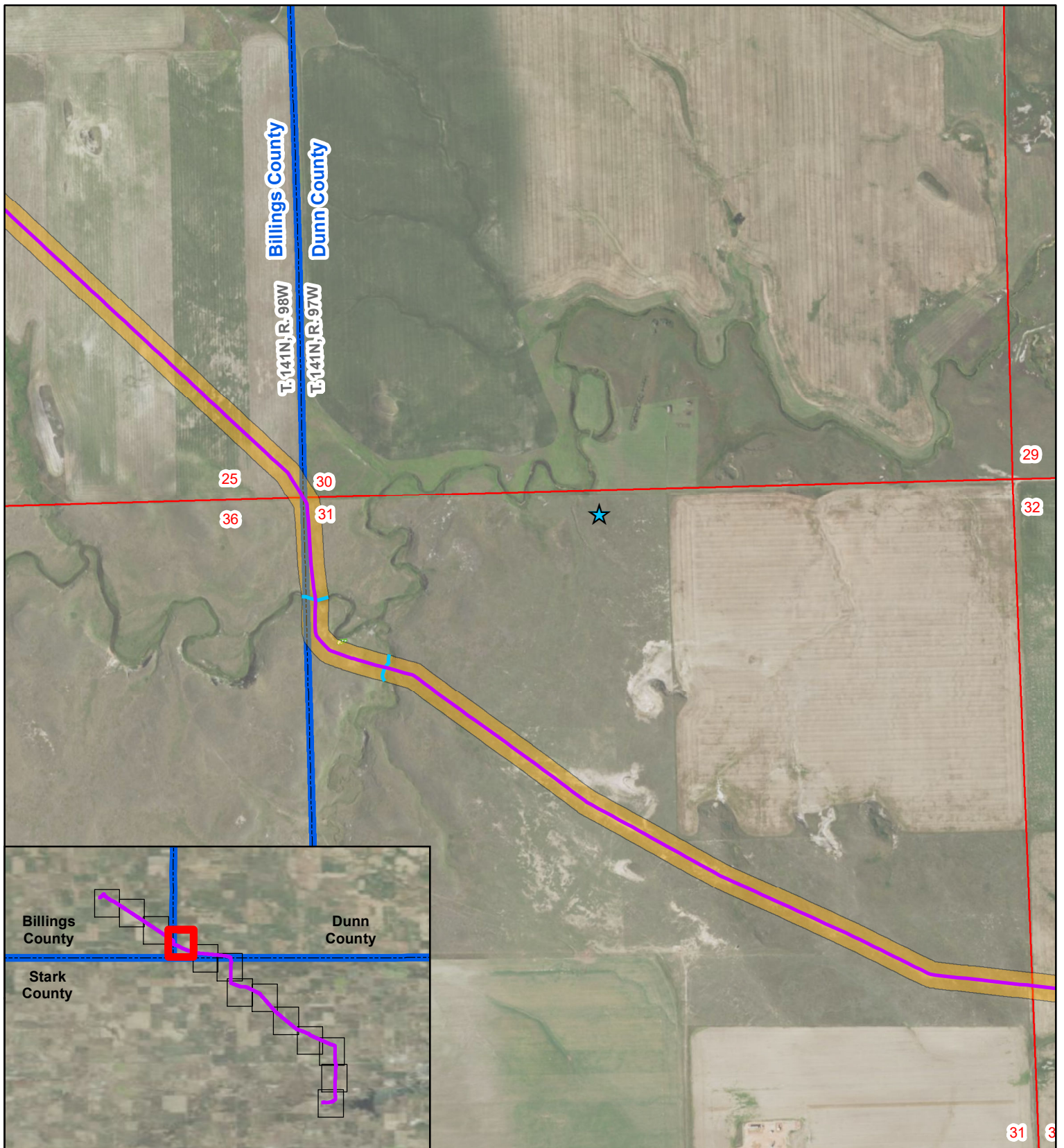
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0 1,000 2,000 Feet

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Figure: A.1



### Skunk Hill To DPR 6" Pipeline

- |                               |                     |                         |
|-------------------------------|---------------------|-------------------------|
| ★ Water Wells                 | — Existing Road     | County Boundary         |
| ● Noxious Weeds               | - - - Site Boundary | Section Boundary        |
| ■ Block Valve                 | Woody Vegetation    | Township/Range Boundary |
| — Proposed 6" Pipeline        | Pipeline Corridor   |                         |
| — Named Streams and Drainages | Residence/Building  |                         |
| — Interstate                  |                     |                         |

Page 4 of 13

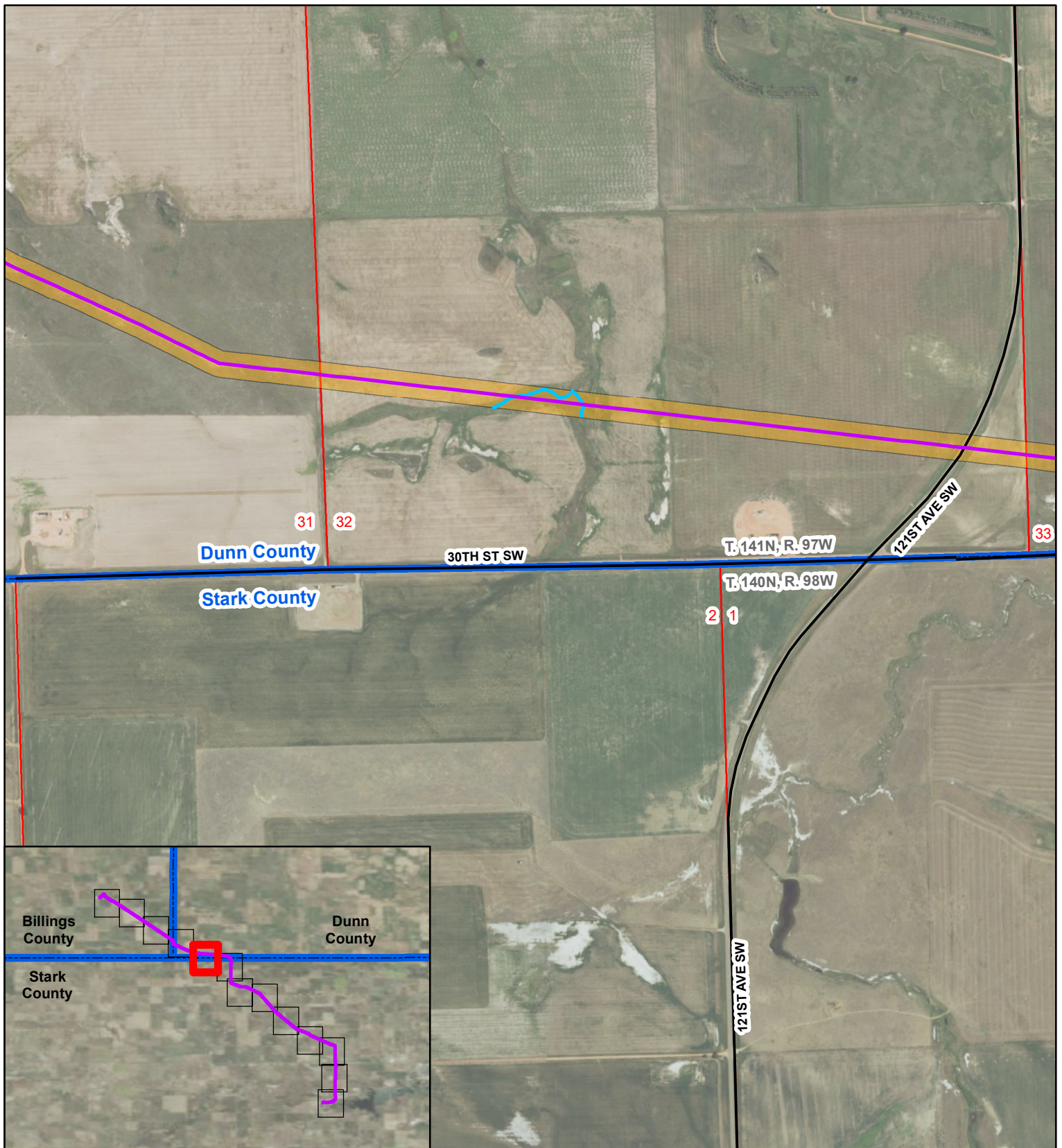
T. 141N, R. 98W  
 and T. 141N, R. 97W  
 Billings and Dunn Counties, North Dakota  
 Projection: NAD 1983 UTM Zone13N  
 Base Map: 2016 Aerial Imagery  
 Source: USDA/FSA - Aerial Photography Field Office



0 1,000 2,000  
 Feet

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 Meters

Figure: A.1



### Skunk Hill To DPR 6" Pipeline

- |                               |                      |                           |
|-------------------------------|----------------------|---------------------------|
| ★ Water Wells                 | — Existing Road      | ▭ County Boundary         |
| ● Noxious Weeds               | - - - Site Boundary  | ▭ Section Boundary        |
| ■ Block Valve                 | ▨ Woody Vegetation   | ▭ Township/Range Boundary |
| — Proposed 6" Pipeline        | ▨ Pipeline Corridor  |                           |
| — Named Streams and Drainages | ▨ Residence/Building |                           |
| ▨ Interstate                  |                      |                           |

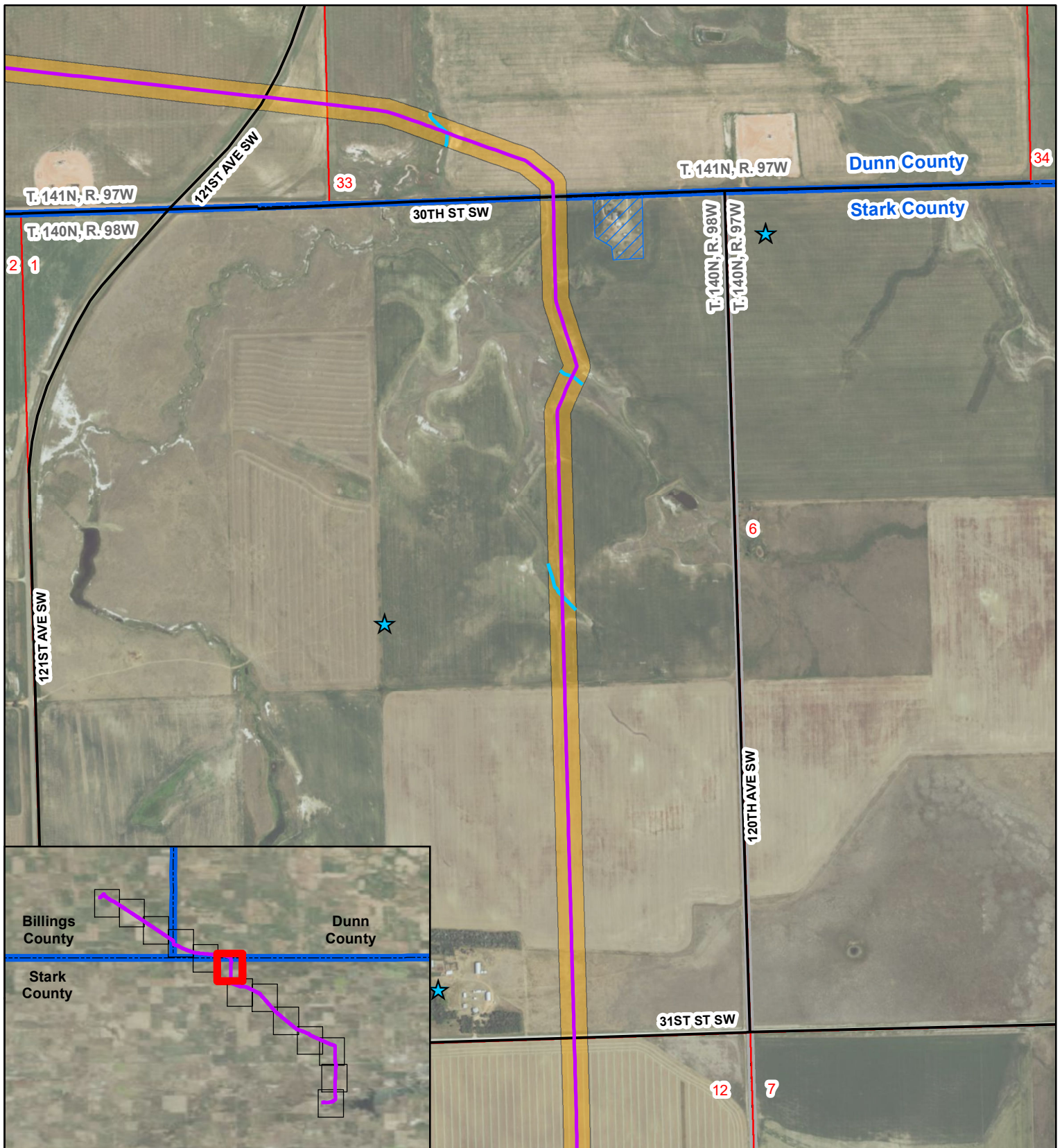
T. 141N, R. 97W  
 and T. 140N, R. 98W  
 Dunn and Stark Counties, North Dakota  
 Projection: NAD 1983 UTM Zone13N  
 Base Map: 2016 Aerial Imagery  
 Source: USDA/FSA - Aerial Photography Field Office



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Figure: A.1



### Skunk Hill To DPR 6" Pipeline

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|-------------------------------|----------------------|---------------------------|
| ★ Water Wells                 | — Existing Road      | ▭ County Boundary         |
| ● Noxious Weeds               | - - - Site Boundary  | ▭ Section Boundary        |
| ■ Block Valve                 | ▨ Woody Vegetation   | ▭ Township/Range Boundary |
| — Proposed 6" Pipeline        | ▨ Pipeline Corridor  |                           |
| — Named Streams and Drainages | ▨ Residence/Building |                           |
| — Interstate                  |                      |                           |

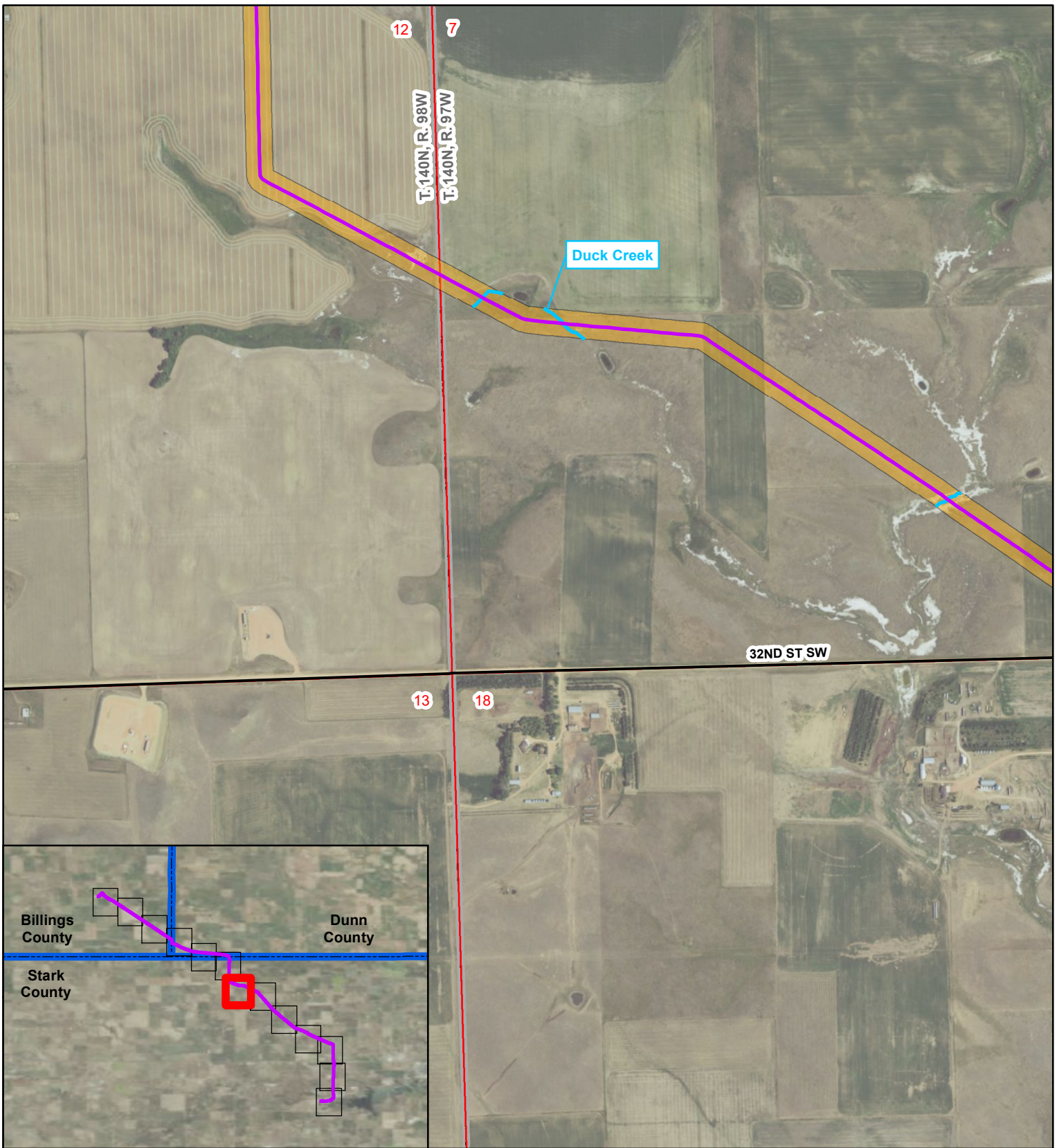
Page 6 of 13  
 T. 141N, R. 97W, T. 140N, R. 98W,  
 and T. 140N, R. 97W  
 Dunn and Stark Counties, North Dakota  
 Projection: NAD 1983 UTM Zone13N  
 Base Map: 2016 Aerial Imagery  
 Source: USDA/FSA - Aerial Photography Field Office

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Figure: A.1



## Skunk Hill To DPR 6" Pipeline

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|-------------------------------|----------------------|---------------------------|
| ★ Water Wells                 | — Existing Road      | ▭ County Boundary         |
| ● Noxious Weeds               | - - - Site Boundary  | ▭ Section Boundary        |
| ■ Block Valve                 | ▨ Woody Vegetation   | ▭ Township/Range Boundary |
| — Proposed 6" Pipeline        | ▨ Pipeline Corridor  |                           |
| — Named Streams and Drainages | ▨ Residence/Building |                           |
| ▨ Interstate                  |                      |                           |

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T. 140N, R. 98W  
and T. 140N, R. 97W

Stark County, North Dakota

Projection: NAD 1983 UTM Zone13N

Base Map: 2016 Aerial Imagery

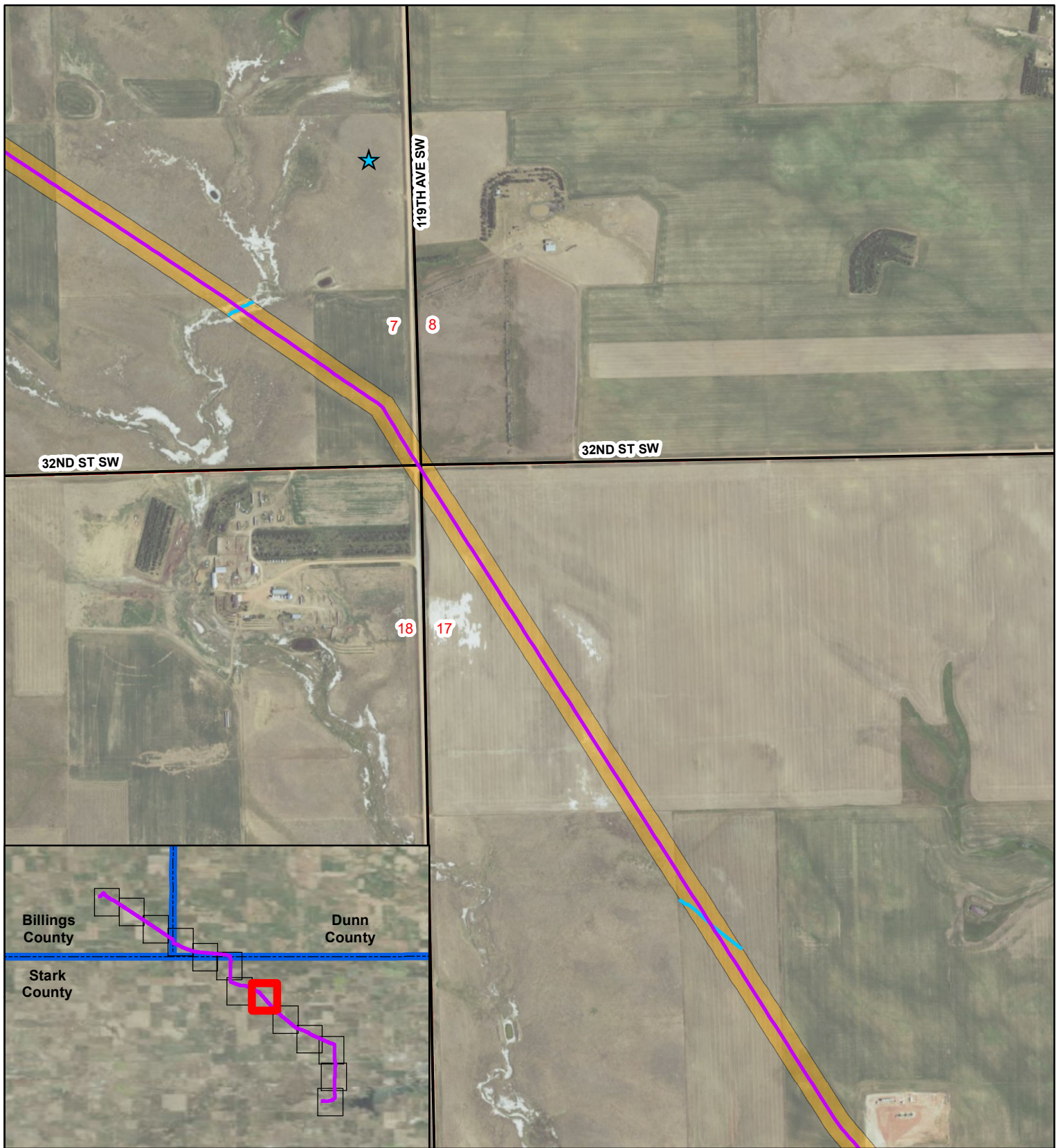
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Feet

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Meters



Figure: A.1



### Skunk Hill To DPR 6" Pipeline

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|-------------------------------|----------------------|---------------------------|
| ★ Water Wells                 | — Existing Road      | ▭ County Boundary         |
| ● Noxious Weeds               | - - - Site Boundary  | ▭ Section Boundary        |
| ■ Block Valve                 | ▨ Woody Vegetation   | ▭ Township/Range Boundary |
| — Proposed 6" Pipeline        | ▨ Pipeline Corridor  |                           |
| — Named Streams and Drainages | ▨ Residence/Building |                           |
| ▨ Interstate                  |                      |                           |

Page 8 of 13  
T. 140N, R. 97W

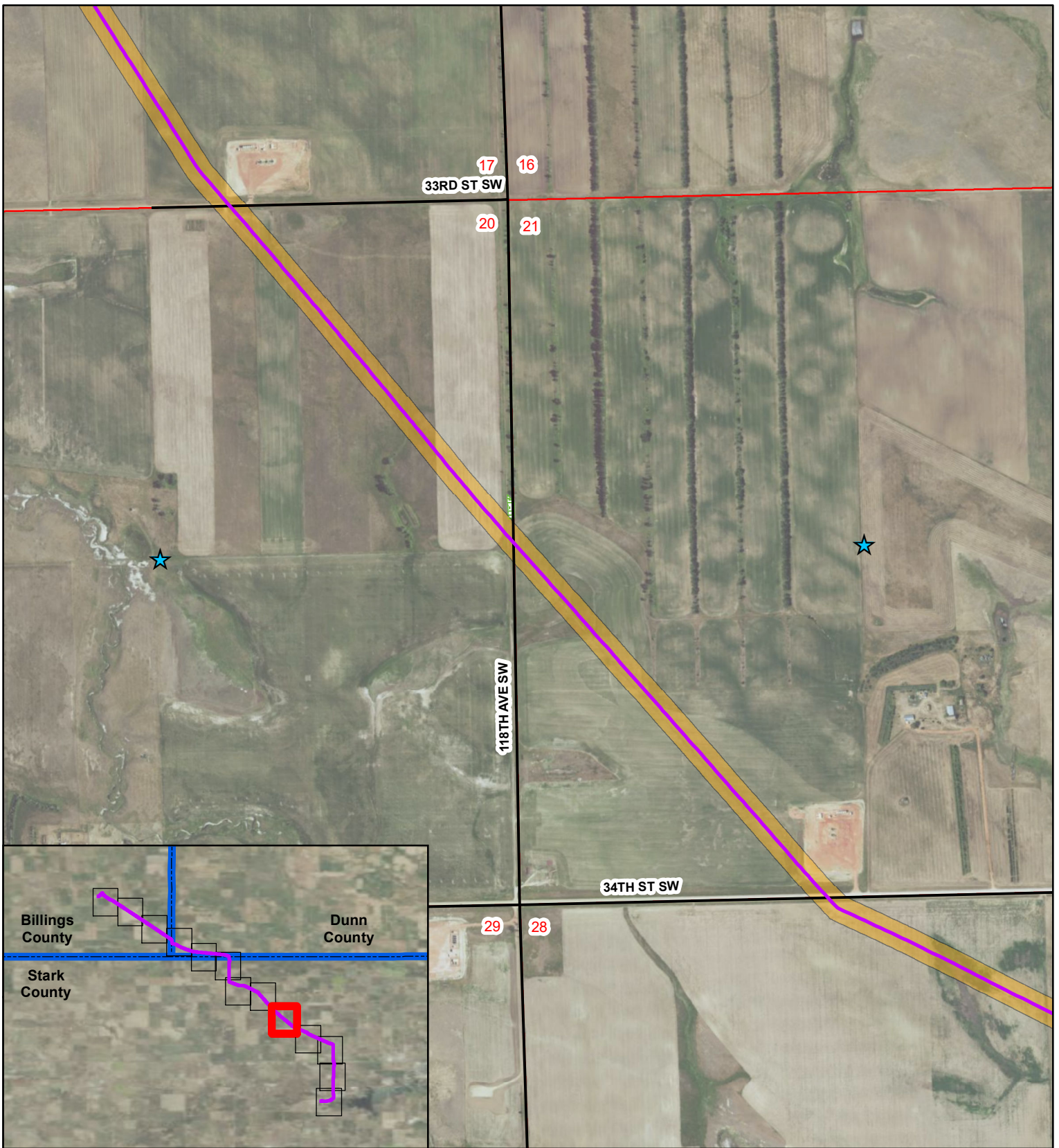
Stark County, North Dakota  
Projection: NAD 1983 UTM Zone13N  
Base Map: 2016 Aerial Imagery  
Source: USDA/FSA - Aerial Photography Field Office



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Feet

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Meters

Figure: A.1



### Skunk Hill To DPR 6" Pipeline

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|-------------------------------|----------------------|---------------------------|
| ★ Water Wells                 | — Existing Road      | ▭ County Boundary         |
| ● Noxious Weeds               | - - - Site Boundary  | ▭ Section Boundary        |
| ■ Block Valve                 | ▨ Woody Vegetation   | ▭ Township/Range Boundary |
| — Proposed 6" Pipeline        | ▨ Pipeline Corridor  |                           |
| — Named Streams and Drainages | ▨ Residence/Building |                           |
| ▨ Interstate                  |                      |                           |

Page 9 of 13

T. 140N, R. 97W

Stark County, North Dakota

Projection: NAD 1983 UTM Zone13N

Base Map: 2016 Aerial Imagery

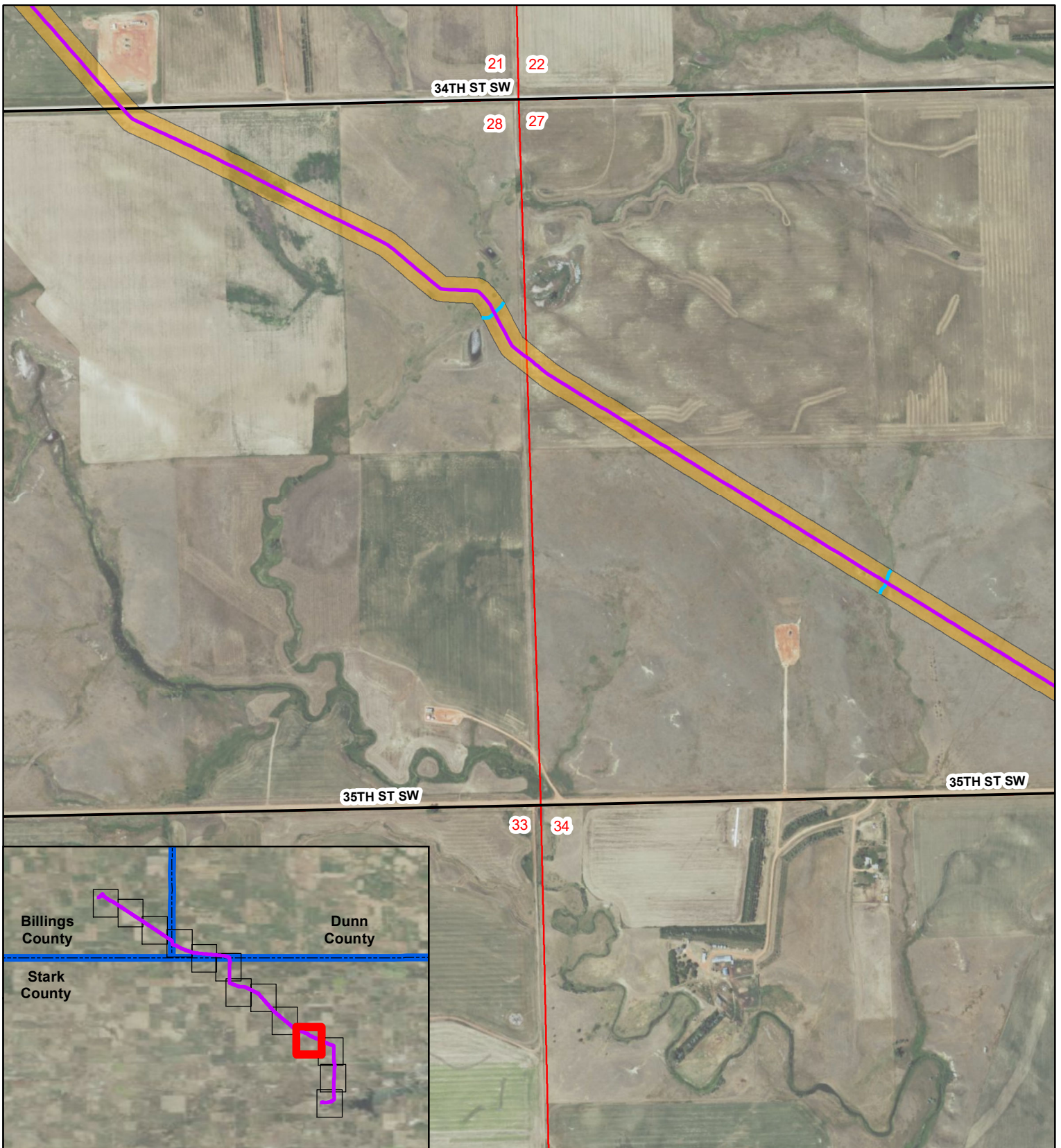
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Figure: A.1



### Skunk Hill To DPR 6" Pipeline

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|-------------------------------|----------------------|---------------------------|
| ★ Water Wells                 | — Existing Road      | ▭ County Boundary         |
| ● Noxious Weeds               | - - - Site Boundary  | ▭ Section Boundary        |
| ■ Block Valve                 | ▨ Woody Vegetation   | ▭ Township/Range Boundary |
| — Proposed 6" Pipeline        | ▨ Pipeline Corridor  |                           |
| — Named Streams and Drainages | ▨ Residence/Building |                           |
| ▨ Interstate                  |                      |                           |

Page 10 of 13  
T. 140N, R. 97W

Stark County, North Dakota  
Projection: NAD 1983 UTM Zone13N  
Base Map: 2016 Aerial Imagery  
Source: USDA/FSA - Aerial Photography Field Office



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Feet

0 400 800  
Meters

Figure: A.1

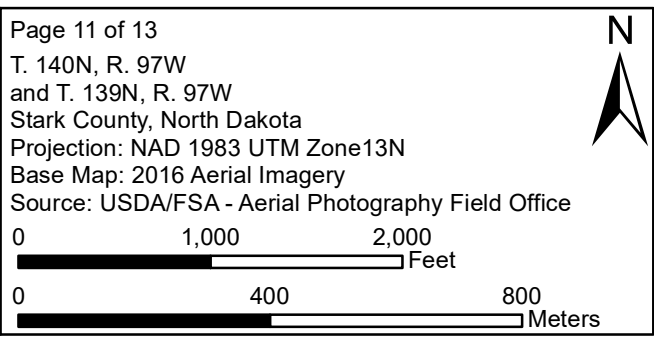
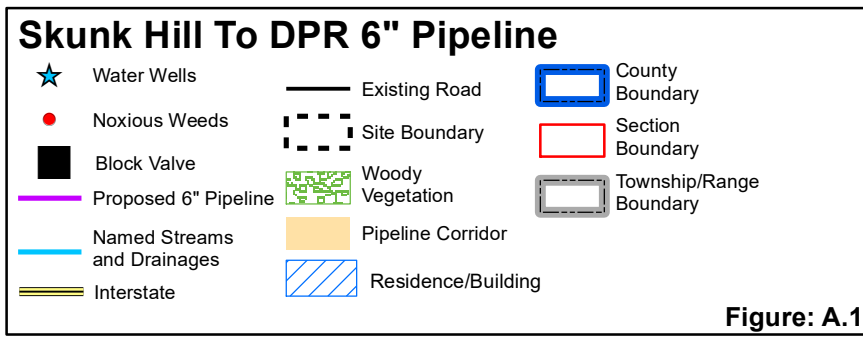
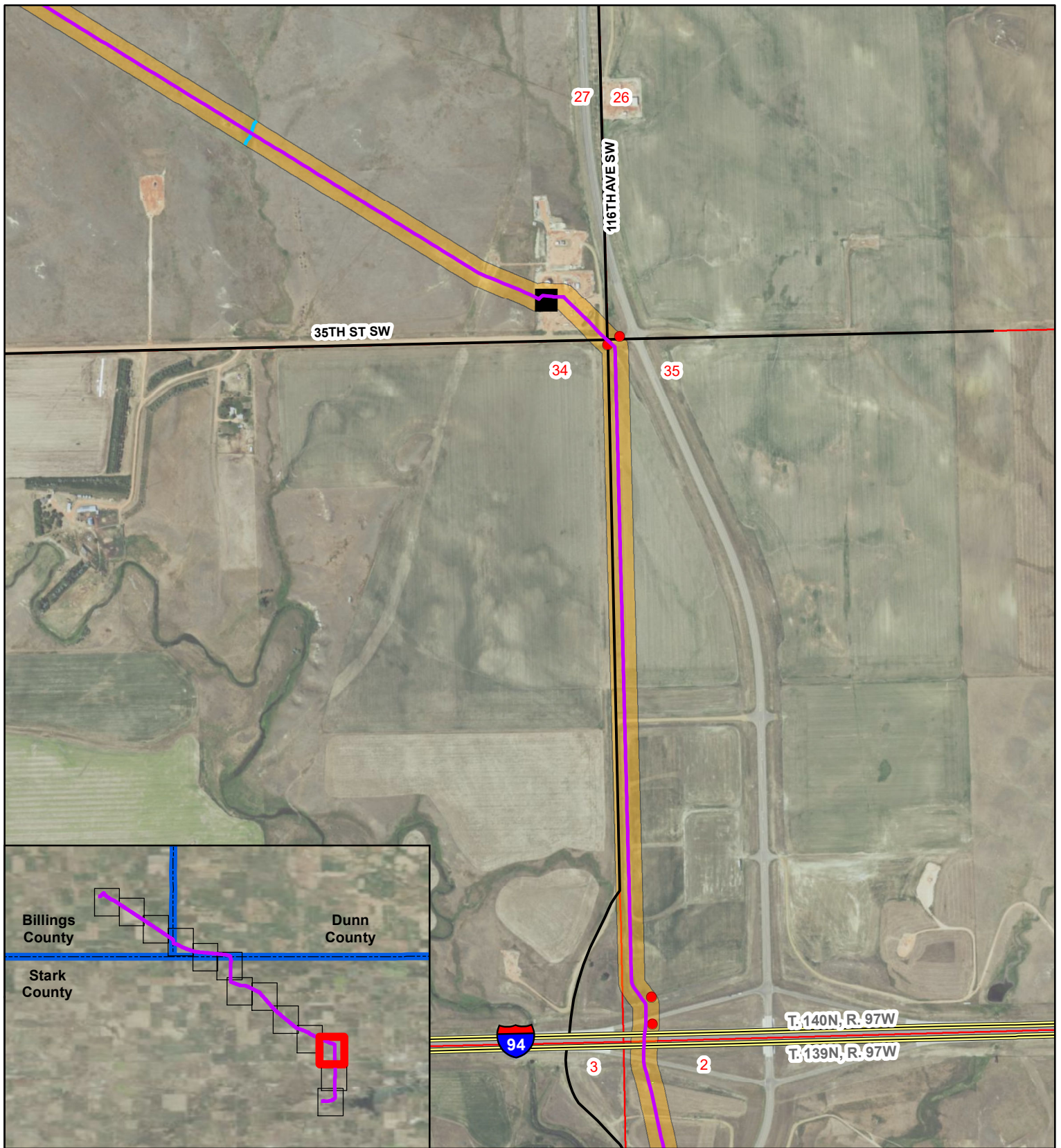
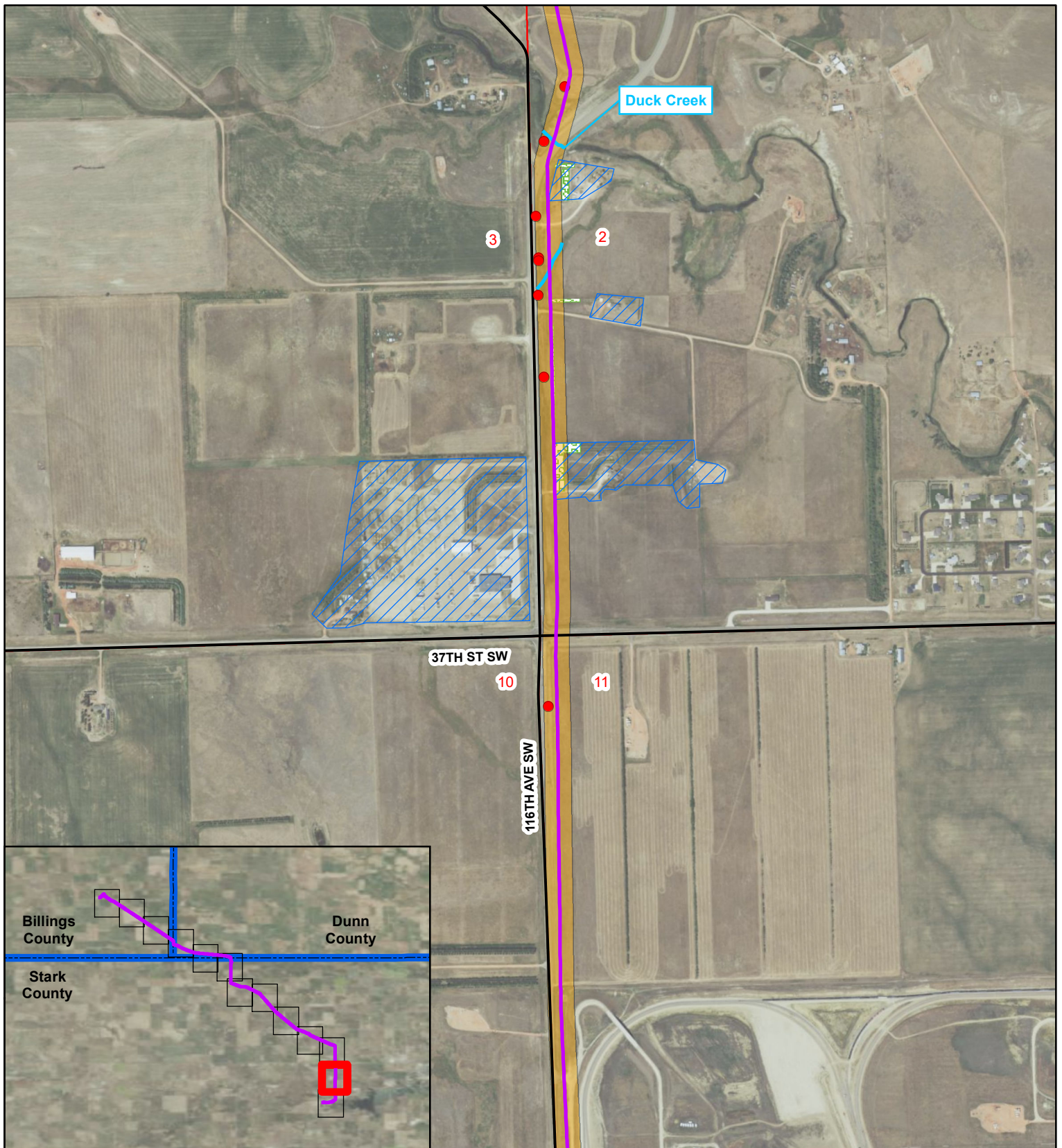


Figure: A.1



### Skunk Hill To DPR 6" Pipeline

- |                               |                      |                           |
|-------------------------------|----------------------|---------------------------|
| ★ Water Wells                 | — Existing Road      | ▭ County Boundary         |
| ● Noxious Weeds               | - - - Site Boundary  | ▭ Section Boundary        |
| ■ Block Valve                 | ▨ Woody Vegetation   | ▭ Township/Range Boundary |
| — Proposed 6" Pipeline        | ▨ Pipeline Corridor  |                           |
| — Named Streams and Drainages | ▨ Residence/Building |                           |
| — Interstate                  |                      |                           |

Page 12 of 13  
T. 139N, R. 97W

Stark County, North Dakota  
Projection: NAD 1983 UTM Zone13N  
Base Map: 2016 Aerial Imagery  
Source: USDA/FSA - Aerial Photography Field Office

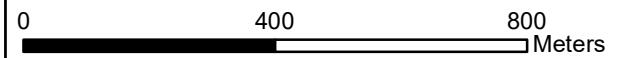
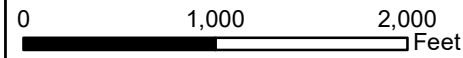
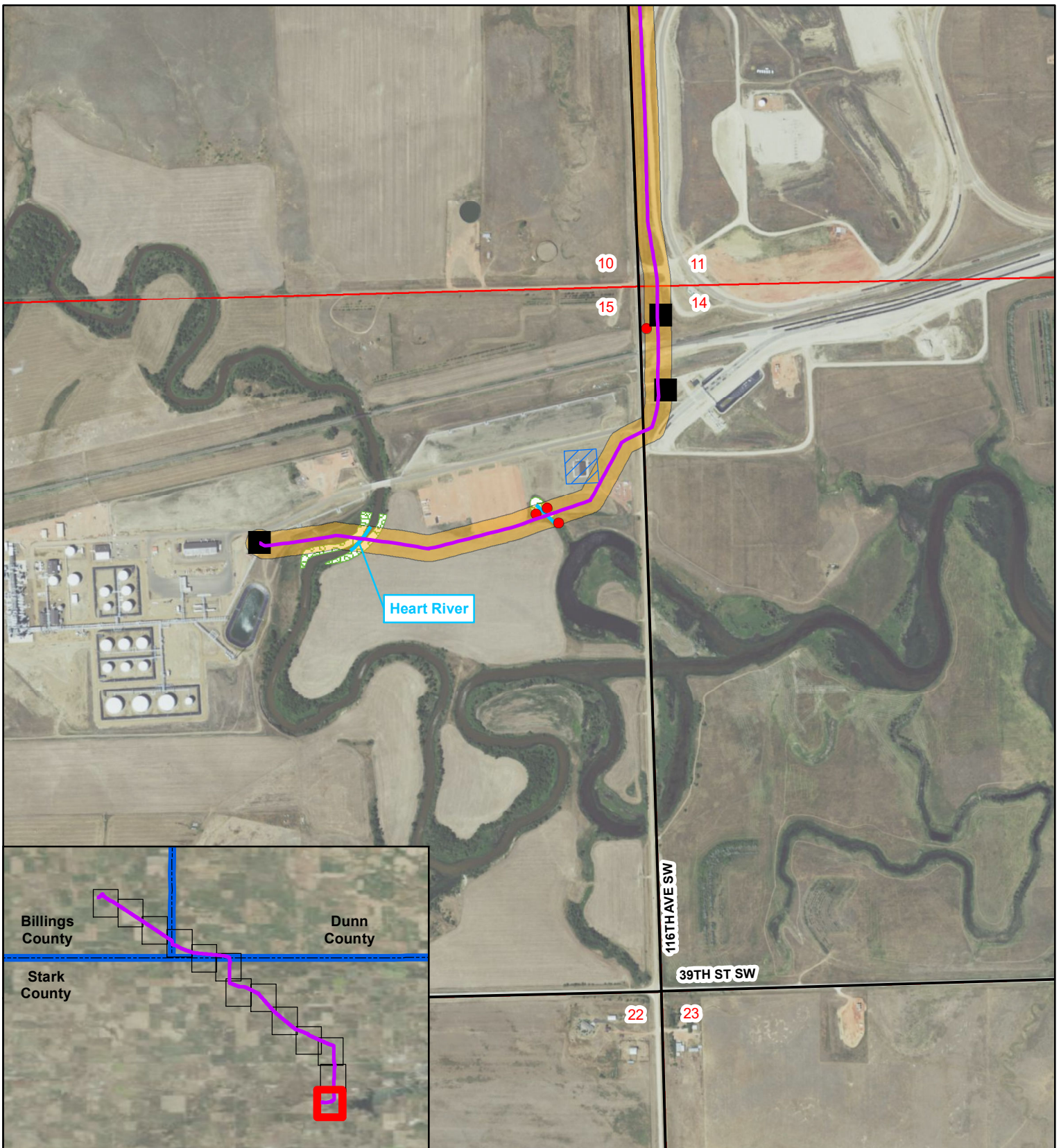


Figure: A.1



### Skunk Hill To DPR 6" Pipeline

- |                               |                      |                           |
|-------------------------------|----------------------|---------------------------|
| ★ Water Wells                 | — Existing Road      | ▭ County Boundary         |
| ● Noxious Weeds               | - - - Site Boundary  | ▭ Section Boundary        |
| ■ Block Valve                 | ▨ Woody Vegetation   | ▭ Township/Range Boundary |
| — Proposed 6" Pipeline        | ▨ Pipeline Corridor  |                           |
| — Named Streams and Drainages | ▨ Residence/Building |                           |
| ▨ Interstate                  |                      |                           |

Page 13 of 13  
T. 139N, R. 97W

Stark County, North Dakota  
Projection: NAD 1983 UTM Zone13N  
Base Map: 2016 Aerial Imagery  
Source: USDA/FSA - Aerial Photography Field Office

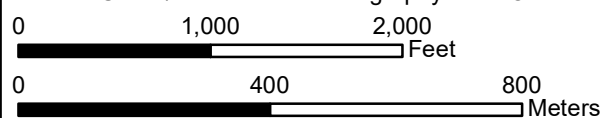
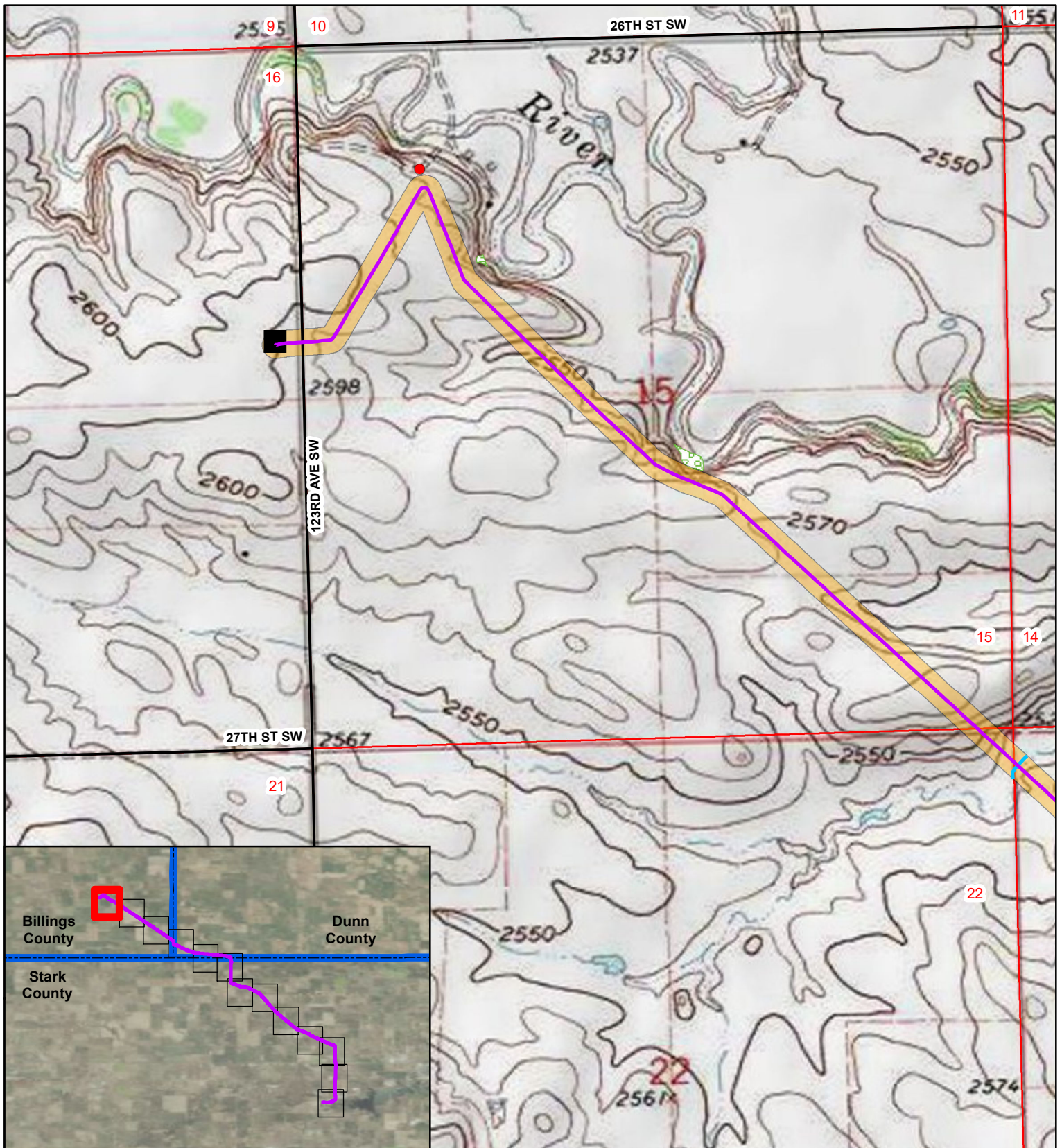


Figure: A.1

**Exhibit A.2  
Topographic  
Mapbook**





### Skunk Hill To DPR 6" Pipeline

- |                               |                      |                           |
|-------------------------------|----------------------|---------------------------|
| ★ Water Wells                 | — Existing Road      | ▭ County Boundary         |
| ● Noxious Weeds               | - - - Site Boundary  | ▭ Section Boundary        |
| ■ Block Valve                 | ▨ Woody Vegetation   | ▭ Township/Range Boundary |
| — Proposed 6" Pipeline        | ▨ Pipeline Corridor  |                           |
| — Named Streams and Drainages | ▨ Residence/Building |                           |
| — Interstate                  |                      |                           |

Page 1 of 13  
T. 141N, R. 98W

Billings County, North Dakota  
Projection: NAD 1983 UTM Zone13N  
Base Map: 7.5' USA Topographic Map  
Source: esri map service

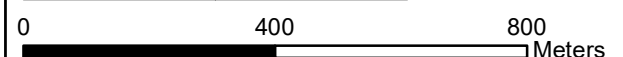
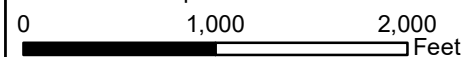
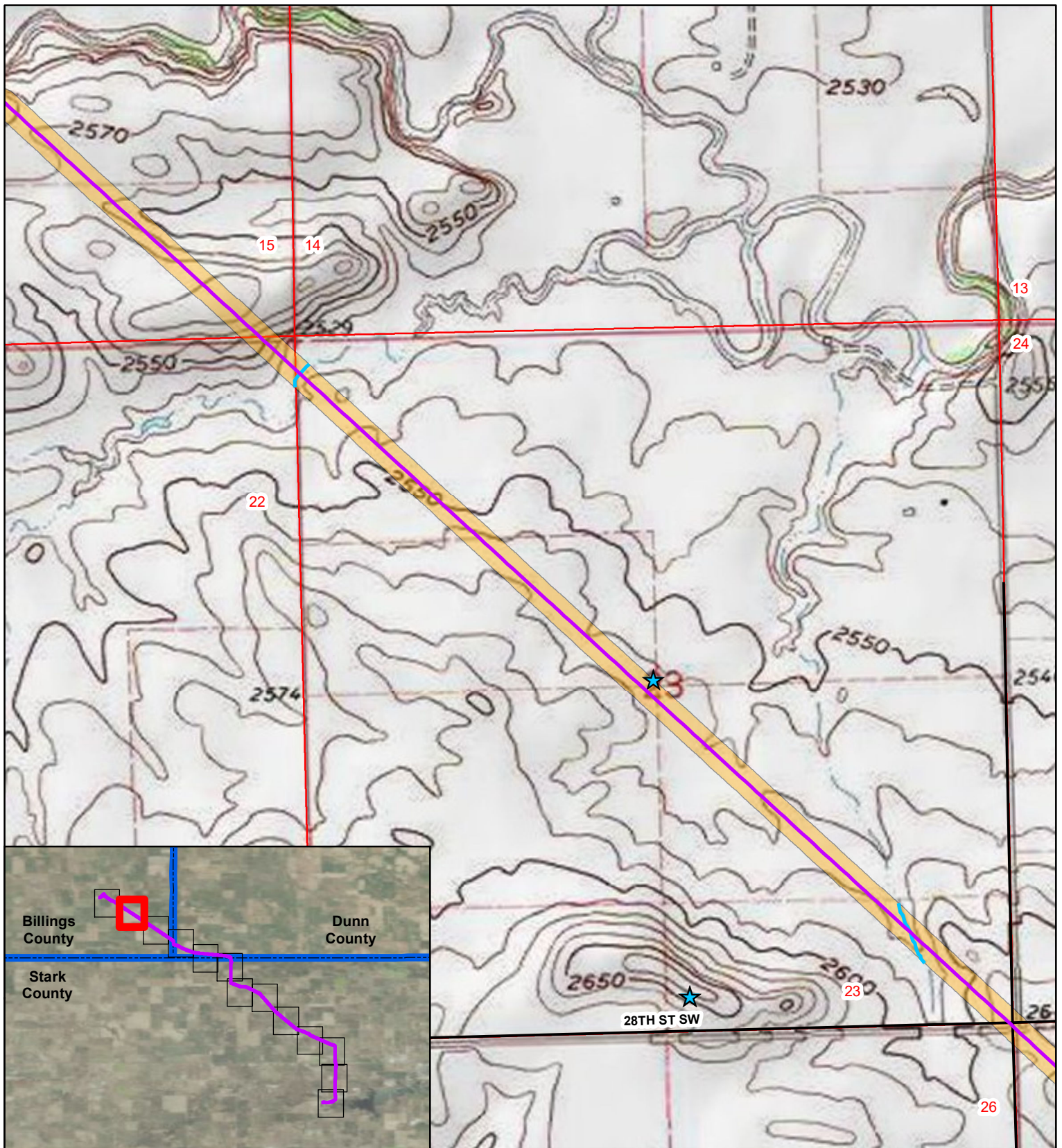


Figure: A.2



### Skunk Hill To DPR 6" Pipeline

- |                               |                      |                           |
|-------------------------------|----------------------|---------------------------|
| ★ Water Wells                 | — Existing Road      | ▭ County Boundary         |
| ● Noxious Weeds               | - - - Site Boundary  | ▭ Section Boundary        |
| ■ Block Valve                 | ▨ Woody Vegetation   | ▭ Township/Range Boundary |
| — Proposed 6" Pipeline        | ▭ Pipeline Corridor  |                           |
| — Named Streams and Drainages | ▨ Residence/Building |                           |
| ▬ Interstate                  |                      |                           |

Page 2 of 13  
T. 141N, R. 98W

Billings County, North Dakota  
Projection: NAD 1983 UTM Zone13N  
Base Map: 7.5' USA Topographic Map  
Source: esri map service

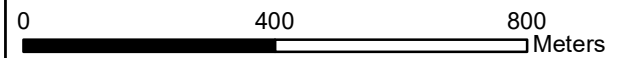
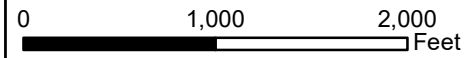


Figure: A.2

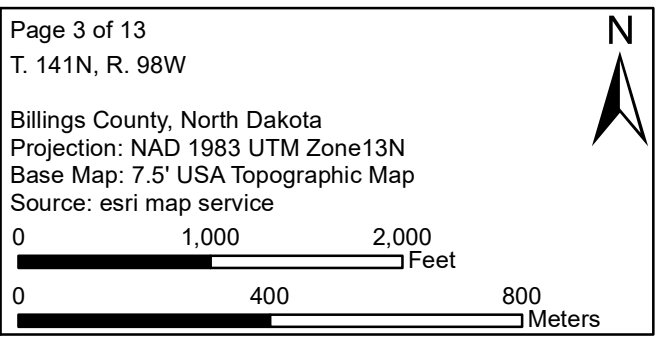
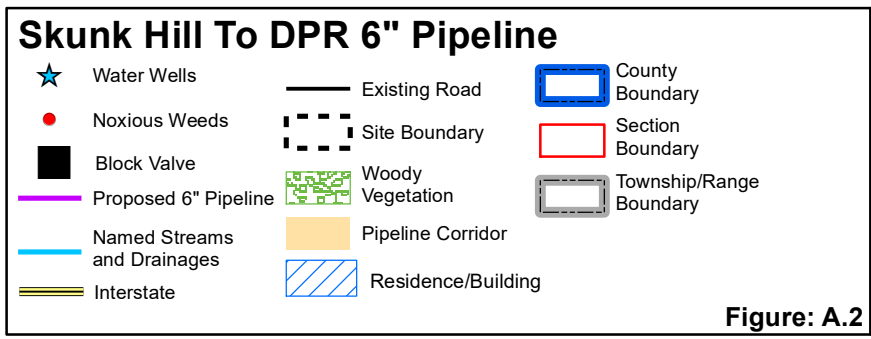
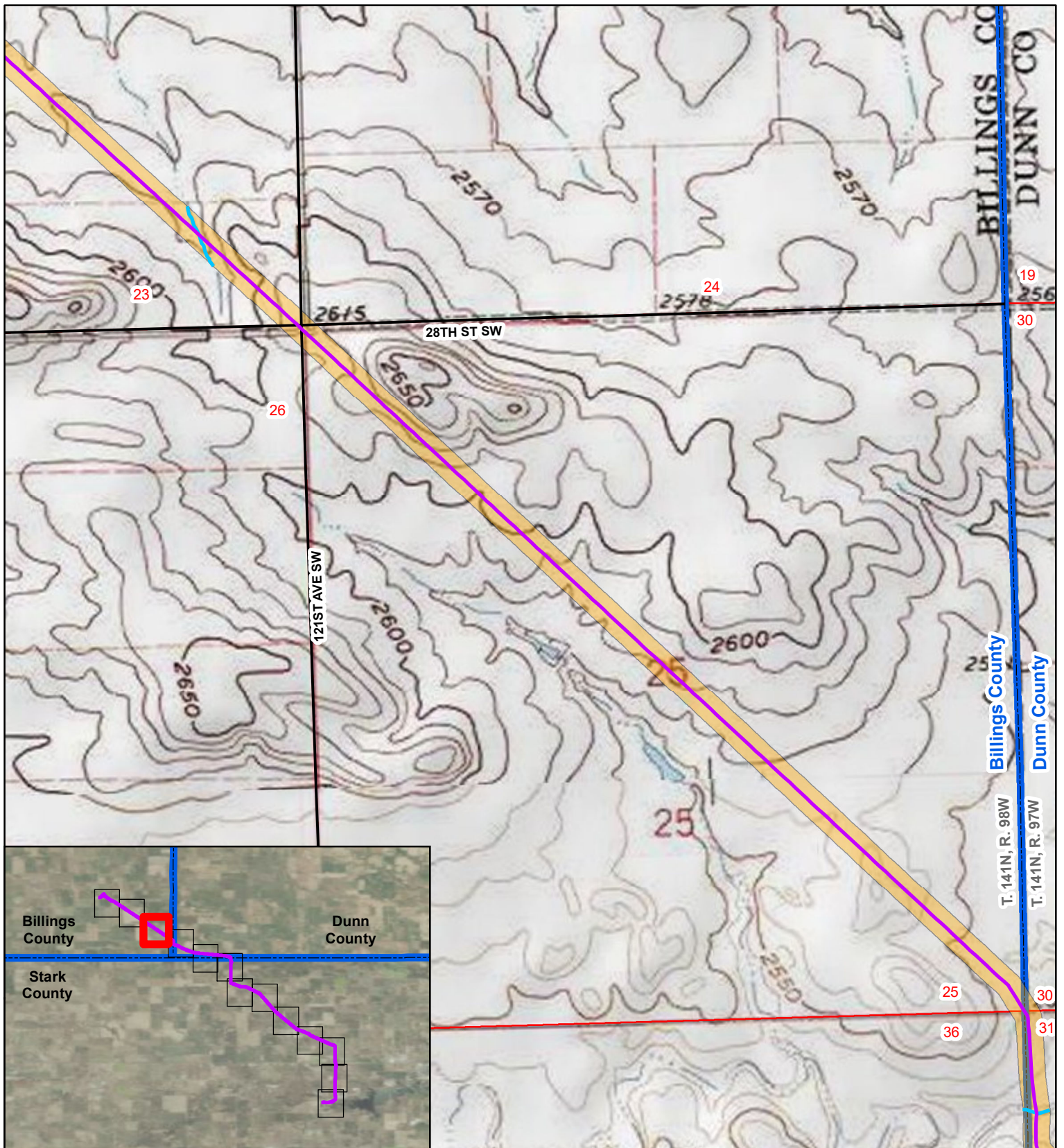
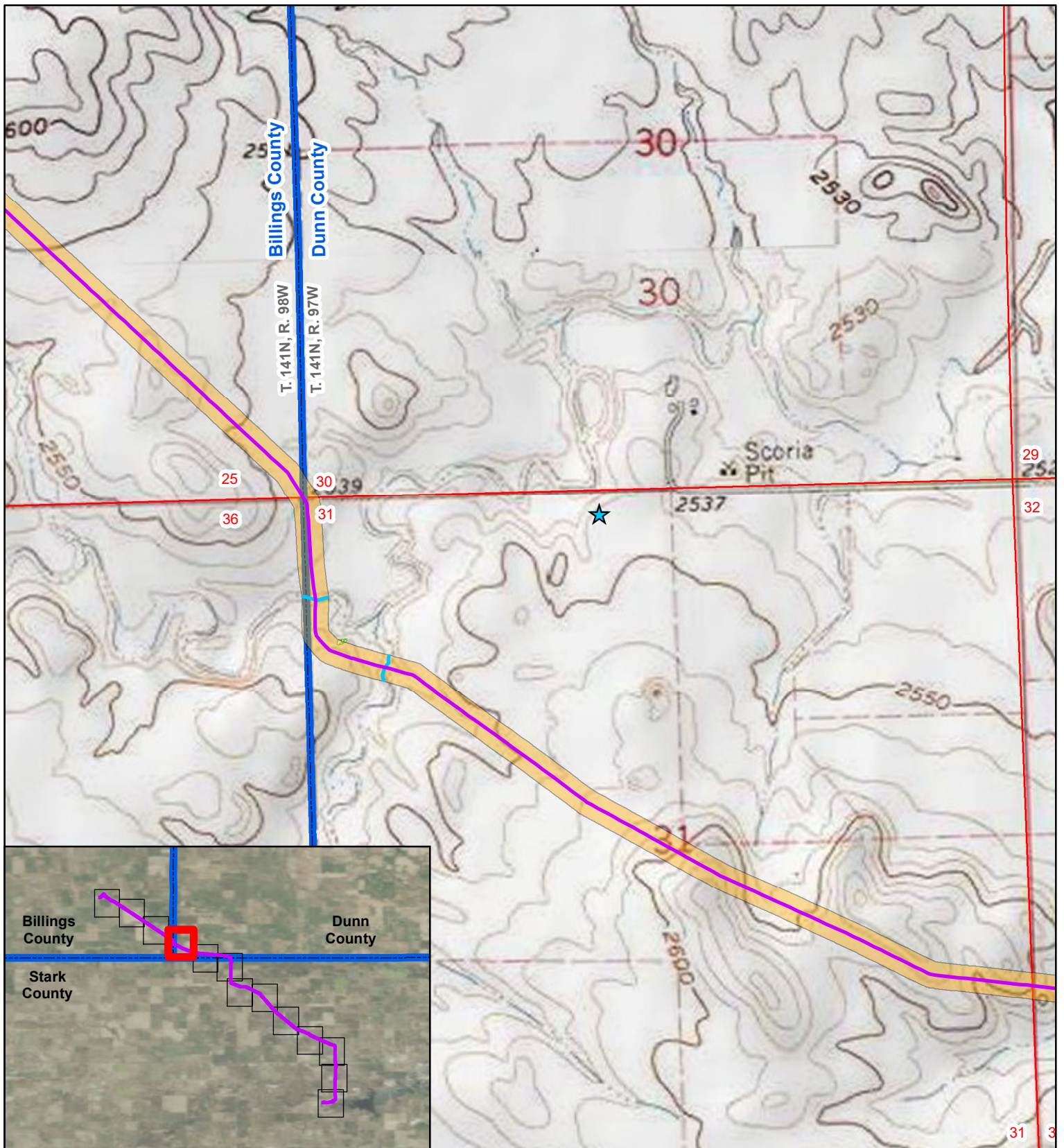


Figure: A.2



### Skunk Hill To DPR 6" Pipeline

- Water Wells
- Noxious Weeds
- Block Valve
- Proposed 6" Pipeline
- Named Streams and Drainages
- Interstate
- Existing Road
- Site Boundary
- Woody Vegetation
- Pipeline Corridor
- Residence/Building
- County Boundary
- Section Boundary
- Township/Range Boundary

Page 4 of 13

T. 141N, R. 98W  
 and T. 141N, R. 97W  
 Billings and Dunn Counties, North Dakota  
 Projection: NAD 1983 UTM Zone13N  
 Base Map: 7.5' USA Topographic Map  
 Source: esri map service

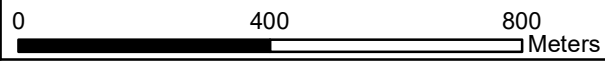
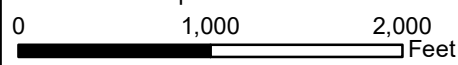
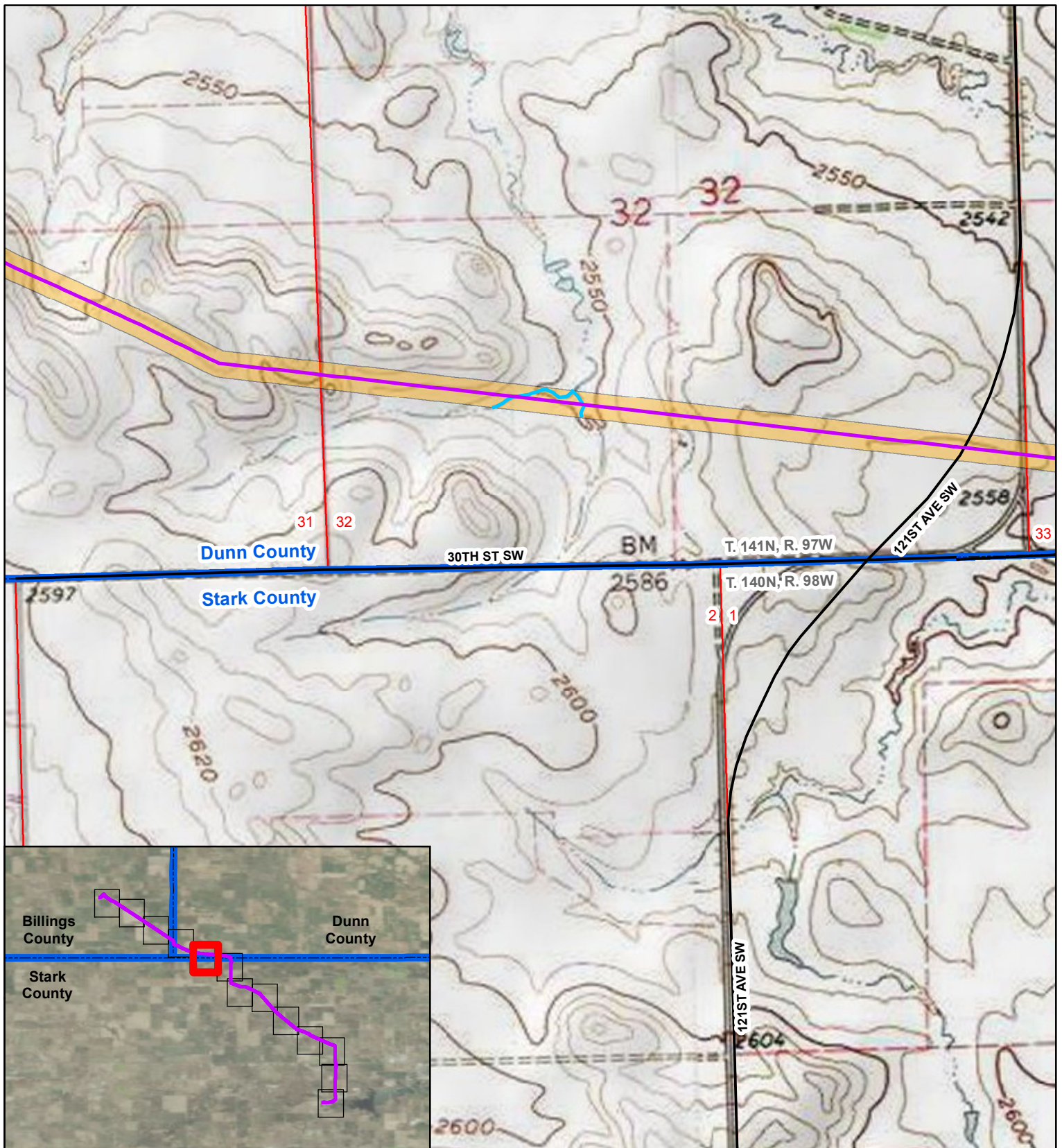


Figure: A.2



### Skunk Hill To DPR 6" Pipeline

- |                             |                   |                         |
|-----------------------------|-------------------|-------------------------|
| Water Wells                 | Existing Road     | County Boundary         |
| Noxious Weeds               | Site Boundary     | Section Boundary        |
| Block Valve                 | Woody Vegetation  | Township/Range Boundary |
| Proposed 6" Pipeline        | Pipeline Corridor | Residence/Building      |
| Named Streams and Drainages |                   |                         |
| Interstate                  |                   |                         |

T. 141N, R. 97W  
 and T. 140N, R. 98W  
 Dunn and Stark Counties, North Dakota  
 Projection: NAD 1983 UTM Zone13N  
 Base Map: 7.5' USA Topographic Map  
 Source: esri map service

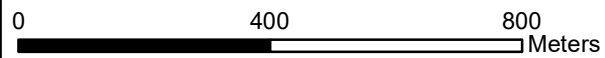
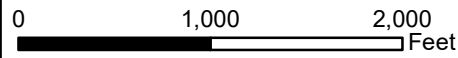
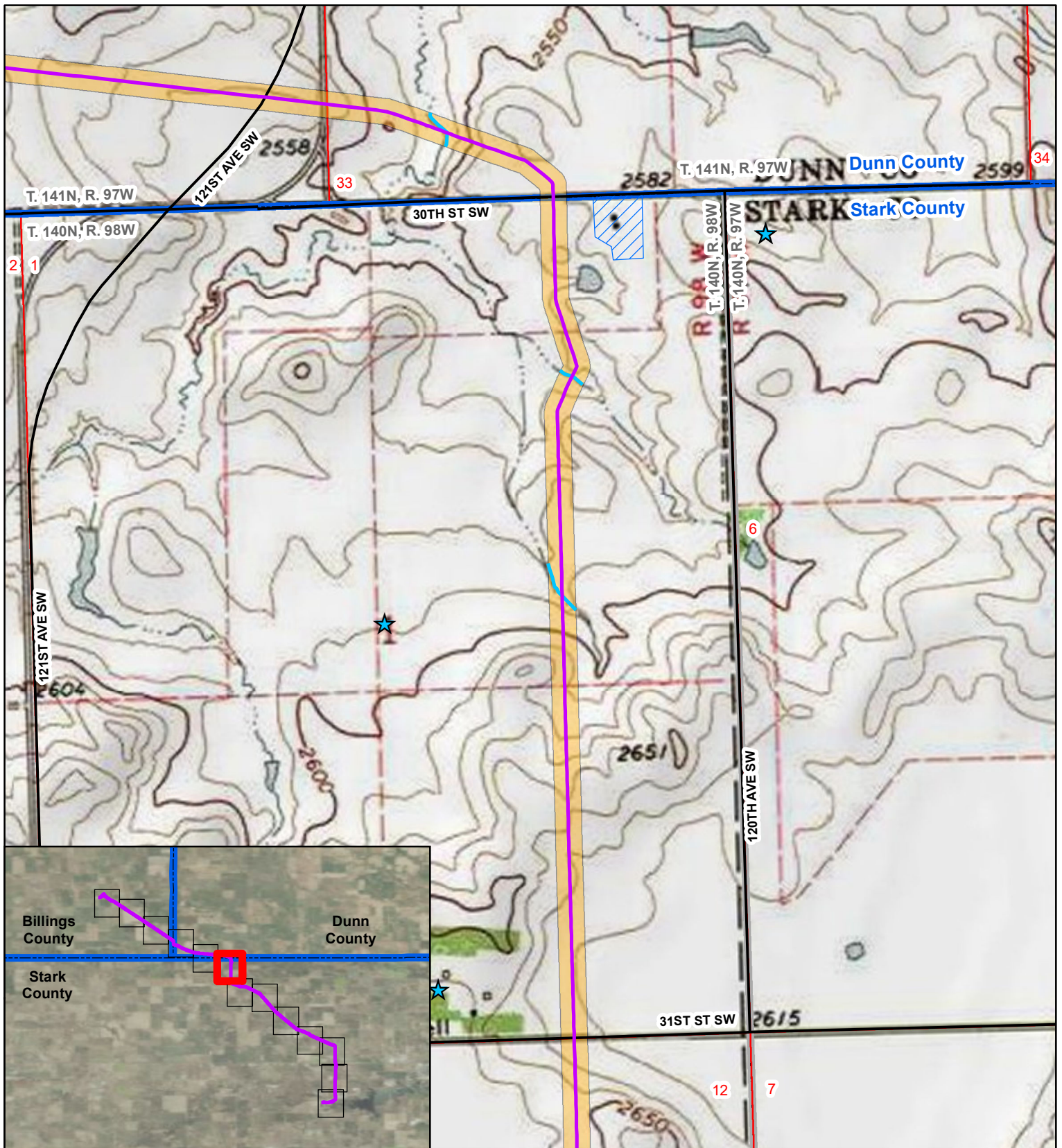


Figure: A.2



### Skunk Hill To DPR 6" Pipeline

- |                             |                   |                         |
|-----------------------------|-------------------|-------------------------|
| Water Wells                 | Existing Road     | County Boundary         |
| Noxious Weeds               | Site Boundary     | Section Boundary        |
| Block Valve                 | Woody Vegetation  | Township/Range Boundary |
| Proposed 6" Pipeline        | Pipeline Corridor | Residence/Building      |
| Named Streams and Drainages |                   |                         |
| Interstate                  |                   |                         |

Page 6 of 13

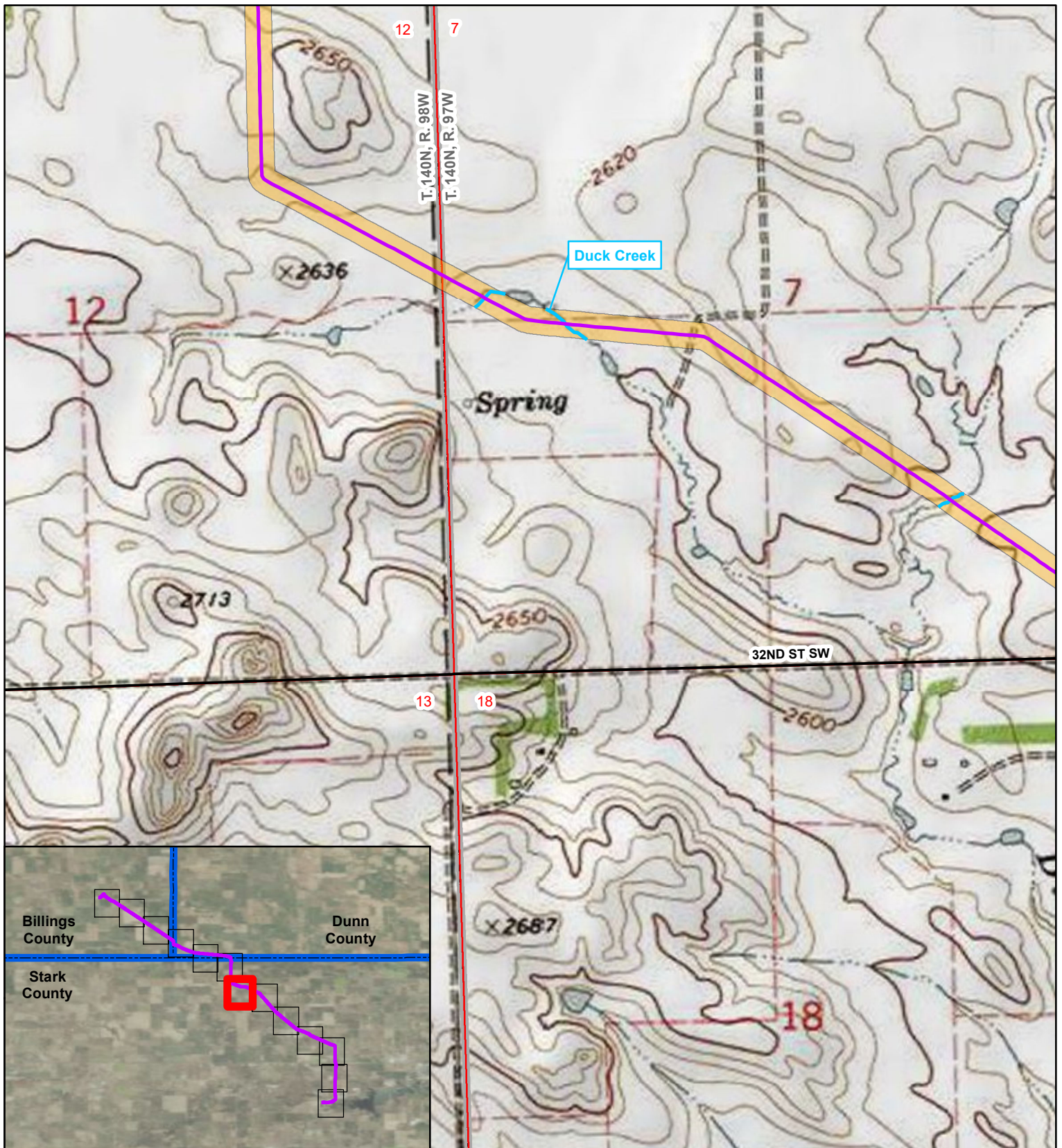
T. 141N, R. 97W, T. 140N, R. 98W,  
and T. 140N, R. 97W  
Dunn and Stark Counties, North Dakota  
Projection: NAD 1983 UTM Zone13N  
Base Map: 7.5' USA Topographic Map  
Source: esri map service



0 1,000 2,000  
Feet

0 400 800  
Meters

Figure: A.2



### Skunk Hill To DPR 6" Pipeline

- |                             |                   |                         |
|-----------------------------|-------------------|-------------------------|
| Water Wells                 | Existing Road     | County Boundary         |
| Noxious Weeds               | Site Boundary     | Section Boundary        |
| Block Valve                 | Woody Vegetation  | Township/Range Boundary |
| Proposed 6" Pipeline        | Pipeline Corridor | Residence/Building      |
| Named Streams and Drainages |                   |                         |
| Interstate                  |                   |                         |

Page 7 of 13

T. 140N, R. 98W  
 and T. 140N, R. 97W  
 Stark County, North Dakota  
 Projection: NAD 1983 UTM Zone13N  
 Base Map: 7.5' USA Topographic Map  
 Source: esri map service

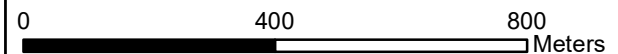
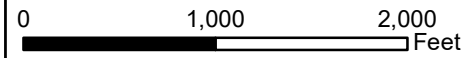
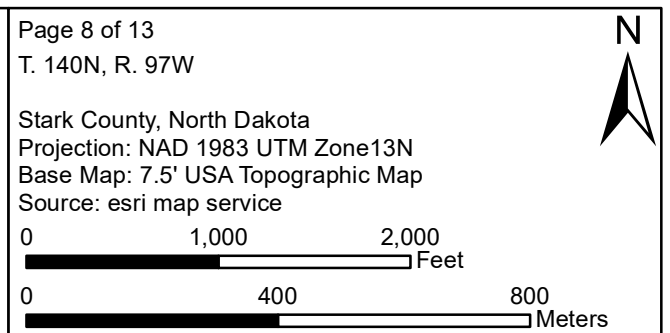
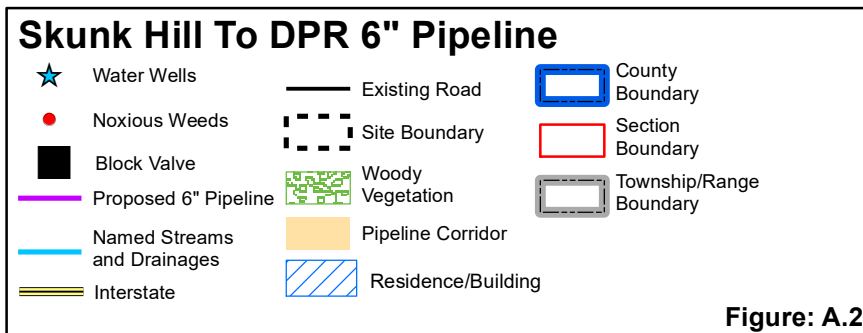
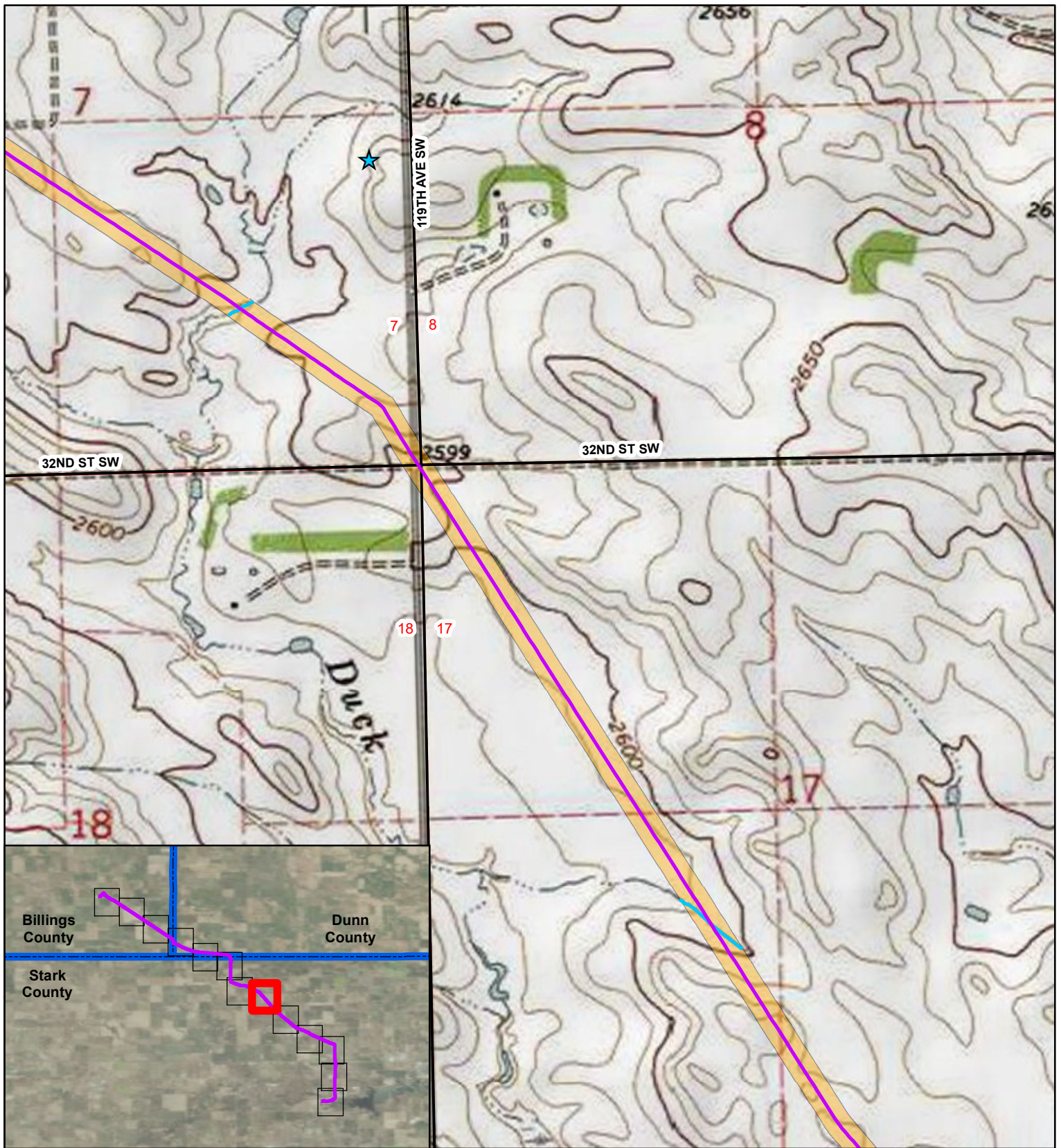
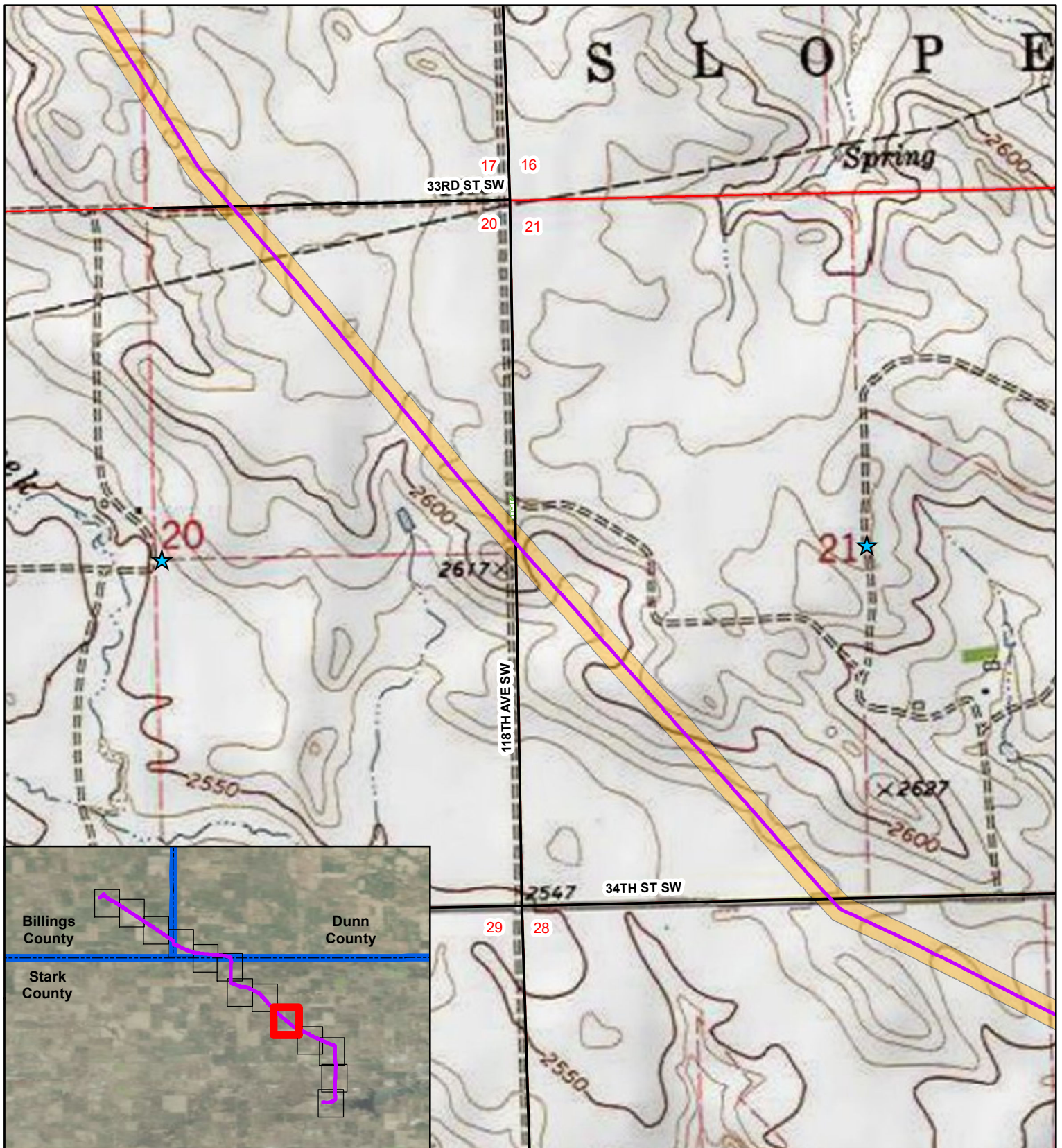


Figure: A.2





### Skunk Hill To DPR 6" Pipeline

- |                               |                      |                           |
|-------------------------------|----------------------|---------------------------|
| ★ Water Wells                 | — Existing Road      | ▭ County Boundary         |
| ● Noxious Weeds               | - - - Site Boundary  | ▭ Section Boundary        |
| ■ Block Valve                 | ▨ Woody Vegetation   | ▭ Township/Range Boundary |
| — Proposed 6" Pipeline        | ▨ Pipeline Corridor  |                           |
| — Named Streams and Drainages | ▨ Residence/Building |                           |
| — Interstate                  |                      |                           |

Page 9 of 13  
T. 140N, R. 97W

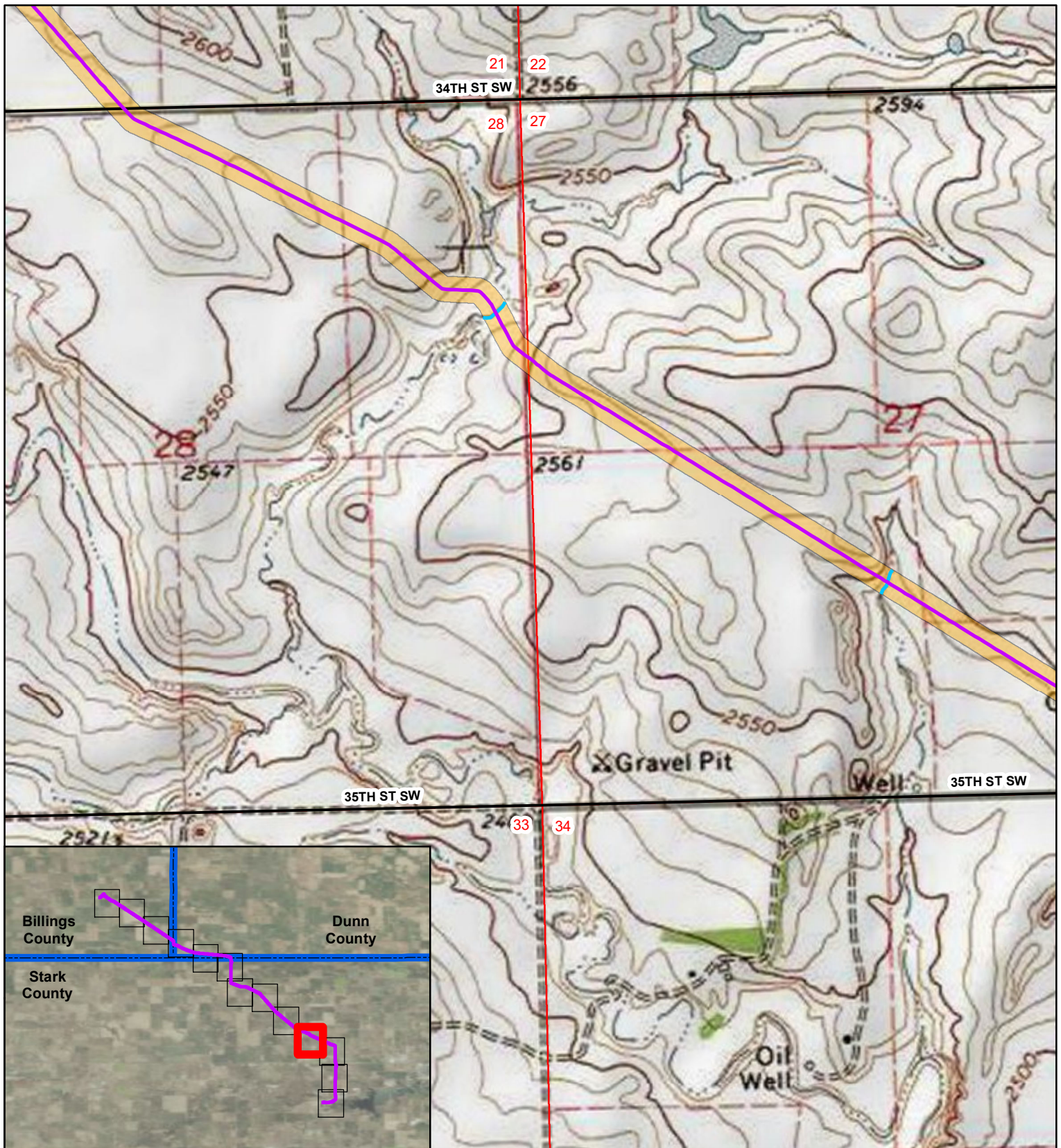
Stark County, North Dakota  
Projection: NAD 1983 UTM Zone 13N  
Base Map: 7.5' USA Topographic Map  
Source: esri map service



0 1,000 2,000  
Feet

0 400 800  
Meters

Figure: A.2



### Skunk Hill To DPR 6" Pipeline

- |                             |                    |                         |
|-----------------------------|--------------------|-------------------------|
| Water Wells                 | Existing Road      | County Boundary         |
| Noxious Weeds               | Site Boundary      | Section Boundary        |
| Block Valve                 | Woody Vegetation   | Township/Range Boundary |
| Proposed 6" Pipeline        | Pipeline Corridor  |                         |
| Named Streams and Drainages | Residence/Building |                         |
| Interstate                  |                    |                         |

Page 10 of 13  
T. 140N, R. 97W

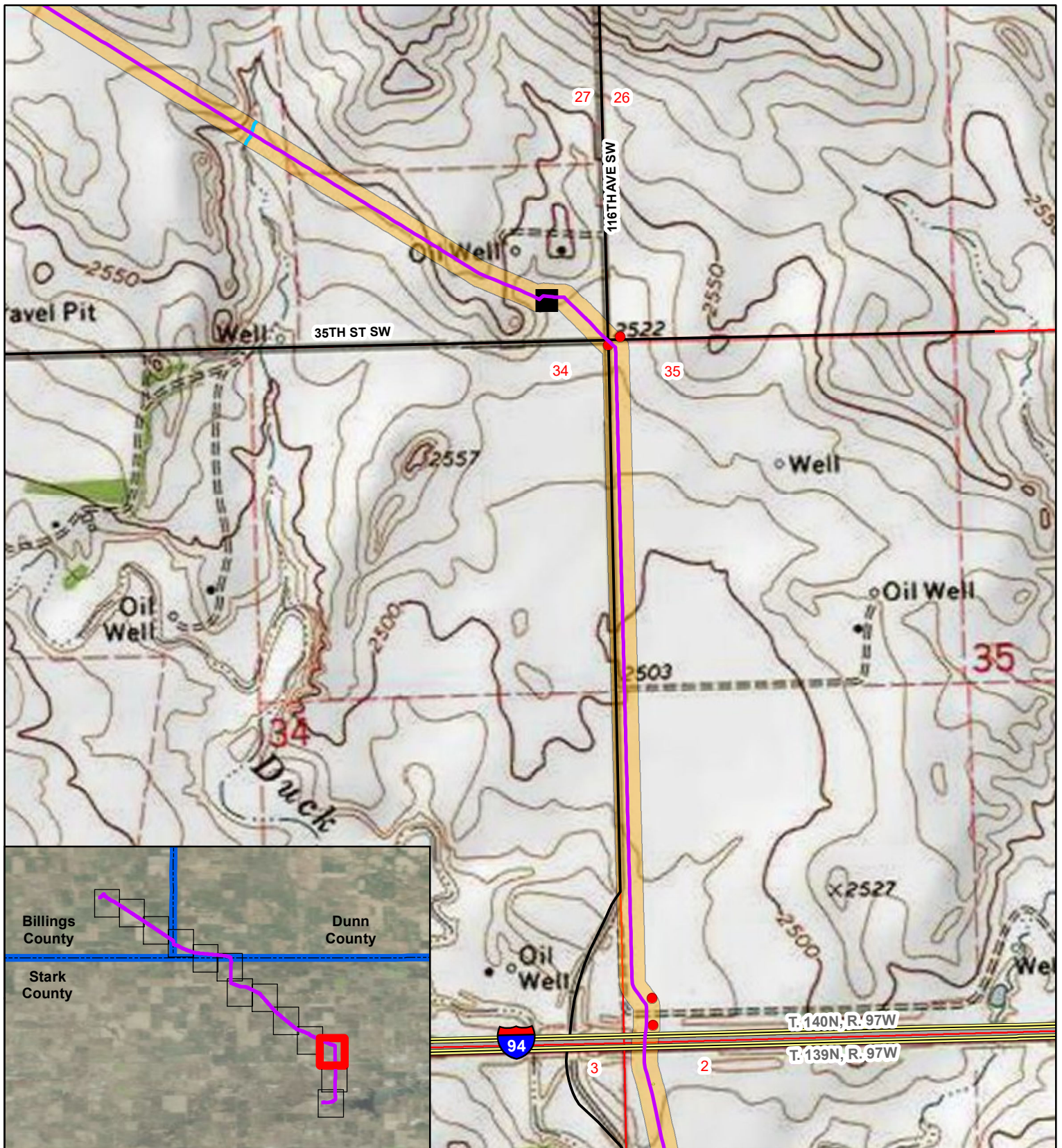
Stark County, North Dakota  
Projection: NAD 1983 UTM Zone 13N  
Base Map: 7.5' USA Topographic Map  
Source: esri map service



0 1,000 2,000  
Feet

0 400 800  
Meters

Figure: A.2



### Skunk Hill To DPR 6" Pipeline

- |                               |                      |                           |
|-------------------------------|----------------------|---------------------------|
| ★ Water Wells                 | — Existing Road      | ▭ County Boundary         |
| ● Noxious Weeds               | - - - Site Boundary  | ▭ Section Boundary        |
| ■ Block Valve                 | ▨ Woody Vegetation   | ▭ Township/Range Boundary |
| — Proposed 6" Pipeline        | ▨ Pipeline Corridor  |                           |
| — Named Streams and Drainages | ▨ Residence/Building |                           |
| — Interstate                  |                      |                           |

T. 140N, R. 97W  
and T. 139N, R. 97W

Stark County, North Dakota

Projection: NAD 1983 UTM Zone 13N

Base Map: 7.5' USA Topographic Map

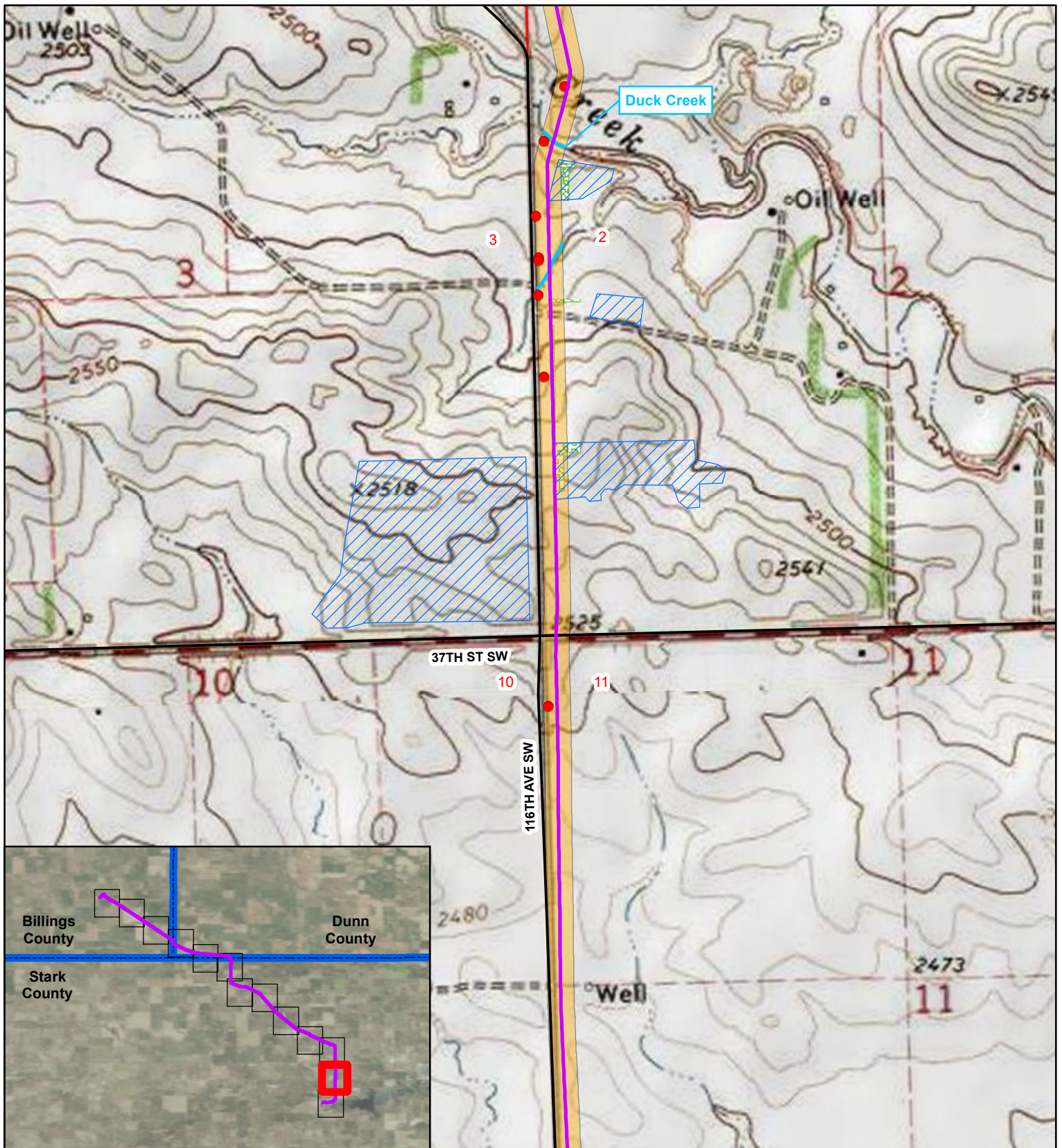
Source: esri map service



0 1,000 2,000  
Feet

0 400 800  
Meters

Figure: A.2



### Skunk Hill To DPR 6" Pipeline

- |                               |                      |                           |
|-------------------------------|----------------------|---------------------------|
| ★ Water Wells                 | — Existing Road      | ▭ County Boundary         |
| ● Noxious Weeds               | - - - Site Boundary  | ▭ Section Boundary        |
| ■ Block Valve                 | ▨ Woody Vegetation   | ▭ Township/Range Boundary |
| — Proposed 6" Pipeline        | ▨ Pipeline Corridor  |                           |
| — Named Streams and Drainages | ▨ Residence/Building |                           |
| — Interstate                  |                      |                           |

Page 12 of 13  
T. 139N, R. 97W

Stark County, North Dakota  
Projection: NAD 1983 UTM Zone 13N  
Base Map: 7.5' USA Topographic Map  
Source: esri map service

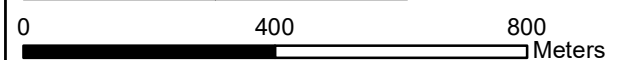
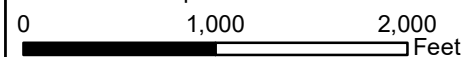
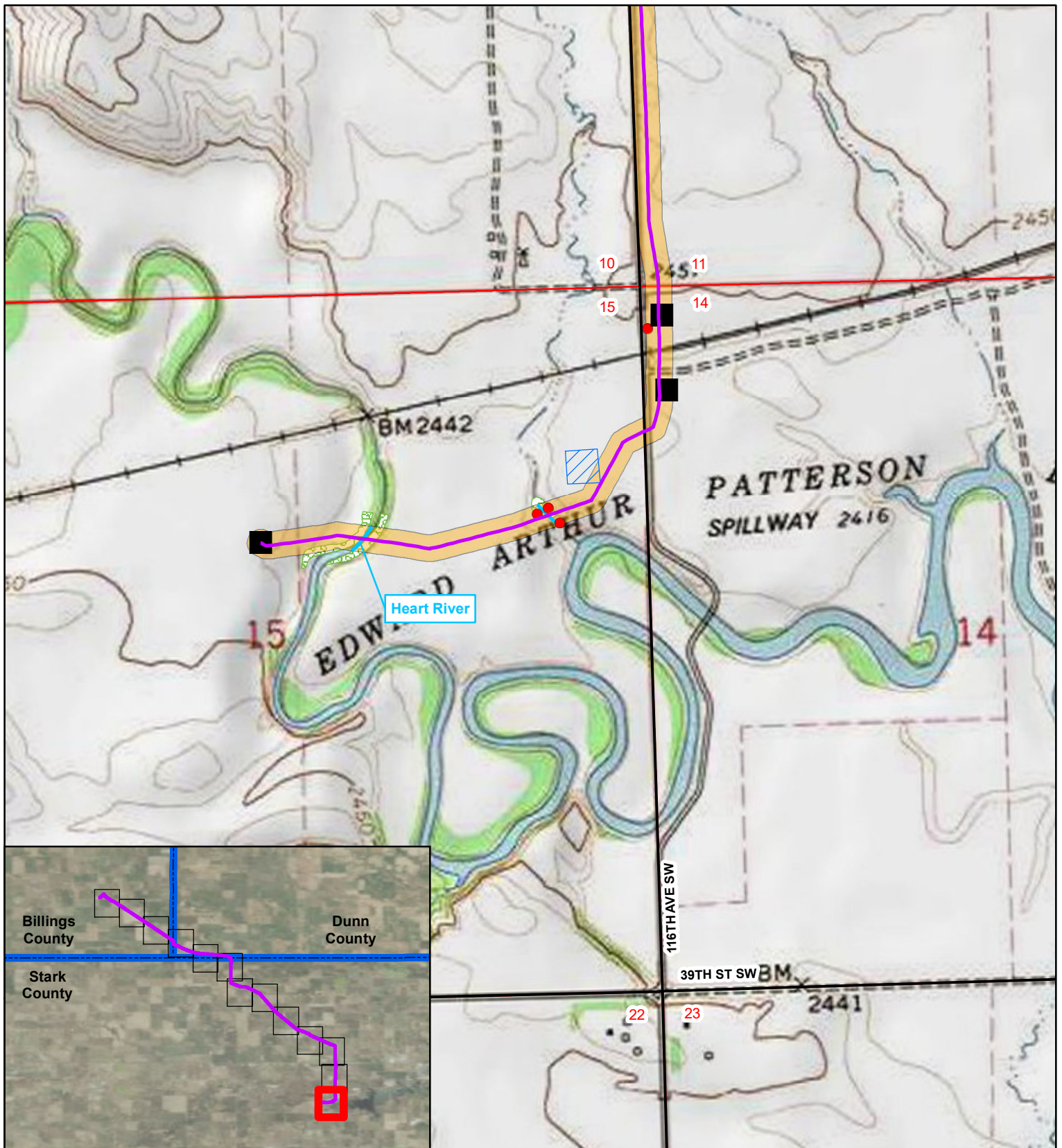


Figure: A.2



### Skunk Hill To DPR 6" Pipeline

Page 13 of 13  
T. 139N, R. 97W

Stark County, North Dakota  
Projection: NAD 1983 UTM Zone13N  
Base Map: 7.5' USA Topographic Map  
Source: esri map service



0 1,000 2,000  
Feet

0 400 800  
Meters

Figure: A.2

**Exhibit C.1**  
**Sample Notifications**

---

**From:** [Jaimee Antognazzi](mailto:Jaimee.Antognazzi@keitu.com)  
**To:** ["cy.munos@us.af.mil"](mailto:cy.munos@us.af.mil)  
**Subject:** Skunk Hill to Dakota Prairie Refinery Pipeline Project  
**Date:** Thursday, June 22, 2017 4:38:00 PM  
**Attachments:** [Skunk Hill to DPR Pipeline.shx](#)  
[Skunk Hill to DPR Pipeline.cpg](#)  
[Skunk Hill to DPR Pipeline.dbf](#)  
[Skunk Hill to DPR Pipeline.prj](#)  
[Skunk Hill to DPR Pipeline.sbn](#)  
[Skunk Hill to DPR Pipeline.sbx](#)  
[Skunk Hill to DPR Pipeline.shp](#)

---

Mr. Cy Munos,

Belle Fourche Pipeline Company ("Belle Fourche") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") to convert a 6-inch crude oil pipeline approximately 18 miles in length from a gathering pipeline to a crude supply pipeline. The pipeline is located within Dunn, Billings, and Stark Counties in North Dakota. The pipeline will be known as the Skunk Hill to Dakota Prairie Refinery Pipeline Project ("Project"). The proposed pipeline originates from a location near Belfield, North Dakota in Billings County and terminates at the Dakota Prairie Refinery in Stark County.

The purpose of this contact is to afford Cable Affairs the opportunity to assess the Project area for the presence of Intercontinental Ballistic Missile ("ICBM") related systems that could potentially be impacted, and to provide comments. We respectfully request that any specific concerns known in the area are brought to our attention to ensure we focus on those items. Attached are the GIS Shapefiles of the entire length of the Project intended for the Minot Air Force Base Cable Affairs Office to review.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance.

**Jaimee Antognazzi, CSP**

Operations Manager

Keitu Engineers & Consultants

1403 27<sup>th</sup> Street NW

Mandan, ND 58554

(701) 667-1808 Ext# 105



1403 27th STREET NW  
PO BOX 98  
MANDAN, ND 58554-0098  
701-667-1800

June 22, 2017

Dan Cimarosti  
Regulatory Program Manager  
US Army Corps of Engineers  
1513 South 12<sup>th</sup> Street  
Bismarck, ND 58504

**RE: Belle Fourche Pipeline Company – Skunk Hill to Dakota Prairie Refinery 6” Pipeline**

Belle Fourche Pipeline Company (“Belle Fourche”) plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission (“Commission”) for the conversion of an approximately 18-mile crude oil gathering pipeline to a crude supply pipeline (“Project”). It originates from a location near Belfield, North Dakota and terminates at the Dakota Prairie Refinery located near Dickinson, North Dakota. The Project is located entirely within Billings, Dunn, and Stark Counties and will be known as the Skunk Hill to DPR Pipeline Project.

Keitu Engineers and Consultants, Inc. (“Keitu”) is contracted by Belle Fourche to submit the Certificate of Corridor Compatibility and Route Application in September 2017. The Commission requires applicants to contact relevant agencies for comment on the Project.

Enclosed is a map of the entire length of the pipeline route intended for your review. We respectfully request that any concerns known in the area is brought to our attention to ensure we focus on those items.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance. I will serve as the primary Keitu contact and can be reached at (701) 667-1800 or via email at [jantognazzi@keitu.com](mailto:jantognazzi@keitu.com).

A handwritten signature in blue ink that reads "Jaimee Antognazzi". The signature is written in a cursive, flowing style.

Jaimee Antognazzi  
Operations Manager

*Enclosure: Proposed Pipeline Route*

**Exhibit C.2**  
**Agency Responses**

## **Stark County Planning & Zoning**



Belle Fourche Pipeline Company  
6" Skunk Hill to DPR Pipeline Conversion Project  
NDPSC Consolidated Application

**From:** [Steve Josephson](#)  
**To:** [jantognazzi@keitu.com](mailto:jantognazzi@keitu.com)  
**Cc:** [Al Heiser](#); [Russ Hoff](#); [Jay Elkin](#)  
**Subject:** Emailing - Keitu Engineering Skunk Hill Pipeline\_6.22.2017.pdf  
**Date:** Monday, June 26, 2017 11:51:28 AM  
**Attachments:** [Keitu Engineering Skunk Hill Pipeline\\_6.22.2017.pdf](#)

---

Thank you for giving us an opportunity to comment on the proposed 18-mile Skunk Hill to DPR pipeline project. Per the Stark County Zoning Ordinance an oil gathering line is a permitted use. An application to the County for zoning approval is not required.

I would recommend you contact Stark County Road Superintendent Al Heiser at (701)456-7662 re: required road crossing and right-of-way permits.

Please let me know if you have questions.

Steve

---

## **Minot Air Force Base – Cable Affairs**

Belle Fourche Pipeline Company  
6" Skunk Hill to DPR Pipeline Conversion Project  
NDPSC Consolidated Application



**From:** [MUNOS, CY I GS-11 USAF AFGSC 91 MMXS/MMXSFK](#)  
**To:** [Jaimee Antognazzi](#)  
**Subject:** RE: [Non-DoD Source] Skunk Hill to Dakota Prairie Refinery Pipeline Project  
**Date:** Monday, June 26, 2017 8:23:06 AM

---

Jaimee,

The USAF has no assets near the project.

Cy Munos  
Cable Affairs Officer  
91 MMXS/MMXSFK  
Minot AFB, ND  
W. 701-723-6053  
C. 701-720-8274

-----Original Message-----

From: Jaimee Antognazzi [<mailto:jantognazzi@keitu.com>]  
Sent: Thursday, June 22, 2017 4:38 PM  
To: MUNOS, CY I GS-11 USAF AFGSC 91 MMXS/MMXSFK <[cy.munos@us.af.mil](mailto:cy.munos@us.af.mil)>  
Subject: [Non-DoD Source] Skunk Hill to Dakota Prairie Refinery Pipeline Project

Mr. Cy Munos,

Belle Fourche Pipeline Company ("Belle Fourche") plans to submit a Certificate of Corridor Compatibility Application and Route Permit Application, requesting permission from the North Dakota Public Service Commission ("Commission") to convert a 6-inch crude oil pipeline approximately 18 miles in length from a gathering pipeline to a crude supply pipeline. The pipeline is located within Dunn, Billings, and Stark Counties in North Dakota. The pipeline will be known as the Skunk Hill to Dakota Prairie Refinery Pipeline Project ("Project"). The proposed pipeline originates from a location near Belfield, North Dakota in Billings County and terminates at the Dakota Prairie Refinery in Stark County.

The purpose of this contact is to afford Cable Affairs the opportunity to assess the Project area for the presence of Intercontinental Ballistic Missile ("ICBM") related systems that could potentially be impacted, and to provide comments. We respectfully request that any specific concerns known in the area are brought to our attention to ensure we focus on those items. Attached are the GIS Shapefiles of the entire length of the Project intended for the Minot Air Force Base Cable Affairs Office to review.

As always, Keitu appreciates the opportunity to assist our client and the regulatory agencies with compliance.

Jaimee Antognazzi, CSP

---

Belle Fourche Pipeline Company  
6" Skunk Hill to DPR Pipeline Conversion Project  
NDPSC Consolidated Application

## **North Dakota Department of Health**





ENVIRONMENTAL HEALTH SECTION  
Gold Seal Center, 918 E. Divide Ave.  
Bismarck, ND 58501-1947  
701.328.5200 (fax)  
www.ndhealth.gov



July 6, 2017

Ms. Jaimee Antognazzi  
Operations Manager  
Keitu Engineers & Consultants, Inc.  
P.O. Box 98  
Mandan, ND 58554-0098

Re: Belle Fourche Pipeline Company  
Skunk Hill to Dakota Prairie Refinery 6" Pipeline  
Billings, Dunn and Stark Counties

Dear Ms. Antognazzi:

This department has reviewed the information concerning the above-referenced project submitted under date of June 22, 2017, with respect to possible environmental impacts.

This department believes that environmental impacts from the proposed construction will be minor and can be controlled by proper construction methods. With respect to construction, we have the following comments:

1. All necessary measures must be taken to minimize fugitive dust emissions created during construction activities. Any complaints that may arise are to be dealt with in an efficient and effective manner.
2. Care is to be taken during construction activity near any water of the state to minimize adverse effects on a water body. This includes minimal disturbance of stream beds and banks to prevent excess siltation, and the replacement and revegetation of any disturbed area as soon as possible after work has been completed. Caution must also be taken to prevent spills of oil and grease that may reach the receiving water from equipment maintenance, and/or the handling of fuels on the site. Guidelines for minimizing degradation to waterways during construction are attached.
3. A temporary discharge permit may be needed if this project will require pipe cleaning and hydrostatic testing. Further information on the temporary discharge permit may be obtained from the Department's website or by calling the Division of Water Quality (701-328-5210).
4. Although the proposed construction project does not overlie a defined glacial drift aquifer, several domestic and stock water supply wells are located in the vicinity of the proposed pipeline route. Care should be taken to avoid spills of any materials that may have an

Environmental Health  
Section Chief's Office  
701.328.5150

Division of  
Air Quality  
701.328.5188

Division of  
Municipal Facilities  
701.328.5211

Division of  
Waste Management  
701.328.5166

Division of  
Water Quality  
701.328.5210

Belle Fourche Pipeline Company  
6" Skunk Hill to DPR Pipeline Conversion Project  
NDPSC Consolidated Application



Belle Fourche Pipeline Company  
6" Skunk Hill to DPR Pipeline Conversion Project  
NDPSC Consolidated Application

**North Dakota State Water Commission**





## North Dakota State Water Commission

900 EAST BOULEVARD AVENUE, DEPT 770 • BISMARCK, NORTH DAKOTA 58505-0850  
(701) 328-2750 • TTY 1-800-366-6888 or 711 • FAX (701) 328-3696 • <http://swc.nd.gov>

July 7, 2017

Jaimee Antognazzi  
Keitu  
PO Box 98  
Mandan, ND 58554-0098

Dear Ms. Antognazzi:

This is in response to your request for a review of the environmental impacts associated with Belle Fourche Pipeline Company - Skunk Hill to Dakota Prairie Refinery 6" Pipeline project.

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

- There are floodplains identified where this proposed project is to take place. Areas are designated to be in Zone A. North Dakota has no formal permitting authority in NFIP identified floodplain areas. The permitting is always done by the local entity, which has jurisdiction in the area in question. Please work closely with the County Floodplain administrators. Flood Insurance Rate Maps for the area in question can be found at [www.msc.fema.gov](http://www.msc.fema.gov). The Floodplain Administrator for Stark County is Bill Fahlsing (DES Director), 701-456-7605, [bfahlsing@starkcountynd.gov](mailto:bfahlsing@starkcountynd.gov).

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

Sincerely,

A handwritten signature in blue ink that reads "Jared Huibregtse". The signature is written in a cursive, flowing style.

Jared Huibregtse  
Water Resource Planner IV

JH:dm/1570

**State Historical Society**



**STATE  
HISTORICAL  
SOCIETY  
OF NORTH DAKOTA**

Doug Burgum  
*Governor of North Dakota*

North Dakota  
State Historical Board

Terrance Rockstad  
*Bismarck - President*

Gerold Gerntholz  
*Valley City - Vice-President*

H. Patrick Weir  
*Medora - Secretary*

Calvin Grinnell  
*New Town*

Albert I. Berger  
*Grand Forks*

Steve C. Martens  
*Fargo*

Daniel Stenberg  
*Watford City*

Sara Otte Coleman  
*Director  
Tourism Division*

Kelly Schmidt  
*State Treasurer*

Alvin A. Jaeger  
*Secretary of State*

Melissa Baker  
*Director  
Parks and Recreation Department*

Thomas Sorel  
*Interim Director  
Department of Transportation*

Claudia J. Berg  
*Director*

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September 25, 2017

Ms. Raina Hanley  
Beaver Creek Archaeology Inc.  
1632 Capitol Way  
Bismarck, ND 58501

**ND SHPO REF: 17-1462 PSC Belle Fourche Pipeline Company "A Class I and III Cultural Resource Inventory of the Existing Dickinson to Calument Pipeline in Billings, Dunn, and Stark Counties, North Dakota"**

Dear Ms. Hanley,

We reviewed ND SHPO REF: 17-1462 PSC Belle Fourche Pipeline Company "A Class I and III Cultural Resource Inventory of the Existing Dickinson to Calument Pipeline in Billings, Dunn, and Stark Counties, North Dakota" and find this report acceptable. We concur with a "No Significant Sites Affected" determination provided the project is of the nature stated and it takes place in the plotted location in the documentation.

Thank you for the opportunity to review the project and to further consultation on it. If you have any questions please contact either Paul Picha [ppicha@nd.gov](mailto:ppicha@nd.gov) at (701) 328-3574 or Susan Quinnell [squinnell@nd.gov](mailto:squinnell@nd.gov) at (701) 328-3576.

Sincerely,

Claudia J. Berg  
Director, State Historical Society of North Dakota

**Exhibit D**

**Landowner Waivers**



Thomas and Donna Dukart waive any objection to the conversion of the 6-inch crude oil pipeline or the issuance of the facility siting certificate.

By Thomas Dukart

Thomas Dukart

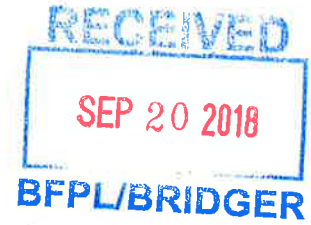
By Donna M. Dukart

Donna Dukart

3650 116<sup>th</sup> Ave SW

Dickinson, ND

Date: 9 13 18



116 Block LLC waives any objection to the conversion of the 6-inch crude oil pipeline or the issuance of the facility siting certificate.

By Rudy Pazourek  
Print Name: Rudy Pazourek  
Title: Land owner

Pazourek, Rudolph JR AKA Rudy  
3625 116-R Ave  
SW Dickinson ND, 58601  
Date: 9-19-18

**Exhibit E**

**ESRI ArcGis Shapefiles**

