



PIPELINE ROUTE PERMIT APPLICATION

PINE BEND PIPELINE

INVER GROVE HEIGHTS, DAKOTA COUNTY, MN

DECEMBER 30, 2020

Prepared for:
Petroleum Fuels Company
6750 West Loop South
Suite 748
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Docket No. IP-7042/PPL-20-872
WSB PROJECT NO. 016962-000



ROUTE PERMIT APPLICATION

**PINE BEND PIPELINE
CITY OF INVER GROVE HEIGHTS, Minnesota**

**FOR
PETROLEUM FUELS COMPANY**

December 30, 2020

Prepared By:



ROUTE PERMIT APPLICATION

TABLE OF CONTENTS

Completeness Checklist	vii
INTRODUCTION	x
SECTION 1: General Information (Minn. R. 7852.2100)	1
Rule 7852.2100, Subpart 1 and Subpart 2	1
Rule 7852.2100, Subpart 3 and Subpart 4.A	1
Rule 7852.2100, Subpart 4.B	1
Rule 7852.2100, Subpart 4.C	1
Rule 7852.2100, Subpart 4.D.1. General Location	2
Rule 7852.2100, Subpart 4.D.2. Planned Use and Purpose	2
Rule 7852.2100, Subpart 4.D.3. Estimated Cost	2
Rule 7852.2100, Subpart 4.D.4. Planned In-Service Date	3
Rule 7852.2100, Subpart 4.D.5. General Design and Operational Specifications	3
SECTION 2: Proposed Pipeline and Associated Facilities Description (Minn. R. 7852.2200)	4
Rule 7852.2200 Subpart 1	4
Rule 7852.2200 Subpart 2. Information Regarding Operating Pressure	5
Rule 7852.2200 Subpart 3. Description of Associate Facilities	5
Rule 7852.2200 Subpart 4. Product Capacity	5
Rule 7852.2200 Subpart 5. Product Description	5
Rule 7852.2200 Subpart 6. Material Safety Data Sheets	5
SECTION 3: Land Requirements (Minn. R. 7852.2300)	6
SECTION 4: Project Expansion (Minn. R. 7852.2400)	7
SECTION 5: Right-of-Way Preparation Procedures and Construction Activity Sequence (Minn. R. 7852.2500)	8
A. Survey and Staking	8
B. Clearing and Grading	8
C. Trenching	8
D. Pipe Laying	9
E. Backfilling and Rough Grading	9
F. Testing	10
G. Cleanup and Restoration	10
SECTION 6: Preferred Route Location and Environmental Description (Minn. R. 7852.2600)	11
Subpart 1. Preferred Route Location	11
Subpart 2. Other Route Locations	11
Subpart 3. Description of Existing Environment	11
A. Socioeconomics	11
B. Land Cover and Zoning	13
C. Recreation Areas	13
D. Geology	13

ROUTE PERMIT APPLICATION

E. Soils	13
F. Cultural Resources.....	14
G. Vegetation	14
H. Wildlife and Fisheries	15
I. Threatened and Endangered Species.....	16
J. Water Resources – Groundwater	17
K. Water Resources – Surface Waters and Wetlands	18
L. Air Quality.....	18
M. Existing Infrastructure.....	18
N. Hazardous Waste and Regulated Materials	18
SECTION 7: Environmental Impact of Preferred Route (Minn. R. 7852.2700).....	20
Human Settlement.....	20
A. Human Environment.....	20
B. Land Cover and Land Use	20
Natural Environment, Public, and Designated Lands	21
A. Geology.....	21
B. Soils	21
C. Vegetation	22
D. Wildlife Habitat	22
E. Wildlife and Fisheries	22
F. Threatened and Endangered Species.....	22
G. Water Resources – Groundwater	23
H. Water Resources – Surface Waters and Wetlands	23
I. Water Resources – Federal, State, and County Recreational Areas.....	23
J. Air Quality.....	24
K. Hazardous Wastes.....	24
Lands of Historical, Archaeological, and Cultural Significance	24
A. Precontact Site – Potential Impacts.....	24
B. Historic Sites – Potential Impacts.....	24
C. Architectural Property – Potential Impacts	24
Economics.....	24
Pipeline Cost and Accessibility.....	25
Use of Existing Rights-of-Ways	25
Mitigation of Environmental Effects	25
Cumulative Potential Effects of Other Pipeline Construction.....	25
Applicable Policies, Rules, and Regulations	25
SECTION 8: Right-of-Way Protection and Restoration Measures (Minn. R. 7852.2800).....	26
7852.2800 Subpart 1. Protection.....	26
7852.2800 Subpart 2. Restoration.....	26

ROUTE PERMIT APPLICATION

SECTION 9: Operation and Maintenance (Minn. R. 7852.2900)	27
SECTION 10: List of Government Agencies and Permits (MN Rule 7852.3000)	28
SECTION 11: References.....	29

LIST OF TABLES

Table 1: Pipeline Design Specifications for the Pine Bend Pipeline Project
Table 2: Socioeconomics
Table 3: Soil Types within Preferred Route
Table 4: Wildlife Species Commonly Occurring in Dakota County
Table 5: Federally Listed Species Occurring in Dakota County
Table 6: Minnesota State Endangered and Threatened Species Occurrences within 1 mile of the Project Area
Table 7: Minnesota Pollution Control Agency Listing of Regulated Facilities and Sites within the Project Area
Table 8: Land Cover and Land Use
Table 9: Residences and Commercial Properties
Table 10: Required Permits and Approvals

LIST OF FIGURES

Figure 1: Project Area Overview
Figure 2: Land Type Associations
Figure 3: Topography
Figure 4: Route Alternatives
Figure 5: Dakota County Planned Land Use
Figure 6: Inver Grove Heights Zoning
Figure 7: Landcover
Figure 8: Human Settlement
Figure 9: Existing ROW Paralleling

LIST OF EXHIBITS

Exhibit A: Affidavit
Exhibit B: Project Map
Exhibit C: Material Safety Data Sheet
Exhibit D: Draft Agricultural Mitigation Plan

ROUTE PERMIT APPLICATION

ACRONYMS:

AC	Alternating current
API	American Petroleum Institute
Applicant	Petroleum Fuels Company
BMP	Best Management Practice
City	City of Inver Grove Heights, Minnesota
CFR	Code of Federal Regulations
CSAH	County State Aid Highway
Commission	Minnesota Public Utilities Commission (also MPUC)
EPA	United States Environmental Protection Agency
HDD	Horizontal Directional Drilling
MBS	Minnesota Biological Survey
Mcfd	Million cubic feet per day
Mcfh	Million cubic feet per hour
MDA	Minnesota Department of Agriculture
MLCCS	Minnesota Land Cover Classification System
MnDOT	Minnesota Department of Transportation
MnOPS	Minnesota Office of Pipeline Safety
MPCA	Minnesota Pollution Control Agency
MPUC	Minnesota Public Utilities Commission
NAAQS	National Ambient Air Quality Standards
NACE	National Association of Corrosion Engineers
NPDES	National Pollutant Discharge Elimination System
NHIS	Natural Heritage Inventory System
NSPM	Northern States Power Company Minnesota an affiliate of Xcel Energy
OD	Outside Diameter
PFC	Petroleum Fuels Company
PHMSA	Pipeline and Hazardous Materials Safety Administration

ROUTE PERMIT APPLICATION

PI	Point of inflection
Project	Pine Bend Pipeline
Psig	Pounds per square inch gauge
PWI	Public Waters Inventory
ROW	Right-of-Way
SHPO	State Historic Preservation Office
SDS	State Disposal System
TBS	Town Border Station
US DOT	United States Department of Transportation
WT	Wall thickness

DEFINITIONS:

Route	“Route” means the proposed location of a pipeline between two end points. This Application requests a Route of 200 feet in width.
Right-of-way	“Right-of-way” means the interest in real property used or proposed to be used within a Route to accommodate a pipeline and associated facilities. For this project, the right-of-way consists of a 30-foot Permanent right of way and an additional 20 feet of temporary workspace adjacent to the permanent right of way, all located within the route. The combination of the 30-foot permanent right of way and the 20-foot temporary workspace is defined as the Construction right-of-way.

ROUTE PERMIT APPLICATION

Completeness Checklist

Minnesota Rules	Description of Requirement	Page
7852.2100. GENERAL INFORMATION.		
Subpart 1.	<u>Cover letter:</u> Each application must be accompanied by a cover letter signed by an authorized representative or agent of the applicant. The cover letter must specify the type, size, and general characteristics of the pipeline for which an application is submitted.	Cover Letter
Subpart 2.	<u>Title page and table of contents:</u> Each application must contain a title page and a complete table of contents.	i
Subpart 3.	<u>Statement of ownership:</u> Each application must include a statement of proposed ownership of the pipeline as of the day of filing and an affidavit authorizing the applicant to act on behalf of those planning to participate in the pipeline project.	1
Subpart 4.	<u>Background information:</u> Each application must contain the following information: A. The applicant's complete name, address, and telephone number; B. The complete, name, title, address, and telephone number of the authorized representative or agent to be contacted concerning the applicant's filing; C. The signatures and titles of persons authorized to sign the application, and the signature of the preparer of the application if prepared by an outside representative or agent; and D. A brief description of the proposed project which includes: 1. General location; 2. Planned use and purpose; 3. Estimated cost; 4. Planned in-service date; and 5. General design and operational specifications for the type of pipeline for which an application is submitted.	1-3
7852.2200. PROPOSED PIPELINE AND ASSOCIATED FACILITIES DESCRIPTION.		
Subpart 1.	<u>Pipeline design specifications:</u> The specifications for pipeline design and construction are assumed to be in compliance with all applicable state and federal rules or regulations unless determined otherwise by the state or federal agency having jurisdiction over the enforcement of such rules or regulations. For public information purposes, the anticipated pipeline design specifications must include but are not limited to: A. Pipe size (outside diameter) in inches; B. Pipe type; C. Nominal wall thickness in inches; D. Pipe design factor; E. longitudinal or seam joint factor; F. class location and requirements, where applicable; G. Specified minimum yield strength in pounds per square inch; and H. Tensile strength in pounds per square inch.	4

ROUTE PERMIT APPLICATION

Minnesota Rules	Description of Requirement	Page
Subpart 2.	<u>Operating pressure:</u> Operating pressure must include: A. Operating pressure (pounds per square inch gauge [psig]); and B. Maximum allowable operating pressure (psig).	5
Subpart 3.	<u>Description of associated facilities:</u> For public information purposes, the applicant shall provide a general description of all pertinent associated facilities on the right-of-way.	5
Subpart 4.	<u>Product capacity information:</u> The applicant shall provide information on planned minimum and maximum design capacity or throughput in the appropriate unit of measure for the types of product shipped as defined in part 7852.0110.	5
Subpart 5.	<u>Product description:</u> The applicant shall provide a complete listing of products the pipeline is intended to ship and a list of products the pipeline is designed to transport, if different from those intended for shipping.	5
Subpart 6.	<u>Material safety data sheet:</u> For each type of product that will be shipped through the pipeline, the applicant shall provide for public information purposes the material identification, ingredients, physical data, fire and explosive data, reactivity data, occupational exposure limits, health information, emergency and first aid procedures, transportation requirements, and other known regulatory controls.	5 Exhibit C
7852.2300. LAND REQUIREMENTS.		
For the proposed pipeline, the applicant shall provide the following information: A. Permanent right-of-way length, average width, and estimated acreage; B. Construction right-of-way (workspace) length, estimated width, and estimated acreage; C. Estimated range of minimum trench or ditch dimensions including bottom width, top width, depth, and cubic yards of dirt excavated; D. Minimum depth of cover for state and federal requirements; and E. Right-of-way sharing or paralleling: type of facility in the right-of-way, and the estimated length, width, and acreage of the right-of-way.		6
7852.2400. PROJECT EXPANSION.		
If the pipeline and associated facilities are designed for expansion in the future, the applicant shall provide a description of how the proposed pipeline and associated facilities may be expanded by looping, by additional compressor and pump stations, or by other available methods.		7
7852.2500. RIGHT-OF-WAY PREPARATION PROCEDURES AND CONSTRUCTION ACTIVITY SEQUENCE.		
Each applicant shall provide a description of the general right-of-way preparation procedures and construction activity sequence anticipated for the proposed pipeline and associated facilities.		8-10

ROUTE PERMIT APPLICATION

Minnesota Rules	Description of Requirement	Page
7852.2600. PREFERRED ROUTE LOCATION; ENVIRONMENTAL DESCRIPTION.		
Subpart 1.	<u>Preferred route location:</u> The applicant must identify the Preferred Route for the proposed pipeline and associated facilities on any of the following documents, which must be submitted with the application: A. United States Geological Survey topographical maps to the scale of 24,000, if available; B. Minnesota Department of Transportation county highway maps; or C. Aerial photos or other appropriate maps of equal or greater detail in items A and B. The maps or photos may be reduced for inclusion in the application. One full-sized set shall be provided to the Commission.	11
Subpart 2.	<u>Other route locations:</u> All other route alternatives considered by the applicant must be identified on a separate map or aerial photos or set of maps and photos or identified in correspondence or other documents evidencing consideration of the route by the applicant.	11
Subpart 3.	<u>Description of environment:</u> The applicant must provide a description of the existing environment along the Preferred Route.	11-19
7852.2700. ENVIRONMENTAL IMPACT OF PREFERRED ROUTE.		
The applicant must also submit to the Commission along with the application and analysis of the potential human and environmental impacts that may be expected from pipeline right-of-way preparation and construction practices and operation and maintenance procedures. These impacts include but are not limited to the impacts for which criteria are specified in part 7852.0700 or 7852.1900.		20-25
7852.2800. RIGHT-OF-WAY PROTECTION AND RESTORATION MEASURES.		
Subpart 1.	<u>Protection:</u> The applicant must describe what measures will be taken to protect the right-of-way or mitigate the adverse impacts of right-of-way preparation, pipeline construction, and operation and maintenance on the human and natural environment.	26
Subpart 2.	<u>Restoration:</u> The applicant must describe what measures will be taken to restore the right-of-way and other areas adversely affected by construction of the pipeline.	26
7852.2900. OPERATION AND MAINTENANCE.		
Pipeline operations and maintenance are assumed to be in compliance with all applicable state and federal rules or regulations, unless determined otherwise by the state or federal agency having jurisdiction over the enforcement of such rules or regulations. For public information purposes, the applicant must provide a general description of the anticipated operation and maintenance practices planned for the proposed pipeline.		27
7852.3000. LIST OF GOVERNMENT AGENCIES AND PERMITS.		
Each application must contain a list of all the known federal, state, and local agencies or authorities and titles of the permits they issue that are required for the proposed pipeline and associated facilities.		28

ROUTE PERMIT APPLICATION

INTRODUCTION

Petroleum Fuels Company (PFC) is filing this Application with the Minnesota Public Utilities Commission (MPUC) for a Natural Gas Pipeline Route Permit under its partial exemption of pipeline route selection procedures (Minnesota Rule 7852.0600). The Application describes PFC's project in accordance with Minnesota Statutes Chapter 216G and Minnesota Rules Chapter 7852.

Through this Application, PFC seeks a Route Permit from the MPUC to construct an approximate 5,600-foot-long, 4.5 inch-outside-diameter, natural gas pipeline to be located in Inver Grove Heights, MN. The Project will transport gas from a meter station located on the west side of the site of a Renewable Natural Gas Processing Facility to be constructed to process the landfill gas extracted from the Republic Services Pine Bend Landfill to a delivery point into the NSPM high-pressure gas system. The pipeline will be constructed and tested for a maximum allowable operating pressure of 1440 psig and will operate at a pressure of 670 psig. The gas to be transported will primarily consist of methane (approximately 98%) with a small amount of carbon dioxide and trace amounts of other compounds. The gas will meet the specification required for renewable natural gas as established by NSPM.

The Renewable Natural Gas Processing Facility and the low-pressure pipeline to the facility from the landfill will be built, owned and operated by FORTISTAR Methane Group. Gas from the landfill is already collected and used to drive generators that provide electricity into the NSPM grid. Under this current use, the landfill gas is not refined. When this gas processing facility is completed and in operation, the landfill gas will be refined to pipeline quality for injection into NSPM's natural gas system. Construction of both the processing facility and the low-pressure pipeline are scheduled to start in April, 2021. The physical size of the Renewable Natural Gas Processing Facility is about 12,000 square feet. The low-pressure pipeline will be constructed of 24 inch high density polyethylene and will operate at a pressure between 0 and negative 3 psig. A preliminary plan of the facility and the low-pressure landfill gas pipeline are included as Figure 10. The meter station in the northwest portion of the site will be the start of the pipeline that is the subject of this Application.

PFC requests a pipeline route width of 200 feet as shown on the project Map included in Exhibit B. PFC proposes to begin construction of the Project in spring of 2021, with a planned in-service date of June 30, 2021. PFC's application describes the location of the Project, the human and environmental setting, proposed construction methods, potential environmental impacts, and proposed mitigation measures and restoration procedures. The application provides information to address the criteria listed in Minnesota Rules Chapter 7852.0700 - Criteria For Partial Exemption From Pipeline Route Selection Procedures, Subpart 3, Criteria, items A – J. As set forth in this Application, the proposed pipeline and associated facilities will not have a significant impact on human or natural environment.

ROUTE PERMIT APPLICATION

SECTION 1: General Information (Minn. R. 7852.2100)

This Application is organized by the associated sections of Minnesota Rules Chapter 7852.

Rule 7852.2100, Subpart 1 and Subpart 2.

The cover letter is included with this Route Permit Application and the title page and table of contents are both included at the beginning of this Route Permit Application.

Rule 7852.2100, Subpart 3 and Subpart 4.A.

Statement of Ownership, Address and telephone number:

The Pine Bend Pipeline will be owned by:

Petroleum Fuels Company
6750 West Loop South
Suite 748
Bellaire, TX 77401
(281) 334-5976

PFC, based in Bellaire, Texas, provides wholesale energy and midstream services to producers and end users of natural gas, natural gas liquids and crude oil. PFC and its affiliate companies own and operate over 800 miles of infrastructure including pipelines and processing facilities, primarily in Texas.

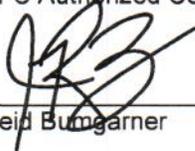
Rule 7852.2100, Subpart 4.B.

Reid Bumgarner is the authorized contact person for Petroleum Fuels Company. Here is his contact information:

Reid Bumgarner
President
(713) 678-0674
rbumgarner@pfcmidstream.com

Rule 7852.2100, Subpart 4.C.

PFC Authorized Contact Signature:



Reid Bumgarner

This Application was submitted by:

WSB
701 Xenia Ave South
Suite 300
Minneapolis, MN 55416

For questions regarding Rule 7852.2100 – 7852.2500 and Rules 7852.2800 – 7852.3100, please contact:

ROUTE PERMIT APPLICATION

Timothy Johnston, PE
Director of Pipeline Engineering, WSB
(303) 842-6972
tjohnston@wsbeng.com


Timothy Johnston

For questions regarding Rule 7852.2600 – 7852.2700, please contact Shawn Williams at (763) 287-8531 or by email at swilliams@wsbeng.com.


Shawn Williams

The Affidavit authorizing WSB to act on behalf of Petroleum Fuels Company is attached as Exhibit A to this Application.

Rule 7852.2100, Subpart 4.D.1. General Location

The pipeline will begin at a new Renewable Natural Gas facility to be built in the Northwest ¼ of Section 33, Township 27N, Range 22W, in the city of Inver Grove Heights. The pipeline will proceed north approximately 400 feet, then west approximately west approximately 900 feet, then north for 130 feet, the west again for 540 feet, then northwest for 450 feet to a point on the east side of Rich Valley Blvd. The pipeline will then cross Rich Valley Blvd and the proceed north-northwest for along the west side of Rich Valley Blvd and Blaine Ave for a distance of 2200 feet, crossing under 110th St E, The pipeline then crosses Blaine Avenue to the northeast and proceeds NNE parallel to an existing pipeline owned by NSPM for a distance of 1170 feet to a pipeline facility owned by NSPM which is located on the south side of 105th St E approximately 550 feet west of Blaine Ave E. The pipeline will extend through portions of the NW ¼ of S33, the NE1/4 of Section 32 and the SE ¼ of Section 29, all in T27N, R22W. A map of the pipeline route is included as Exhibit B.

Rule 7852.2100, Subpart 4.D.2. Planned Use and Purpose

A Certificate of Need is not required for the Project since it is not classified as a large energy facility under Minnesota Statutes Section 216B.2421, subd. 2 or large pipeline under Minnesota Rules 7851.0010 Subp. 13. Therefore, the Project is exempt from the Certificate of Need requirements. However, information regarding the need for the Project is presented herein.

This pipeline will carry pipeline-quality natural gas meeting the specifications of NSPM, the local utility provider. This gas will be produced from landfill gas from the Republic Services Pine Bend Landfill located east of the south-east end of the pipeline. This gas will be injected into the NSPM system that feeds the Twin Cities and will serve the needs of the NSPM natural gas customers.

Rule 7852.2100, Subpart 4.D.3. Estimated Cost

The estimated cost of the pipeline is as follows:

Engineering, ROW, Permitting	\$79,000
Material	\$632,000
Construction Labor	\$790,000
Construction Inspection and Testing	\$79,000
Total	\$1,580,000

ROUTE PERMIT APPLICATION

Rule 7852.2100, Subpart 4.D.4. Planned In-Service Date

Petroleum Fuels Company expects to construct this line during the 2021 construction season with a planned in-service date of June 30, 2021.

Rule 7852.2100, Subpart 4.D.5. General Design and Operational Specifications

The Project will include the installation of approximately 5,600 feet of 4.5-inch outside diameter natural gas pipeline to be located in Inver Grove Heights, MN. The Project will transport gas from a Renewable Natural Gas Processing Facility to be constructed to process the landfill gas extracted from the Republic Services Pine Bend Landfill to a delivery point into the NSPM high-pressure gas system. The pipeline will be constructed and tested for a maximum allowable operating pressure of 1440 psig and will operate at a pressure of 670 psig.

ROUTE PERMIT APPLICATION

SECTION 2: Proposed Pipeline and Associated Facilities Description (Minn. R. 7852.2200)

Rule 7852.2200 Subpart 1.

DOT regulations, in Title 49 C.F.R. Part 192, define minimum federal safety standards for construction, operations and maintenance of natural gas pipelines. PFC will comply with these standards while constructing, operating, and maintaining the proposed pipeline. Anticipated design specifications are listed in **Table 1** below:

Table 1		
Pipeline Design Specifications for the Pine Bend Pipeline Project		
Design Criteria		Specification
A.	Pipe size (outside diameter) in inches	4.5 inch
B.	Pipe type	Steel pipe manufactured to American Petroleum Institute (API) 5L Pipeline System Limited (PSL) 2 Specifications for Line Pipe, Grade X-52
C.	Nominal wall thickness in inches	0.237 inch for line pipe, 0.337 inches for pipe used for directional bores under streets
D.	Pipe design factor	The pipe will meet or exceed a design factor of 0.5
E.	Longitudinal or seam joint factor	1.0, pipe will be seamless or electric resistance welded
F.	Class location and requirements	The pipeline will be designed to a minimum of a Class 2 location.
G.	Specified minimum yield strength (SMYS), in pounds per square inch	A minimum SMYS of 52,000 psig is anticipated to be used, based on current pipeline design.
H.	Tensile strength, in pounds per square inch	$P = (2St/D) \times F \times E \times T = 2,738$ psig Coating on the pipe will be fusion bond epoxy with abrasion-resistant coating added for the bore pipe.

The Project is designed to meet a Class 2 location designation. Natural gas pipelines are designed to comply with a “class location designation” as required by 49 C.F.R. § 192.5. Class location refers to a regulatory designation for natural gas transmission lines that indicates the level of human population within a certain distance on either side of the pipeline. The class location of a pipeline is a factor in determining the maximum allowable pressure of the pipeline, and is based on the number and type of buildings intended for human occupancy that are situated in an area that extends 220 yards on either side of the centerline of any continuous 1.0-mile length of a gas pipeline. Class locations are specified as Class 1, 2, 3 or 4; with Class 1 representing the least heavily populated of the class locations, and Class 4 representing the most heavily populated of the class locations.

The criteria for each of the Class designations follows below:

- Class 1: 0 to 10 buildings;
- Class 2: 10 to 45 buildings;
- Class 3: 46 or more buildings or an area where the pipeline lies within 100 yards (300 feet) of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period; and

ROUTE PERMIT APPLICATION

- Class 4: Any class location unit where buildings with four or more stories above ground are prevalent.

Rule 7852.2200 Subpart 2. Information Regarding Operating Pressure

This pipeline will operate at a pressure of 670 psig. The maximum allowable operating pressure will 1440 psig, established by a hydrostatic pressure test to 2160 psig, well below the design pressure calculated above.

Rule 7852.2200 Subpart 3. Description of Associate Facilities

No above-ground facilities will be constructed along this right-of-way. PFC will install associated facilities as part of the proposed Project; these facilities support the Project and are provided here for public information purposes. PFC will install a meter station and odorizing facility at the south end of the pipeline, within the boundaries of the gas processing facility. These facilities are shown on the map in Exhibit B and in the various Figures. Alternating current mitigation and other cathodic protection facilities may be installed at a future date as warranted by a cathodic protection study to be conducted after construction. Pipeline markers will be installed at various locations (e.g., road crossings) in accordance with applicable federal and state regulations. The following briefly describes each associated facility that will be installed with the Project:

- 1) Measurement Station consisting of a rotary meter with a capacity exceeding the maximum anticipated flowrate of the pipeline. Based on the pressure and flowrate, this will be only a 2" meter.
- 2) Odorization Facility will consist of a pulse-injection system to inject odorant into the gas stream proportional to the flow measured by the Measurement Station.
- 3) Cathodic protection and alternating current mitigation, if necessary, will include non-conductive ground mats and grounding rods. Cathodic protection for the pipeline will be provided by sacrificial anodes along the pipeline route.

Rule 7852.2200 Subpart 4. Product Capacity

This pipeline will have a maximum capacity, with a 10-psi pressure drop, of 4,000 MCFD, and no minimum capacity. The design maximum throughput is expected to be 2850 MCFD.

Rule 7852.2200 Subpart 5. Product Description

This pipeline will carry renewable natural gas produced from landfill gas. The composition will be approximately 98% methane (CH₄), 2% carbon dioxide (CO₂) and will conform to NSPM's specifications.

Rule 7852.2200 Subpart 6. Material Safety Data Sheets

The Material Safety Data Sheet for natural gas is attached as Exhibit C.

ROUTE PERMIT APPLICATION

SECTION 3: Land Requirements (Minn. R. 7852.2300)

Rule 7852.2300 Information Describing the Land Requirements for the Project The permanent right of way will be 5600 feet in length and 30 feet in width for a total estimated acreage of 4.07 acres. During construction an additional 20 feet of width will be utilized along the length as a temporary right of way, for an additional 2.71 acres. This combined width of 50 feet is the construction right of way.

The typical dimensions of the ditch will be 18 inches wide by 54 inches deep, with the intent to provide 48 inches of cover over the pipeline. Depending on soil conditions, the width of the bottom of the trench may be smaller and the top wider. The total excavated soil will be 1200 cubic yards allowing for less excavation at the bores under the streets.

Depth of cover over the pipeline will be 4.5 feet on agricultural lands and between 3.0 to 4.0 feet in non-agricultural lands. These cover amounts meet the requirements set forth in DOT pipeline standards 49 CFR Part 192.327, and is consistent with Minnesota Statute 216G.07, Subdivision 1. This statute requires the proposed pipeline to be buried with a minimum level cover of not less 4.5 feet in all areas where the pipeline alignment crosses public drainage facilities, county or state highway rights-of-way, and actively cultivated agricultural lands.

The north 1170 feet of the pipeline will parallel a pipeline owned by NSPM. WSB is inquiring as to the required separation from that facility in the NSPM Standards and the conditions of the existing easement to determine if this pipeline can share that easement with the NSPM facility.

ROUTE PERMIT APPLICATION

SECTION 4: Project Expansion (Minn. R. 7852.2400)

The pipeline is designed to transport the full output from the renewable natural gas processing facility, which in turn is sized to process all the gas produced by the landfill. At this time, PFC has no plans to expand this Project in the future by looping or adding additional compressor stations.

ROUTE PERMIT APPLICATION

SECTION 5: Right-of-Way Preparation Procedures and Construction Activity Sequence (Minn. R. 7852.2500)

The Construction Right-of-Way will need to be cleared of trees prior to construction. The vegetation does not appear to include any trees of significant size; most of the route is through agricultural areas.

Construction Sequence:

1. Initial staking of ROW
2. Call for locations of foreign facilities within the ROW
3. Tree clearing, grading of ROW
4. Potholing foreign utilities to be crossed by the pipeline
5. Directional boring of the three streets
6. Excavate the trench
7. String, weld and coat pipe
8. Install pipe, backfill and compact
9. Clean pipeline, pressure test and dry
10. Restoration of the ROW
11. Tie-in at both ends of the pipeline

These major activities are described below.

A. Survey and Staking

The initial step in the preparation of the right-of-way for construction is the preconstruction survey. Affected landowners will be notified before the preconstruction survey and staking are started. After these notifications, a crew will survey and stake the outside limits of the construction right-of-way, the centerline of the pipeline, wetlands crossings, highway crossings, and known underground facilities. Existing utility lines (e.g., cables, conduits, and pipelines) will be located and marked with flags, stakes, or other devices to prevent accidental damage during pipeline construction.

B. Clearing and Grading

Following the installation of the staking and flagging, the right-of-way will be cleared and graded to remove brush, trees, roots, and other obstructions such as large rocks and stumps within upland areas. Non-woody vegetation may be mowed and left in place to limit soil erosion. Soil, brush, roots, and rocks removed from the construction right-of-way will be typically windrowed on the outer edge of the construction right-of-way and some may be used for reclamation. Large (merchantable) timber will be salvaged or used for reclamation. Smaller trees and brush may be chipped for use as mulch. Burning of slash, brush, stumps, or other project debris is prohibited.

After the right-of-way has been cleared and the stumps removed from within upland areas, grading may be necessary to create a smooth surface for safe operation of equipment. Minimal grading will be required in flat terrain. Topsoil will be stored along the outside edge of the construction right-of-way. To minimize the potential for erosion from wind and water, PFC will install temporary erosion control devices as specified in its Storm Water Pollution Prevention Plan (SWPPP) and as required by its National Pollution Discharge Elimination System (NPDES) construction stormwater permit requirements. Temporary erosion control measures will include sediment barriers (e.g., silt fence and straw bale structures) and slope breakers. Temporary erosion control measures will be installed downstream of planned work areas prior to initiating ground disturbing activities.

C. Trenching

The trench will be excavated with a track-mounted backhoe. Excavated subsoil will be stockpiled along the right-of-way on the side of the trench away from the construction traffic and pipe assembly area. Subsoil will be stockpiled separately from topsoil. This segregation of topsoil and subsoil will be maintained throughout the construction of the Project.

ROUTE PERMIT APPLICATION

During trenching, previously unidentified or unknown drain tile may be located. PFC will restore the functionality of the drain tile through the relocation, reconfiguration, or replacement of the existing tile.

D. Pipe Laying

After the pipe trench is excavated, sections of externally coated pipe typically in 40-foot or 80-foot lengths (also referred to as joints) will be transported to the construction right-of-way by truck and strung along the side of the trench. Pipe joints may be bent by using a track-mounted, hydraulic pipe-bending machine to tailor the shape of the pipe to conform to the contours of the terrain. Sections of pipe that require multiple or complex bends may be prefabricated off-site.

After the pipe ends are sufficiently cleaned and bending activities have been completed, the pipe joints are lined up and welded together until the joints are securely joined. Welding will be completed by pre-qualified welders in accordance with American Petroleum Institute (API) 1104, the code for "Welding of Pipelines and Related Facilities." Welders will comply with the welding procedures that have been developed and tested to the detailed national industry standards and pipeline regulations. All welds are required to exhibit the same structural integrity with respect to strength and ductility.

Each weld will be inspected by qualified welding inspectors to determine the integrity of each weld. U.S. DOT regulations require nondestructive testing of all welds in areas such as inside railroad or public road rights-of-way and in certain other areas. Radiographic examination is a nondestructive testing method of inspecting the inner structure of welds and determining the presence/absence of defects. Contractors specializing in radiographic examination will perform the inspections to ensure structural integrity. Welds that do not meet established specifications will be repaired or replaced with a weld that meets DOT standards. Once the welds are approved, a protective coating will be applied to the welded joints.

The DOT requires buried pipelines to have an acceptable protective coating to protect against corrosion. The pipe is typically coated with a fusion-bonded epoxy applied at the steel mill prior to delivery in order. Directional drilled pipe will be dual-coated and construction field welds will be coated in the field with an approved material that is compatible with the mill applied coating. The entire coating will be inspected and any defects in the coating will be field-repaired. After this coating is inspected, the pipe will be ready to be lowered into the trench.

Prior to being lowered-in, the trench will be inspected to ensure it does not contain rocks that could damage the pipeline or its coating. If rock conditions are encountered, the trench bottom will first be padded with a layer of rock-free soil (e.g., sand). Padding is not necessary along the entire pipeline and only occurs where rock is encountered. Padding material will be generated on site or will be imported from a local borrow pit or commercial source. No topsoil will be used to pad the pipeline.

Dewatering may be necessary to inspect the bottom of the trench in areas where water has accumulated. Trench dewatering activities will be performed in accordance with Minnesota Department of Natural Resources (MDNR) Water Appropriation General Permit MN 97-0005 and erosion control plans developed pursuant to the Minnesota Pollution Control Agency (MPCA) NPDES Construction Storm Water Discharge Permit.

E. Backfilling and Rough Grading

After the pipe is lowered into the trench, the trench will be backfilled by replacing subsoil first, then topsoil using bladed equipment or track hoes. Where the backfill material contains large rocks or other materials that could damage the pipe or coating, subsoil, clean fill, and/or protective coating (i.e., padding material) will be placed around the pipe prior to backfilling. Rock excavated from the pipeline trench may be used to backfill the trench only to the depth of the existing bedrock profile. Rock that is not returned to the trench will be disposed of onsite per the landowner request or offsite as construction waste.

ROUTE PERMIT APPLICATION

PFC will grade the construction workspaces to as near as practicable to pre-construction conditions. All construction debris would be removed and disposed of at an appropriate waste facility or in accordance with applicable permit regulations. PFC will require its contractor to use a proven compaction method to minimize trench settling. Following backfilling, a small crown of material may be left over the trench to account for any potential soil settling.

During backfilling, special care will be taken to minimize erosion, restore the natural contour of the ground, and restore surface drainage patterns as close to preconstruction conditions as practicable. In order to minimize the possibility of subsurface water flow on slopes along the pipeline, sandbags will be placed across the trench prior to backfilling, as necessary.

F. Testing

After the installation of the entire pipeline is complete, PFC will test the new pipeline to verify its structural integrity prior to placing the pipeline in service. Hydrostatic testing will be conducted in accordance with PHMSA regulations (49 CFR § 195.300). The test procedure consists of filling the pipeline with water and maintaining a prescribed pressure for a prescribed period of time to establish the maximum allowable operating pressure. When hydrostatic testing is complete, the test water will be discharged to a nearby waterbody or to the ground surface through energy dissipation device. All discharges will be conducted in accordance with terms and conditions of the MPCA NPDES hydrostatic test discharge permit.

G. Cleanup and Restoration

Cleanup and restoration of the right-of-way is the final phase of pipeline construction and typically begins immediately after backfilling, or as soon as weather and soil conditions allow. Construction debris and surplus materials will be cleared from the right-of-way and construction debris will be taken to a licensed disposal facility.

After the pipeline has been installed, backfilled, and successfully tested, the right-of-way and ATWS will be graded to its pre-construction contour, topsoil replaced, and in non-agricultural areas seeded, fertilized, and mulched as appropriate to facilitate revegetation. Agricultural areas will not be seeded, fertilized or mulch, as the land will be tilled during the next spring season for re-planting in crops. Work areas will be restored as nearly as practicable to their preconstruction condition, and erosion control measures will be installed as needed.

ROUTE PERMIT APPLICATION

SECTION 6: Preferred Route Location and Environmental Description (Minn. R. 7852.2600)

Subpart 1. Preferred Route Location

The pipeline will begin at a new renewable natural gas processing facility to be built in the Northwest ¼ of Section 33, Township 27N, Range 22W, in the city of Inver Grove Heights. The pipeline will proceed west approximately 2100 feet for a distance of and cross Rich Valley Blvd, then proceed NW along the west side of Rich Valley Blvd for a distance of 2500 feet, crossing under 110th St E, then cross under Blaine Ave E and proceed NNE parallel to an existing pipeline owned by NSPM for a distance of 1170 feet to a pipeline facility owned by NSPM which is located on the south side of 105th St E approximately 550 feet west of Blaine Ave E. The pipeline will extend through portions of the NW ¼ of S33, the NE1/4 of Section 32 and the SE ¼ of Section 29, all in T27N, R22W.

A map of the pipeline route is included as **Exhibit B**. A topographic map is included as **Figure 3**.

Subpart 2. Other Route Locations

PFC considered one other route, also shown on the maps in Exhibit B and in Figure 4. This route is 500 feet greater in length and lie parallel to a 69 KV power line for approximately 2000 feet, requiring installation of additional corrosion mitigation and personnel safety equipment not required for the preferred route.

Subpart 3. Description of Existing Environment

The proposed project area is in the City of Inver Grove Heights, Dakota County, MN. It is located east of the intersection of 110th St. E. and Rich Valley Blvd in Sections 8, 29, 32, and 33, T27N, R22W (**Figure 1 – Project Area Overview**). It is principally in the southern portion of the St. Paul-Baldwin Plains (222Md) Subsection of the Minnesota and Northeast Iowa Morainal Ecological Section of Minnesota. The St. Paul-Baldwin Plains (where the project is located) is dominated by large glacial moraine and outwash plains.

Watersheds generally begin in the western portion of this section, where the elevation is higher with level to gently rolling landscapes, descending east to the Mississippi River, where the landscape transitions to bluff lands and river valleys. The Project will cross the mapped Coates Sand Plain and Wescott Moraine Land Type Associations (**Figure 2 – Land Type Associations**). The land type setting of the project location is more resembling of the sand plain, with relatively flat to gently rolling slopes. The topographic relief is minor, with elevation of approximately 884' above mean sea level (AMSL) at the north, to 871' AMSL at the southern limit. This is a vertical difference of 13 feet (**Figure 3 – Topography**).

The built environment is primarily agricultural land use, nearby county highways 71 and 32, a few nearby homes and/or small businesses, powerline ROW, natural gas pipeline ROW, and the nearby railroad and landfill to the east. The following sections summarize the existing conditions within the project area, including the Preferred Route and Route Alternatives. Some of the existing conditions for the Preferred Route have been quantified. In general, the existing conditions for the route alternative are anticipated to be very similar to those for the Preferred Route, since the alternative is very near the Preferred Route (**Figure 4 – Route Alternatives**).

A. Socioeconomics

Dakota County population levels in 2010 and 2019 were 398,552 and 433,302, respectively, with a growth rate of 7.6 percent (as compared to the statewide growth rate of 6.3 percent). Population levels within Inver Grove Heights for years 2010 and 2019 were 33,880 and 35,321, respectively, with a growth rate of 5 percent (Minnesota State Demographic Center). From the Quarterly Census of Employment and Wages (QCEW) for Dakota County, employment was highest in the retail and healthcare fields, both at 12.8 percent, in the first quarter of 2020. After retail and healthcare, manufacturing (10 percent) and transportation (8.1 percent) account for the third and fourth largest employment sectors in the County. Income is higher in Dakota County than the

ROUTE PERMIT APPLICATION

State of Minnesota. Median household income for Dakota County in 2018 was \$83,288 (\$68,411 in Minnesota), and per capita income was \$40,441 (\$36,245 in Minnesota) (2018 ACS 5-Year Estimate, US Census Bureau).

Poverty levels were also lower for Dakota County than the State of Minnesota. For families, 4.3 percent were below the state poverty level (6.3 percent in Minnesota), 15.1 percent of families with a female household and no husband present were below the state level (23.6 percent in Minnesota) and for individuals, 6.4 percent were below the state level (10.1 percent in Minnesota) (2018 ACS 5-Year Estimate, US Census Bureau). Out of all of Dakota County's population, 82.1 percent identified as White, 4.8 percent Asian, 6.6 percent Black or African American, 0.3 percent American Indian and Alaska Native, 2.3 percent some other race, and 4 percent two or more races. About 7.6 percent identified with being Hispanic or Latino. These numbers are approximately reflective of the State's population, 82.5 percent of which identifies as White, 4.9 percent Asian, 6.6 percent black/African American, 1.1 percent American Indian and Alaska Native, 1.8 percent some other race, and 3.1 percent two or more races, with 5.6 percent identifying as Hispanic or Latino (2018 ACS 5-Year Estimate, US Census Bureau). Based on this socioeconomic profile of the County, there is no expected environmental justice impact to any disadvantaged group within the County's population. The socioeconomics summary is included in Table 2.

Table 2- Socioeconomics

POPULATION*	Inver Grove Heights	Dakota County	Minnesota
2010	33,880	398,552	5,303,925
2019	35,321	433,302	5,680,337
Growth Rate 2010-2019	4.3%	8.7%	7.1%
INCOME**			
Income - Median household		\$83,288	\$68,411
Income - Per capita		\$40,441	\$36,245
POVERTY**			
Families		4.3%	6.3%
Families (with female household head and no husband)		15.1%	23.6%
Individuals		6.4%	10.1%
RACE AND ETHNICITY**			
White		82.1%	82.5%
Black or African American		6.6%	6.6%
American Indian and Alaska Native		0.3%	1.1%
Asian		4.8%	4.9%
Native Hawaiian and Other Pacific Islander		0.0%	0.0%
Some other race		2.3%	1.8%
Two or more races		4.0%	3.1%

* Minnesota State Demographic Center
 ** 2018 ACS 5-Year Estimate, US Census Bureau

ROUTE PERMIT APPLICATION

B. Land Cover and Zoning

Dakota County and the City of Inver Grove Heights each have land use plans. The County 2040 Comprehensive Plan was adopted by the County Board on June 18, 2019, with an amendment being adopted in 2020. The City's plan is currently being revised. Both plans provide the framework for identifying future growth and development within greater County and City limits and including the project area. The project area includes land that has incurred historic disturbances from vegetation clearing, agricultural practices, as well as rights-of-way for road, railroad, pipeline, and an electrical transmission line. In addition, a few residences are in the vicinity.

The Preferred Route crosses agricultural land and volunteer shrub/grassland. The Dakota County Planned Use map depicts Industrial Open Space and Rural Density Residential (**Figure 5**). The City of Inver Grove Heights Zoning map depicts Zone A – Agricultural (**Figure 6**). The Minnesota Land Cover Classification System (MLCCS) cover types within the Preferred Route include Planted or Cultivated Vegetation, Artificial Surfaces and Associated Areas, Herbaceous, and Woodland (**Figure 7**). None of the agricultural land crossed by the Project is listed as organic farmland (Minnesota Department of Agriculture).

C. Recreation Areas

The project is not located in any public recreation areas. The City of Inver Grove Heights Rich Valley Park is located immediately north of 105th St. E. The Church of St. Patrick – St. Patrick's Cemetery is located immediately west of Rich Valley Blvd/County Rd 71. The DNR Pine Bend Bluffs Scientific and Natural Area is located over 1 mile to the east, along the Mississippi River.

D. Geology

According to the Geologic Atlas of Dakota County, MN (C-6, Plate 3 – Quaternary Geology), the site exists within mapped Des Moines lobe (glacial) deposits. The map unit at the route location mapped as "dso" and is associated with mixed outwash; gravelly sand glaciofluvial outwash plains. This surficial geology resulted from the last glaciation, associated with the Des Moines Lobe, and New Ulm formation. The depth to bedrock along most of the project area is 300 to 500 feet. Construction of the Project will have no impact on the geology of the area.

E. Soils

The Soils in the project area are generally sandy loam/sand/gravel, well drained to somewhat excessively drained, soils formed in outwash plains and terraces.

Three of the eight soils along the Preferred Route are designated Prime Farmland, which is defined by the best combination of physical and chemical characteristics to produce crops. One of the soils along the Preferred Route is designated Farmland of Statewide Importance, which is defined as land other than Prime Farmland that has a good combination of physical and chemical characteristics to produce crops. The remaining four soil types are Not Prime Farmland.

Six of the 8 soils along the Preferred Route are not hydric soils. Estherville sandy loam (41B) and Cylinder loam (129) are predominantly non-hydric. In general, the soil types are not conducive to support wetlands.

ROUTE PERMIT APPLICATION

Table 3: Soil Types within Preferred Route
Summary by Map Unit — Dakota County, Minnesota (MN037)

Map unit symbol	Map unit name	Hydric Rating	Farmland Classification
41B	Estherville sandy loam, 2 to 6 percent slopes	1	Farmland of statewide importance
42C	Salida gravelly coarse sandy loam, 2 to 12 percent slopes	0	Not prime farmland
129	Cylinder loam, 0 to 2 percent slopes	15	All areas are prime farmland
250	Kennebec silt loam	0	All areas are prime farmland
411B	Waukegan silt loam, 1 to 6 percent slopes	0	All areas are prime farmland
611C	Hawick gravelly sandy loam, 6 to 12 percent slopes	0	Not prime farmland
611D	Hawick gravelly sandy loam, 12 to 20 percent slopes	0	Not prime farmland
1003	Anthroportic Udorthents-Pits-Dumps complex, abandoned, 2 to 45 percent slopes	0	Not prime farmland

F. Cultural Resources

The Minnesota State Historic Preservation Office (SHPO) database search of archaeological and architectural records for the four sections (for which this project is located) was completed. Results of the desktop database search for records within Sections 28, 29, 32,33 T27N, R22W indicated no records within the project site. SHPO database search results were received on October 20, 2020.

G. Vegetation

Pre-settlement vegetation in the proposed project area was influenced by slope, fire, and sunlight. The Pre-settlement Vegetation of Minnesota map depicts the original vegetation community at the project location was Oak Openings and Barrens. This habitat type was comprised of woodlands comprised of primarily oak species (white, red, pin, oaks etc.) with dry sandy prairie openings comprised of primarily native herbaceous vegetation. As the area became settled, the vegetation has transitioned to farming, resulting in alterations to the landscape.

Human activities have converted nearly all native pre-settlement prairie (openings/barrens) and woodland communities present along the Preferred Route to agricultural row crops. Fire suppression has allowed volunteer trees and woody species, such as Eastern red cedar (*Juniperus virginiana*) and Siberian elm (*Ulmus pumila*) trees to encroach into areas historically dominated by grasses. Human influence has also allowed for non-native or disturbance species, such as smooth brome (*Bromus inermis*) and reed canary grass (*Phalaris arundinacea*) to become widely established in road ditches and remnant grasslands.

ROUTE PERMIT APPLICATION

A review of MLCCS data along the Preferred Route determined that approximately two thirds of the route will be located in fields used for agricultural row crops or pasture, representing very little ecological value in terms of the vegetation community because the native plant community has been completely replaced by agricultural row crops and non-native or disturbance species. Another significant land cover community along the Preferred Route is old field/dry grasslands which are mostly associated with existing road rights-of-way, and previously disturbed areas. Grasslands associated with these areas are typically dominated by non-native smooth brome or reed canary grass and are of poor ecological quality.

H. Wildlife and Fisheries

Wildlife species occupying habitats in the project area are typical of agricultural, grassland, woods edge, and human development areas in the Upper Midwest. A list of relatively common mammal, bird, and amphibians/reptile species that may occur in the project area is included in **Table 4**.

Table 4: Wildlife Species Commonly Occurring in Dakota County

Species Group	Common Name	Scientific Name
Mammals	Meadow vole	<i>Microtus pennsylvanicus</i>
	Raccoon	<i>Procyon lotor</i>
	White-tailed deer	<i>Odocoileus virginianus</i>
	Stripped skunk	<i>Mephitis mephitis</i>
	Eastern cottontail	<i>Sylvilagus floridanus</i>
	Eastern gray squirrel	<i>Sciurus carolinensis</i>
	Virginia opossum	<i>Didelphis virginiana</i>
	Coyote	<i>Canis latrans</i>
Birds	Downy woodpecker	<i>Picoides pubescens</i>
	Canada goose	<i>Branta canadensis</i>
	Dark-eyed Junco	<i>Junco hyemalis</i>
	Red-tailed hawk	<i>Buteo jamaicensis</i>
	Wild turkey	<i>Meleagris gallopavo</i>
	Killdeer	<i>Charadrius vociferous</i>
	Rock pigeon	<i>Columba livia</i>
	Mourning dove	<i>Zenaida macroura</i>
	Great horned owl	<i>Bubo virginianu</i>
	Chimney swift	<i>Chaetura pelagica</i>
	American crow	<i>Corvus brachyrhynchos</i>
	Barn swallow	<i>Hirundao rustica</i>
	Black-capped chickadee	<i>Poecile atricapillus</i>
	Canada Blue jay	<i>Cyanocitta cristata</i>
	Northern Cardinal	<i>Cardinalis cardinalis</i>
	American robin	<i>Turdus migratorius</i>
	European starling	<i>Sturnus vulgaris</i>
	Song sparrow	<i>Melospiza melodia</i>
	Red-winged blackbird	<i>Agelaius phoeniceus</i>
	American goldfinch	<i>Spinus tristis</i>
House sparrow	<i>Passer domesticus</i>	
Amphibians and Reptiles		
	Mudpuppy	<i>Necturus maculosus</i>

ROUTE PERMIT APPLICATION

Species Group	Common Name	Scientific Name
	Eastern tiger salamander	<i>Ambystoma tigrinum</i>
	Eastern gray treefrog	<i>Hyla versicolor</i>
	American Toad	<i>Bufo americanus</i>
	Northern Leopard Frog	<i>Rana pipiens</i>
	Green Frog	<i>Lithobates clamitans</i>
	Painted Turtle	<i>Chrysemys picta</i>
	Snapping Turtle	<i>Chelydra serpentina</i>
	Eastern Garter Snake	<i>Thamnophis sirtalis</i>
	Plains Garter Snake	<i>Thamnophis radix</i>
	North American Racer	<i>Coluber constrictor</i>

The Preferred Route does not cross aquatic habitat for fish, mollusks, crayfish, and other aquatic invertebrates. Documentation of fish species within the County is not applicable.

I. Threatened and Endangered Species

Four federally listed species are documented as occurring in Dakota County. **Table 5** lists the species and their preferred habitat (United States Fish and Wildlife Service 2014). PFC will consult with the USFWS on appropriate construction mitigation measures for the species once the Route Permit is issued. At this time, PFC intends to complete all tree clearing activities for the Project during the winter months to minimize the likelihood of impacts on these federally listed species.

Table 5: Federally Listed Species Occurring in Dakota County

Species Name	Federal Status	Type of Species	Habitat
Northern long-eared bat (<i>Myotis septentrionalis</i>)	Threatened	Insectivorous Bat	Hibernates in caves and mines - swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests during spring and summer.
Higgins eye pearl mussel (<i>Lampsilis higginsii</i>)	Endangered	Aquatic Mussel	Mississippi River
Rusty patched bumble bee (<i>Bombus affinis</i>)	Endangered	Insect	Grasslands with flowering plants from April through October, underground and abandoned rodent cavities or clumps of grasses above ground as nesting sites, and undisturbed soil for hibernating queens to overwinter.
Prairie bush clover (<i>Lespedeza leptostachya</i>)	Threatened	Vascular Plant	Native prairie on well-drained soils

A review of DNR Natural Heritage Information System (NHIS) Data (DNR LA-896) for Dakota County indicates three state-listed species occurrences within 1 mile of the project area. **Table 6** lists those species.

ROUTE PERMIT APPLICATION

Table 6: Minnesota State Endangered and Threatened Species Occurrences within 1 mile of the Project Area

Species Name	State Status	Type of Species	Habitat*
Lark sparrow (<i>Chondestes grammacus</i>)	Special Concern	Omnivorous bird	Open country with bushes, trees; pastures, farms, roadsides. For nesting, generally favors areas with some open bare ground and some taller plants; included are overgrazed pastures, sandy barrens, hedgerows near fallow fields, brushy dry grasslands, sometimes open pinyon-juniper woods. In migration and winter, found in similar areas, also open weedy fields.
Loggerhead shrike (<i>Lanius ludovicianus</i>)	Endangered	Omnivorous bird	Semi-open country with lookout posts; wires, trees, scrub. Breeds in any kind of semi-open terrain, from large clearings in wooded regions to open grassland or desert with a few scattered trees or large shrubs. In winter, may be in totally treeless country if fences or wires provide hunting perches.
Bell's Vireo (<i>Vireo bellii</i>)	Special Concern	Omnivorous bird	Willows, streamsides. Breeds in low dense growth, especially in second-growth scrub or brushy fields in Midwest, streamside thickets in Southwest, but also locally in chaparral, woodland edges, or scrub oaks.

*Habitat Description from Audubon Society *Guide to North American Birds*.

Notes included in these NHIS records provide more details about these species' occurrences. These bird species have been observed within the 1-mile search radius historically but does not mean they are still present or consistently occur there. The presence of Bell's vireo often comes with a tree/shrub clearing restriction where clearing cannot occur between May 15 and August 15. Same goes for loggerhead shrikes, where clearing should be avoided between April and July or else a nest survey is usually needed. Coordination with the DNR may occur ahead of construction for mitigation planning.

J. Water Resources – Groundwater

The project is located within the DNR Metro Groundwater Province. This province includes sand aquifers in generally thick (greater than 100 feet) sandy and clayey glacial drift overlying Precambrian sandstone and Paleozoic sandstone, limestone, and dolomite aquifers (DNR 2001).

The DNR Pollution Sensitivity of Near-Surface Materials (2016) indicate the project is located at a moderate sensitivity location. Moderate sensitivity to pollution means that contaminants at the surface can take anywhere from a week to weeks to reach the underlying aquifer, whereas a very high sensitivity means contaminants can take anywhere from hours to months to reach the underlying aquifer. The sand/gravel soil types result in faster travel times (residence time) for contaminants to impact drinking water (Olsen and Hobbs 1988).

ROUTE PERMIT APPLICATION

K. Water Resources – Surface Waters and Wetlands

The project is in the Lower Mississippi River Watershed Management Organization limits. The Lower Mississippi River Watershed is in the southeast part of the Twin Cities Metropolitan Area, in northern Dakota County and southern Ramsey County. The project area generally includes the upper portions of the watershed, which is generally flat to rolling. Downstream and to the east of the project area, the topography of the watershed transitions to small stream valleys as the waterways descend through the watershed towards the pronounced Mississippi River bluff.

The project area does not include any mapped state public waters, wetlands, or water courses on the DNR Public Waters Inventory (PWI). The DNR National Wetlands Inventory indicates one mapped freshwater emergent wetland (PEM1A) located about 300 feet north of the preferred route. Impacts to this wetland are not anticipated.

No PWI lakes or wetlands are crossed by the Project. There are no fens within or near the project site. The Minnesota County Biological Survey (MBS) for Dakota County does not depict any resources within or near the project vicinity.

L. Air Quality

The project area is entirely within Dakota County, which is designated as in attainment with National Ambient Air Quality Standards (NAAQS). Air quality related to construction activities and pipeline operation will not adversely affect NAAQS attainment.

M. Existing Infrastructure

To reduce impacts, PFC selected routes that parallel other rights-of-way. The Preferred Route parallels existing infrastructure for a total of 3,270 feet, or approximately 56% of the route. This existing infrastructure includes electric distribution lines, the NSPM pipeline, and road right-of-way (see **Figure 9**). Although a portion of the route parallels existing ROW, the new pipeline will not be within the existing ROW, but rather next to, under a new easement.

N. Hazardous Waste and Regulated Materials

Properties where hazardous waste or other regulated materials have been stored can present a risk if spills or leaks have occurred or may occur. Contaminated or potentially contaminated properties are of concern for pipeline projects because of the liability associated with acquiring such property through right-of-way purchase, potential cleanup costs, and safety concerns during construction related to exposure to contaminated soil, surface water, or groundwater. The use, storage, and clean-up of hazardous wastes and petroleum products are regulated by EPA and Minnesota Pollution Control Agency (MPCA). The MPCA's "What's in my neighborhood?" database identifies information about air quality, hazardous waste, remediation, solid waste, tanks and leak sites, and water quality for regulated facilities and sites in Minnesota. The database was searched for sites located within 500 feet of the anticipated alignment. **Table 7** summarizes the listings that were identified in the search area.

ROUTE PERMIT APPLICATION

Table 7: Minnesota Pollution Control Agency Listing of Regulated Facilities and Sites within the Project Area

Name	Address	Minnesota Pollution Control Agency ID(s)	Activity
All-Star Disposal, Inc. Transfer/Recycling	11278 Rich Valley Blvd	SW-517	Solid Waste, Closed Landfill privately managed; Solid Waste, Closed Landfill privately managed, Permitted Solid Waste Facility
Rainbow, Inc. - Inver Grove Heights	11201 Rich Valley Blvd	MND985756873; TS0001194	Aboveground Tanks; Hazardous Waste, Small quantity generator; Underground Tanks
Storage Facility	Address Unknown	C00032839	Construction Stormwater
Bituminous Roadways, Inc.- IGH	11201 Rich Valley Blvd	03700264; A00000147; ENR-00565; MND981530074; TS0130747-001	Aboveground Tanks; Air Quality; Environmental Review; Hazardous Waste, Very small quantity generator; Industrial Stormwater
Yard Waste Composting Facility Construct	Address Unknown	C00026865	Construction Stormwater
Pine Bend Landfill	2495 117th St E	C00056781	Construction Stormwater
Republic Services – Pine Bend Landfill	2495 117th St E	C00005756; C00007620; C00015145; C00029744; C00032177; C00051197; C00054017; ENR-00032; MND000245795; MNR0534JT; MNR053B5P; SR0000111; SW-45	CERCLIS Site; Construction Stormwater; Environmental Review; Hazardous Waste, Very small quantity generator; Industrial Stormwater; Solid Waste, Permitted Solid Waste Facility; Superfund, Federal Superfund project and State Superfund project
All-Star Disposal Inc. Transfer/Recycling	11278 Rich Valley Blvd	SW-517	Solid Waste, Closed Landfill privately managed; Solid Waste, Closed Landfill privately managed, Permitted Solid Waste Facility

ROUTE PERMIT APPLICATION

SECTION 7: Environmental Impact of Preferred Route (Minn. R. 7852.2700)

For the purposes of impact analysis, the applicant has identified an anticipated alignment (right-of-way) for the pipeline that is located within the Preferred Route. The following sections identify potential impacts for the anticipated alignment.

Human Settlement

A. Human Environment

The principal long-term impact of the pipeline will allow for beneficial use of landfill gas, which will be captured at the nearby Republic Services Pine Bend landfill, treated, and transferred into commercial uses.

PFC will construct the pipeline across paved roadways using boring or HDD methods to avoid disruptions to vehicular traffic and physical impacts on roadbeds. Movement of workers, equipment, and materials from contractor and pipe storage yards to the work sites also could result in short-term impacts on transportation systems. Locations for storage yards have not been identified; PFC will work with local road authorities to identify sites that minimize impacts. PFC anticipates that road congestion associated with construction will be minimal and is not expected to be significant. Construction activities and equipment will generate short-term and intermittent noise, up to 90 db(A) at 50 feet from the equipment but further attenuated by increased distance, affecting nearby residences on a short-term basis while construction equipment is operating. The minimum distance from the construction activities to any residences or commercial buildings is 150 feet. Additionally, temporary impacts to the visual environment will occur during construction when residents and travelers view large construction equipment, tree and vegetation clearing, and exposed soil areas. The temporary increase in traffic from construction equipment and employees, potential dust and soil on the roads from construction, and noise levels from construction will result in some increased risk to the public on the roads. Best Management Practices (BMPs) will be implemented to minimize noise, and dust and soil on the roads.

B. Land Cover and Land Use

Land within the construction right-of-way will be impacted during construction. The construction is expected to last about 3 months.

Table 8: Land Cover and Land Use

Land Cover Types within Route	Acres
Planted or Cultivated Vegetation	1.84
Artificial Surfaces and Associated Areas	1.87
Herbaceous	3.06
Forests	0.01
Total	6.78

The primary permanent impact of construction will be the removal of trees and shrubs from the construction right-of-way. Trees and shrubs within construction areas will regenerate over time. The permanent right-of-way will generally be maintained in an herbaceous land cover. Some of the land cover types in the permanent right-of-way will be permanently altered, whereas others will be only temporarily affected. Pipeline construction will temporarily disturb about 1.84 acres of agricultural lands, or 27 percent of the total land affected. Impacts to agriculture are further discussed in the Agriculture Mitigation Plan included in **Exhibit D**. Following construction and restoration, agricultural activities will be allowed to resume along the permanent right-of-way, therefore the impacts on the agricultural land use will be temporary. Impacts to wetlands are not expected, but if wetlands are encountered, the impacts will be minimized by implementation of BMPs. Wetland mitigation (replacement) will not be required. Impacts on surface waters and wetlands are discussed in the next section. Approximately 3.06 acres of herbaceous (grasslands) will be disturbed by pipeline construction. Open grasslands will be temporarily disturbed during

ROUTE PERMIT APPLICATION

grading, trenching, and backfilling. Once construction is complete, these lands will be restored and revegetated. During construction, approximately 0.01 acre of forest (woodland) will be impacted. The impacts to that portion will be permanent. Following construction, the construction right-of-way will be revegetated with a native seed mix. The permanent right-of-way will be maintained as grassland or cultivated land.

Approximately 1.87 acres of artificial surfaces and associated areas (roads) will be crossed by the Project. Construction will avoid direct impact on roads by using boring or HDD construction methods. Both short-term and long-term impacts on residences may result from construction and operation of the Project. These include temporary disturbances associated with construction, and encumbrance of property for future uses within the permanent right-of-way. Temporary construction impacts on residences and buildings could result from increased noise levels or dust generated by construction equipment and personnel. Every effort will be made to bore or HDD roadways and driveways to minimize construction impacts. New permanent structures will be precluded from the permanent right-of-way during operation of the proposed Project. **Table 9** provides a summary of residences and commercial properties proximate to the proposed Project. Residences and Commercial buildings are shown in **Figure 8**.

Table 9: Residences and Commercial Properties

Name	Address	Zoning	Activity
Alan Bebel / PAC LLC	11184 Rich Valley Blvd, Inver Grove Heights, MN 55077	RP	Excavating Contractor
Harriet Cliff	11018 Rich Valley Blvd. Inver Grove Heights, MN 55077	RP	Residential
TSA Holdings LLC	10805 Rich Valley Blvd, Inver Grove Heights, MN 55077	RP	Agricultural
Loren & Fern Scherff	1320 105 th St E, Inver Grove Heights, MN 55077	RP	Residential
Flint Hills Resources Pine Bend LLC	PO Box 2917, Wichita, KS 67201	RP	Agricultural

Natural Environment, Public, and Designated Lands

A. Geology

Construction is unlikely to encounter shallow bedrock. Depth to bedrock is mapped as being over 200 feet below ground surface throughout the proposed project area. Impacts on the underlying bedrock are not anticipated. Karst features are documented within Dakota County, however, the Minnesota Karst Lands map depicts the site is near covered karst, which includes areas underlain by carbonate bedrock but with more than 100 feet of sediment cover. Although near, the site is outside of mapped karst lands, and thus karst (nor sinkholes) is not expected to be encountered during construction.

B. Soils

Temporary impacts on soils resulting from the construction can include soil compaction, soil erosion, introduction of rock into the topsoil, poor vegetative regrowth following construction, and loss of soil productivity resulting from the mixing of topsoil. PFC will minimize these potential impacts through the implementation of BMPs. Erosion control plans will be developed in compliance with the MPCA Construction Stormwater Discharge Permit. Mitigation measures will include but are not limited to: temporary and permanent erosion controls, topsoil segregation, compaction alleviation, removal of excess rock from topsoil, and restoration of agricultural drainage systems. Following construction, PFC will, to the extent possible, revegetate

ROUTE PERMIT APPLICATION

uncultivated areas disturbed by the Project to their preconstruction condition in accordance with applicable permit requirements and landowner agreements.

C. Vegetation

In most instances, permanent impacts on vegetation will be minimized or completely avoided by locating the anticipated alignment in existing agricultural fields. Permanent impacts on vegetation will mostly be restricted to the woodland edge, volunteer trees, and degraded grassland portions of the anticipated alignment. Permanent impacts on the wooded portion of the anticipated alignment will result from tree clearing and conversion to an open habitat type. The potential for tree clearing impacts was minimized by locating the anticipated alignment along existing rights-of-way and generally avoiding wooded areas by locating the route south of most of the existing woodland stand. After construction, newly established woody vegetation will be periodically cleared from the permanent right-of-way as part of regular maintenance activities. Because naturally occurring vegetation (native or invasive) in agricultural fields is removed for crop cultivation, there will be no impacts on such vegetation as a result of locating the anticipated alignment in existing agricultural fields. Impacts on naturally occurring vegetation in grassland habitats will be temporary in nature. Disturbed areas will be reseeded upon completion of construction using a MnDOT approved seed mix. If vegetation is disturbed in a wetland or other regulated habitat, then the revegetation seed mix will be approved by the appropriate agency.

D. Wildlife Habitat

Wildlife habitat is defined as the natural environment in which a species or group of species lives. Wildlife habitat along the Preferred Route is divided into three categories: aquatic, woodland, and grassland. These categories are defined by the land cover classifications. Aquatic wildlife habitat consists of the open water and wetland land cover classifications. Woodland wildlife habitat consists of the woodland and shrub land cover classifications. Grassland wildlife habitat consists of the maintained tall grasses, old field and dry tall grasses land cover classifications. Both agricultural land and impervious lands were not included as wildlife habitat as both provide limited habitat for wildlife. Permanent impacts to wildlife habitat will result from tree clearing and the loss of woodland wildlife habitat, although these impacts would be minimal. Impacts to aquatic and grassland wildlife habitats will be the result of construction activities and temporary in nature.

E. Wildlife and Fisheries

Impacts on wildlife and fisheries will be associated with construction activities and mostly temporary in nature. These impacts have been minimized by locating the anticipated alignment along existing rights-of-way and/or in agricultural fields. Permanent impacts on wildlife will be associated with limited tree removal. Permanent impacts on wildlife will be restricted to individual members of a species and not cause a trend towards state or federal listing of the species. In addition, tree clearing will be conducted between November 1 and March 15. Conducting tree clearing during this time frame will avoid disturbance of arboreal habitats during the breeding season, which could lead to takings of breeding migratory birds or northern long-eared bat maternity colonies, which are protected by federal law. Impacts on fisheries and other aquatic species will be avoided by using HDD in conjunction with erosion and sediment control BMPs to prevent sediment from reaching waterbodies.

F. Threatened and Endangered Species

Measures to avoid impacts to Federal threatened and endangered species will be implemented.

Northern long-eared bat

Impacts on individual northern long-eared bats will be avoided by completing tree clearing activities during the winter months when this species is in hibernacula. Minimal tree clearing is anticipated, and much of the woodland cleared will be comprised of Eastern red cedar shrubby trees and non-native Siberian elms.

ROUTE PERMIT APPLICATION

Higgins eye pearl mussel

The project will not affect the Higgins eye pearl mussel. Erosion and sediment control BMPs will prevent sediment from reaching tributaries to the Mississippi River.

Rusty patched bumble bee

The USFWS Rusty patched bumble bee map depicts the project is located within mapped high-potential zone at the southern portion, and low potential zone at the northern 2/3 of the route. Aerial imagery does depict historic disturbance at the site from vehicle tracks, and much of the herbaceous vegetation appears to be mostly low-quality habitat grass, such as smooth brome. A field survey will occur to verify the habitat condition, and document whether RPBB nesting and/or quality native flowering plants exist within the preferred route. The survey will follow USFWS survey methodology guidance.

Prairie bush clover

Prairie bush clover habitat includes sand/gravelly prairie. Sand and gravel type soils exist within the route. Aerial imagery does depict historic disturbance at the site from vehicle tracks, and much of the herbaceous vegetation appears to be mostly low-quality habitat grass, such as smooth brome. A field survey will occur to verify the habitat condition, and document whether quality native prairie and specific prairie bush clover flowering plants exist within the preferred route. The survey will follow USFWS survey methodology guidance.

Bald and Golden Eagles

At areas of propose tree removal, Bald and Golden Eagle surveys will be completed to ensure no existing eagle nests or eagles are adversely impacted by the project.

State Species

Loggerhead shrike, lark sparrow, Bell's vireo (State)

To ensure impacts to the non-game bird species are avoided, a qualified biologist will conduct surveys for loggerhead shrikes, lark sparrows, and Bell's vireos and their nests using approved survey methodologies from the DNR and/or USFWS. Loggerhead shrikes have been documented in grassland habitats in the vicinity of the proposed Project. Although upland prairies are avoided, this species, along with the lark sparrow and Bell's vireo may occur along the anticipated alignment.

G. Water Resources – Groundwater

The anticipated alignment is in areas classified as having moderate sensitivity to groundwater pollution. Travel times for surface contaminants to reach a drinking water aquifer may range from one week to multiple weeks. Spills or leaks of fuels or hazardous materials associated with construction or maintenance equipment are more likely to impact the groundwater due to these faster travel times. PFC will implement a Spill Prevention, Containment, and Countermeasures Plan to prevent spills and minimize impacts in the event of a spill.

H. Water Resources – Surface Waters and Wetlands

There are no mapped public waters or wetlands within the preferred route. The DNR's public waters inventory (PWI) indicates that there is one freshwater emergent seasonally flooded wetland located approximately 300 feet north of the route, but it will be avoided. PWI wetlands are depicted in Figure 7, with the land cover types. There may be wet ditches along and within the county highways ROW. However, these are proposed to be crossed via HDD, and the HDD stations will be outside of the low wet ditch areas. No surface waters or wetlands will be impacted.

I. Water Resources – Federal, State, and County Recreational Areas

No Federal, State, and County Recreational Areas Water Resources will be affected by the project.

ROUTE PERMIT APPLICATION

J. Air Quality

During the construction phase there would be intermittent and scattered exhaust emissions from construction equipment, both on-road and non-road. These types of emissions occur routinely in metropolitan areas and do not cause air quality problems. During excavation, trenching, and other earthmoving operations, there is a potential for windblown fugitive dust emissions. Such emissions can be effectively mitigated by watering exposed soils, especially unpaved driving surfaces, on an as-needed basis. There will be no significant impact on air quality during operation of the pipeline. Minor emissions will occur due to exhaust from vehicles used during occasional routine inspections and maintenance activities. An air quality permit is not required for the proposed Project.

K. Hazardous Wastes

A desktop review of listed sites located within 500 feet of the anticipated alignment was conducted using the MPCA's "What's in my neighborhood?" online database. No listings were identified in the search area that would likely impact construction or operation of the proposed Project.

Lands of Historical, Archaeological, and Cultural Significance

A Phase 1A Report will be completed to provide a general overview of the environmental and cultural contexts and includes 1) resources identified during the file search and map review; 2) precontact and historic site potential; 3) site types that may be encountered; and 4) survey recommendations. The purpose of the Phase 1A is to determine the location of previously recorded historic properties and surveys (archaeological surveys, archaeological sites, and architectural structures), and to assess the potential for the presence of yet unrecorded archaeological resources. The Phase 1A Study Area will focus on the preferred and alternative routes and includes a 1-mile buffer. The following provides a summary of potential impacts of the Project.

A. Precontact Site – Potential Impacts

A Phase 1A archaeological study will be completed prior to construction.

B. Historic Sites – Potential Impacts

Impacts to Historic Sites will not occur as a result of the project.

C. Architectural Property – Potential Impacts

Impacts to Architectural Property will not occur as a result of the project.

Economics

Economic benefits to the local economy will be realized during construction resulting from the modest labor workforce. These benefits include material expenditures, workforce lodging, fuel sales, grocery sales and restaurant expenditures. Demand for housing and public services from the non-local workers will be incremental and small. Additional local benefits include easement payments, permit fees, and property tax revenues. Construction will create temporary jobs for both local and non-local workers. Operation of the pipeline is not expected to employ any additional permanent staff.

Agricultural land will be temporarily impacted by the proposed Project. No organic farms will be crossed. Land along the right-of-way and construction workspace will not be able to be cultivated during construction. PFC will negotiate easements with affected landowners along the anticipated alignment to mitigate any temporary impacts on agricultural production. All agricultural land within the project is owned by one landowner. Following construction, agricultural land can resume cultivation along the right-of-way and no permanent impacts are expected. The draft Agricultural Mitigation Plan is included in **Exhibit D**. The proposed Project is not expected to have negative impacts on other portions of the local economy.

ROUTE PERMIT APPLICATION

Pipeline Cost and Accessibility

PFC estimates the total Project cost to be approximately \$1.6 million. Operation and maintenance costs for the Project will be nominal for several years, since the pipeline will be new and minimal vegetation maintenance will be required. The annual operating and maintenance cost for the Project is expected initially to be approximately \$60,000 per year. Pipeline access will be required for typical operation and maintenance activities, which will include pipeline patrols, cathodic protection reads, and location requests through Gopher State One-Call system. PFC will use existing roads to access the right-of-way during construction and operation of the pipeline.

Use of Existing Rights-of-Ways

Existing rights-of-way will be paralleled, but not actually used. The pipeline will be near but not within the existing road and pipeline ROW.

Mitigation of Environmental Effects

PFC will undertake measures to minimize and mitigate Project impacts. Right-of-way preparation, construction, cleanup, and restoration have been designed in accordance with the requirements outlined in Minnesota Rule 7852.3600. PFC believes that the proposed construction and operation methods, along with the regulatory oversight of the Commission through its Route Permit for the Project, as well as requirements of the local, state, and federal agencies listed in Table 10 of this application, will mitigate the effects of the proposed Project on the human and natural environments.

Cumulative Potential Effects of Other Pipeline Construction

PFC has designed the proposed Project to capture the benefit of renewable natural gas to incorporate as a beneficial use in the commercial market. The proposed Project has been designed for a maximum design capacity of 4680 Mcfd, and no future expansion of this capacity is planned. The pipeline will be constructed, and pressure tested for operation at the maximum design capacity. Except for the low pressure pipeline to be constructed by others from the landfill to the gas processing facility, PFC was unable to find any other pipeline work planned for the area within a mile of the Project. This project will ultimately have beneficial effects through the production of renewable natural gas from a landfill gas feedstock rather than the landfill gas being combusted in a flare. The project will not have significant cumulative effects.

Applicable Policies, Rules, and Regulations

A list of known federal, state, and local approvals for construction of the proposed Project is presented in Section 10 of this Application. PFC will work with regulatory agencies with permitting authority over the proposed Project and will satisfy permit requirements of those agencies. PFC anticipates that compliance with those permits will be a condition of any permit issued by the MPUC.

The City of Inver Grove Heights and Dakota County do not have any policies, rules, and regulations applicable to construction of natural gas pipelines.

ROUTE PERMIT APPLICATION

SECTION 8: Right-of-Way Protection and Restoration Measures (Minn. R. 7852.2800)

PFC has integrated right-of-way protection measures and impact mitigation strategies into the routing design phase of the proposed Project. As the Project moves forward, PFC will continue to work with applicable state agencies and landowners to minimize adverse impacts on the human and natural environment. BMPs be implemented to protect the right-of-way and minimize adverse impacts on the local community and the natural environment. These measures will include, but are not limited to, using low impact construction techniques (boring and/or HDD); installation of erosion and sediment controls; and restoring the right-of-way to pre-construction conditions to the extent practicable. Following the completion of construction, PFC will work closely with landowners and applicable agencies on clean-up and restoration of the right-of-way.

7852.2800 Subpart 1. Protection

During construction, necessary protection will be provided by limiting construction activities to the designated areas; marking avoidance areas with signs or lath and ribbon; utilizing approved access to the right-of-way; and following permit conditions. Consistent communication with affected stakeholders during construction, restoration, and operations and maintenance activities will be provided.

Construction times will be limited to the hours of 7 am to 5 pm, Monday – Saturday to mitigate adverse impacts on the human environment. Appropriate erosion control measures will be placed before excavation to ensure no sediment is transported to the local streams and other bodies of water. Access points to the ROW will be selected to minimize impacts on traffic along the local streets.

During operations, no impact should occur to either the human or natural environment. Annual maintenance will consist of a leak survey conducted on foot over the pipeline, and at longer intervals other non-invasive testing will be required to comply with the provisions of 49 C.F.R. Part 192 Subpart O.

Adverse impacts on soils will be minimized by implementing BMPs. Erosion control plans will be developed pursuant to the MPCA NPDES Construction Storm Water Discharge Permit and Minnesota Rule 7852.3600. Temporary and permanent erosion controls, including slope breakers, trench breakers, mulching, straw bales, and silt fence, will be installed as necessary to minimize soil erosion and sedimentation. Temporary measures will be properly maintained throughout construction, as necessary, until permanent measures (as described below) are established per the permit conditions. Track-out of soil onto public roads will be cleaned up to ensure the road surface is clear of soil. Following construction, application of seed, fertilizer, and mulch will commence in accordance with permit requirements and landowner agreements.

Finally, a Spill Prevention Control and Countermeasures Plan (SPCC Plan) will be developed and implemented during the Project. Specific requirements for reporting and responding to fuel spills and other accidental releases will be specified in the SPCC Plan.

7852.2800 Subpart 2. Restoration

Clean-up and restoration of the construction right-of-way will commence after the trench is backfilled, subject to weather and soil conditions. Construction related debris and surplus materials will be removed, with debris disposed of at a licensed waste management facility. The Project site impacted by construction will be returned as closely as possible to pre-construction conditions. Restoration will be done in accordance with permit requirements, landowner agreements, and Minnesota Rule 7852.3600 “Permit Conditions for Right-of-Way Preparation, Construction, Cleanup, and Restoration.” Operation and Maintenance (Minn. R. 7852.2900)

ROUTE PERMIT APPLICATION

SECTION 9: Operation and Maintenance (Minn. R. 7852.2900)

Operation of this pipeline will consist of an annual leak survey of the pipeline and an annual check of the level of cathodic protection on the pipeline. Pressure control and measurement of the throughput will be made upstream and downstream of the pipeline. The pipeline will be subject to annual records reviews by the MPUC and by PHMSA. The pipeline will also be registered with 811 and locates will be performed of the pipeline when requested by excavators working in the area of the pipeline. This pipeline will require that a representative of the pipeline company be present whenever any excavation is taking place that might cause the pipeline to be exposed.

At intervals specified in 49 C.F.R. Part 192 Subpart O and the referenced NACE and ANSI Standards, this pipeline will be tested to determine the continued effectiveness of the coating and cathodic protection and to check for other anomalies along the pipeline. If such anomalies are suspected, they may be excavated to determine any requirement for repair. The incidence of such investigative excavation will be low; the required testing interval is every 7 years.

ROUTE PERMIT APPLICATION

SECTION 10: List of Government Agencies and Permits (MN Rule 7852.3000)

Table 10 below identifies the federal, state and local permits and approvals that may be required for the Project.

Table 10: Required Permits and Approvals

Name of Agency	Title of Permit/Approval
Federal	
US Army Corps of Engineers	Section 404 – Clean Water Act (to be determined, but not anticipated)
State	
Department of Natural Resources	Water Appropriation (hydrostatic test water - if applicable from pumping 10,000 gallons per day or more, or 1 million gallons per year or more)
Minnesota Office of Pipeline Safety	Construction Monitoring and Testing
Minnesota Department of Transportation	Utility Crossing Permit
Minnesota Department of Agriculture	Review of the Agriculture Mitigation Plan
Minnesota Pollution Control Agency	National Pollutant Discharge System Construction Permit and Stormwater Pollution Prevention Plan
Public Utilities Commission	Route Permit/Partial Exemption
Local	
Minnesota Board of Water and Soil Resources /Local Government Unit	*Wetlands Conservation Act Permit (to be determined, but not anticipated)
Dakota County	Highway Crossing Permit
City of Inver Grove Heights	Water Appropriation Permit (to be determined - if water needed from a municipal water source)
Dakota County or City of Inver Grove Heights	Permit pertaining to an off-right-of-way yard use (if applicable)

*The Project may be exempt from developing a replacement plan under the Wetland Conservation Act under Minn. R. 8420.0420, Subp. 6, if it will not modify or alter less than one-half acre of wetlands and the impacts have been avoided to the extent possible. Should more than one-half acre of wetlands require modification or alteration because of the Project, it may be exempt from a replacement plan if notices are provided to the local government units with jurisdiction over the project prior to or concurrent with the application to the Corps of Engineers per the Federal Exemption under Minn. Stat. § 103G.2241, subd. 3 and Minn. R. 8420.0420, Subp. 4. 40 State Reg. 58 (July 20, 2015).

ROUTE PERMIT APPLICATION

SECTION 11: References

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ROUTE PERMIT APPLICATION

FIGURES

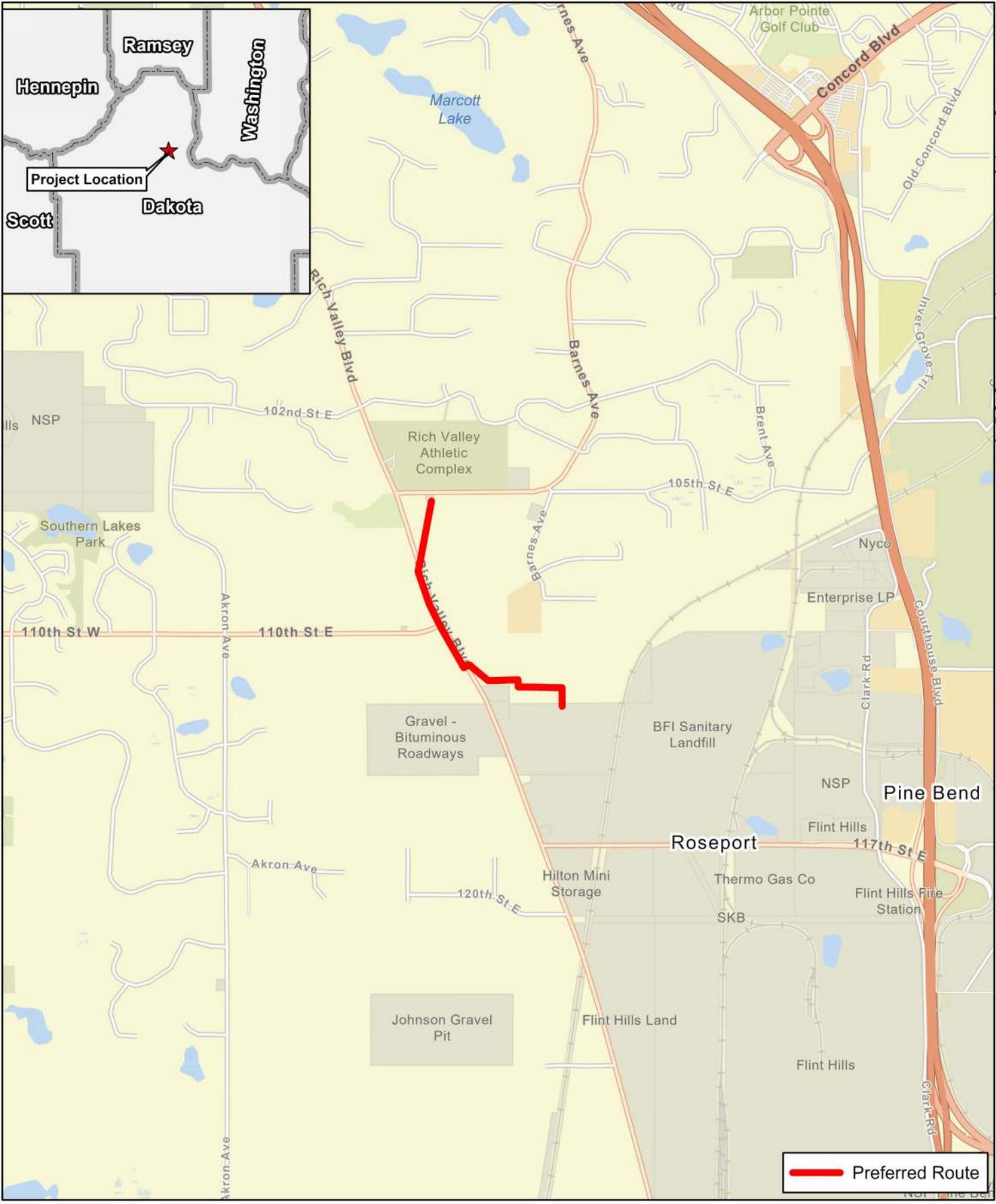
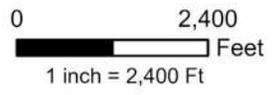


Figure 1 - Project Area Overview

Pine Bend Pipeline
PFC

Docket No. IP-7042/PPL-20-872



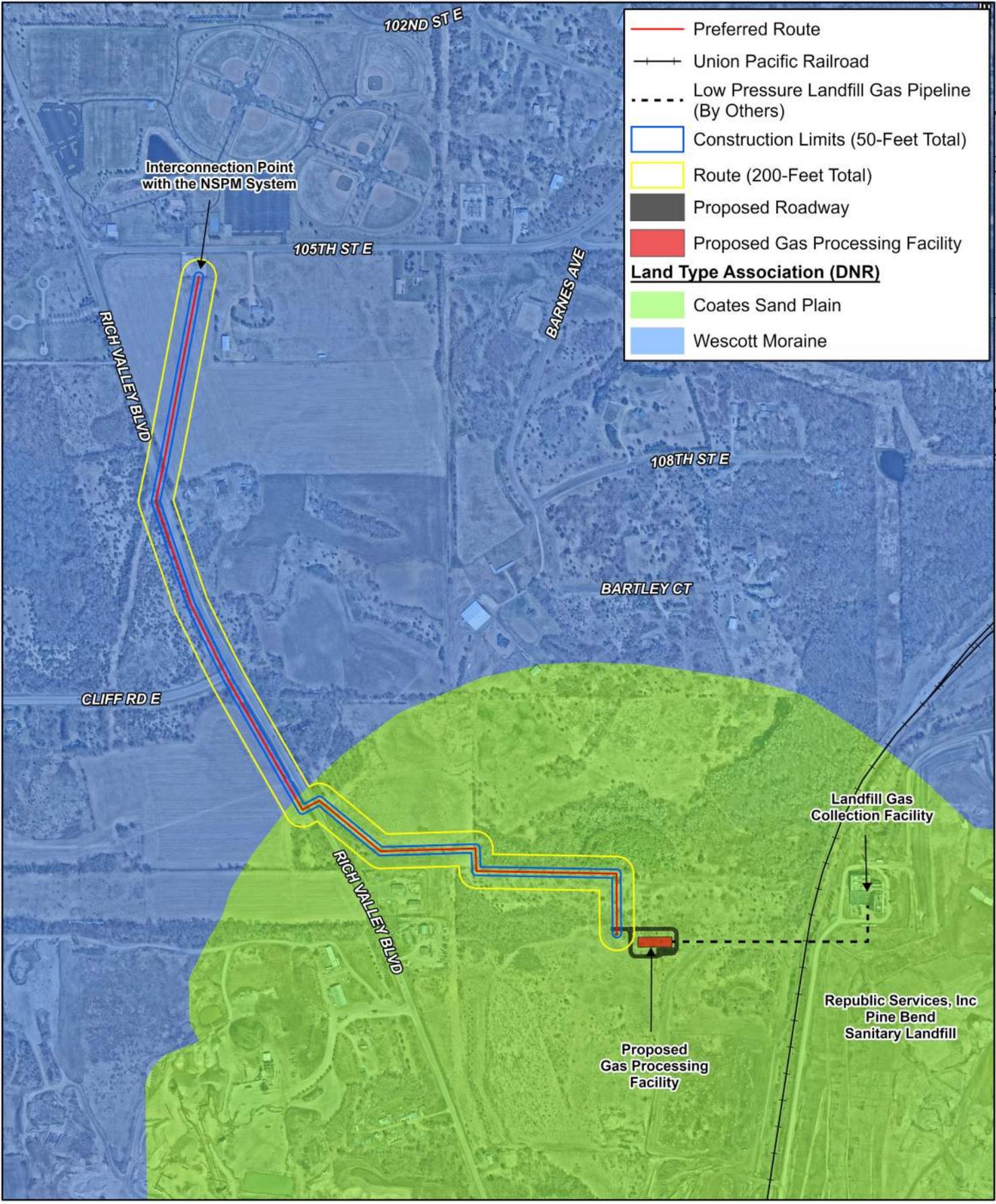


Figure 2 - Land Type Associations

Pine Bend Pipeline
PFC

Docket No. IP-7042/PPL-20-872



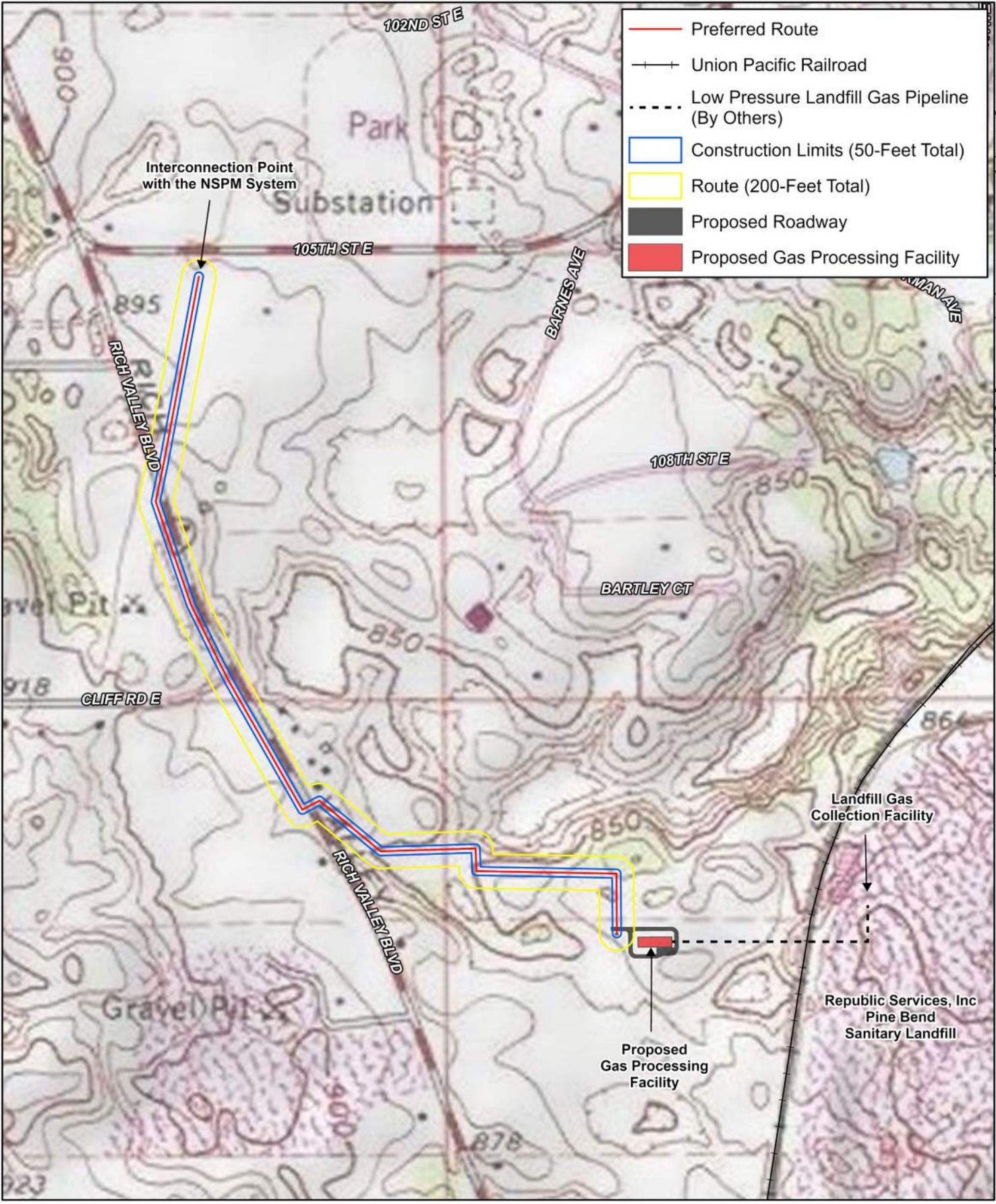
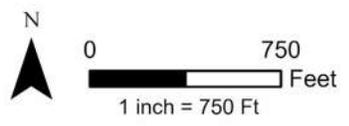


Figure 3 - Topography

Pine Bend Pipeline
PFC

Docket No. IP-7042/PPL-20-872



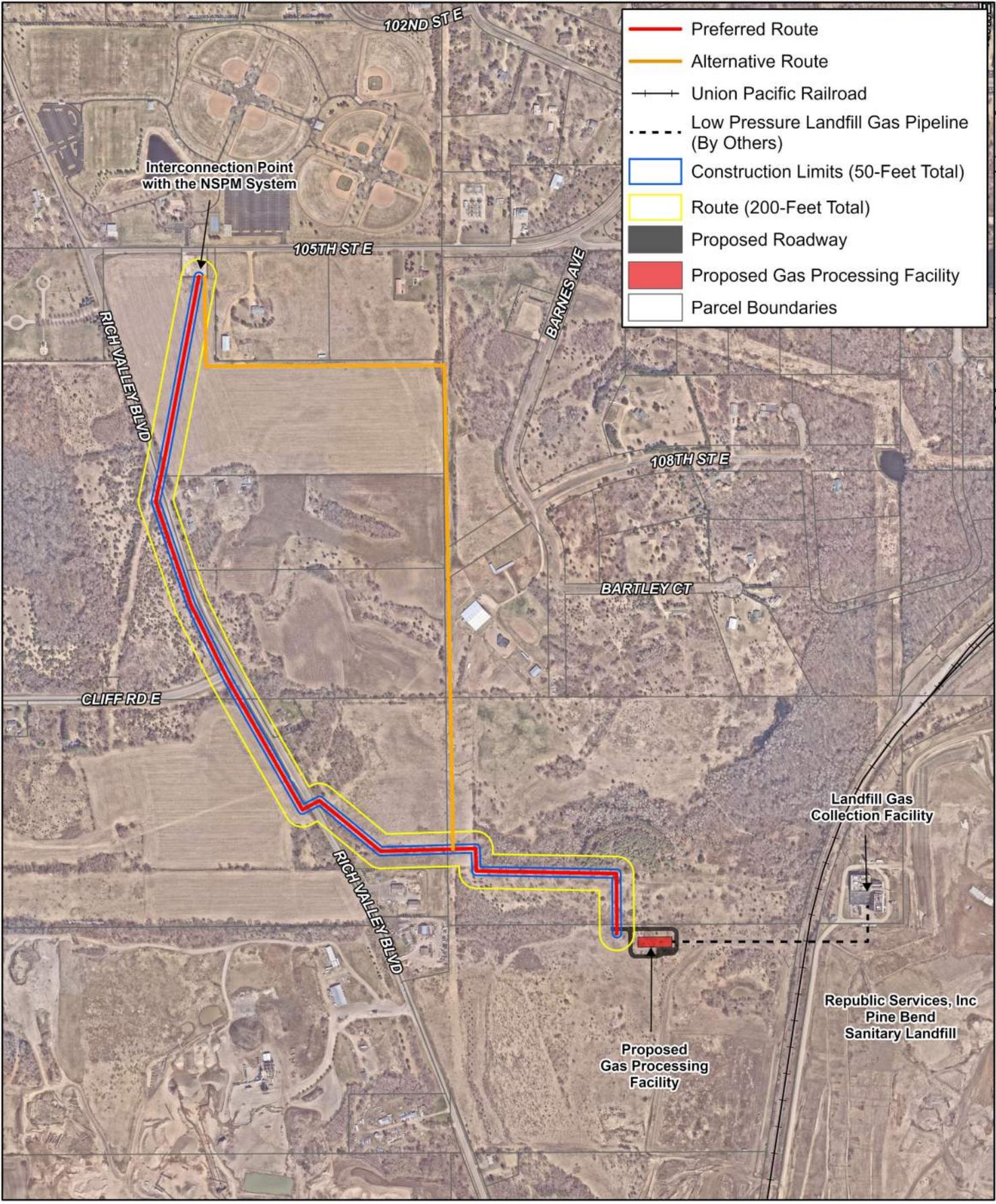
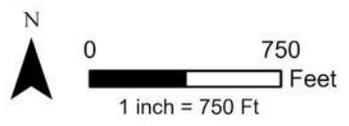


Figure 4 - Route Alternatives

Pine Bend Pipeline
PFC

Docket No. IP-7042/PPL-20-872



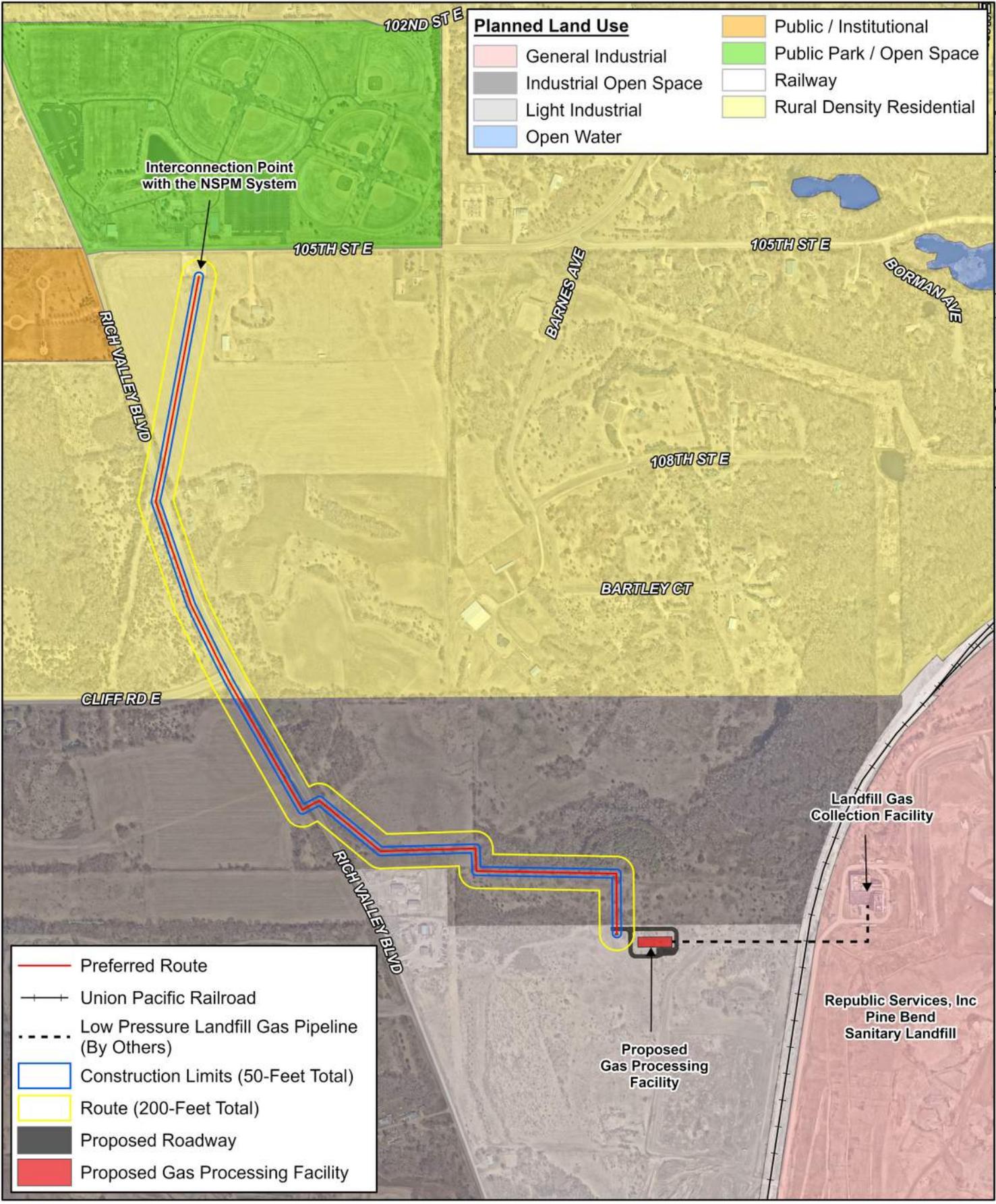
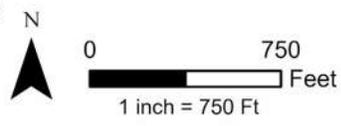


Figure 5 - Dakota County Planned Land Use

Pine Bend Pipeline
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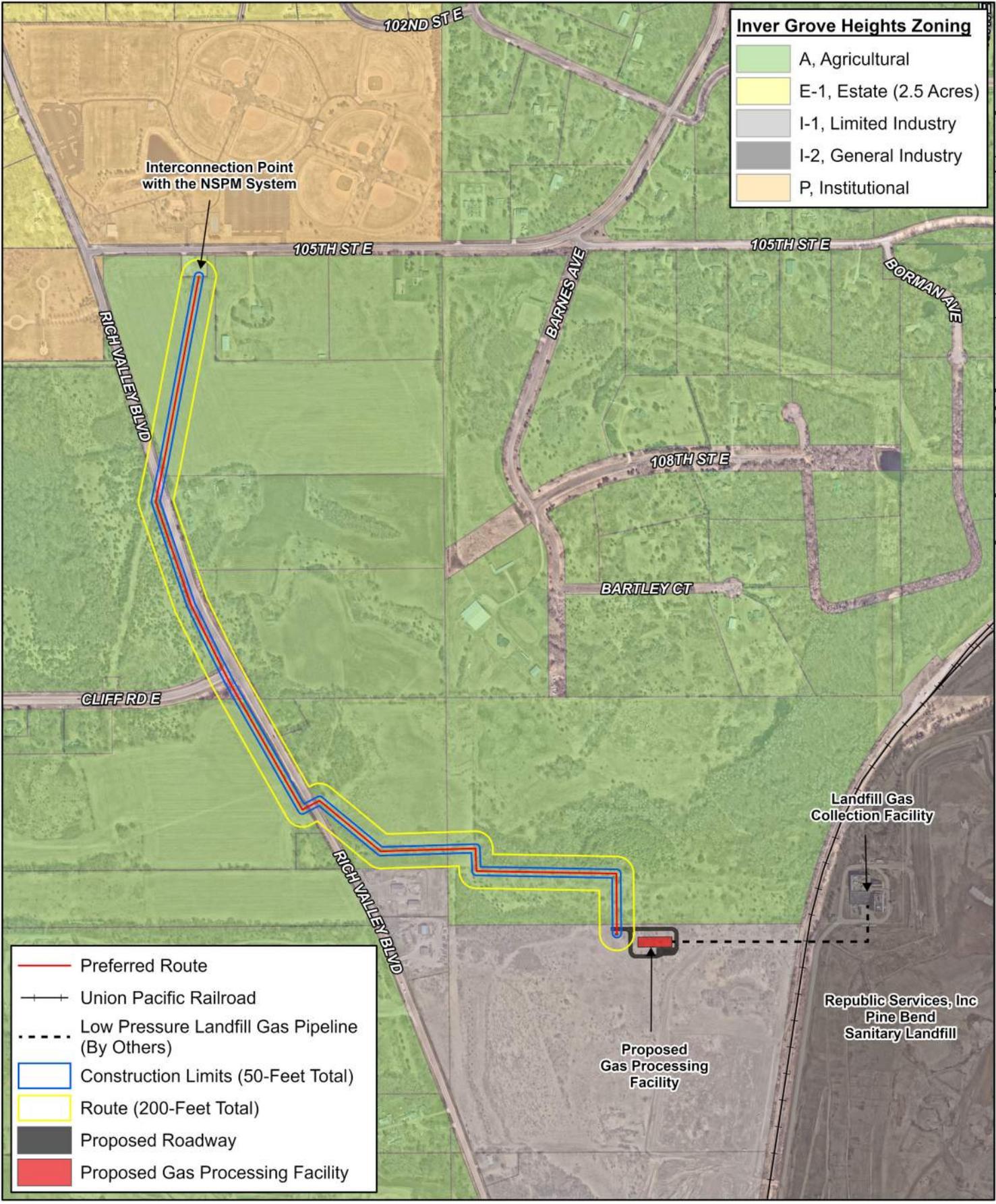
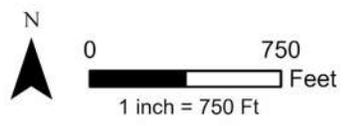


Figure 6 - Inver Grove Heights Zoning



Pine Bend Pipeline
PFC
Docket No. IP-7042/PPL-20-872



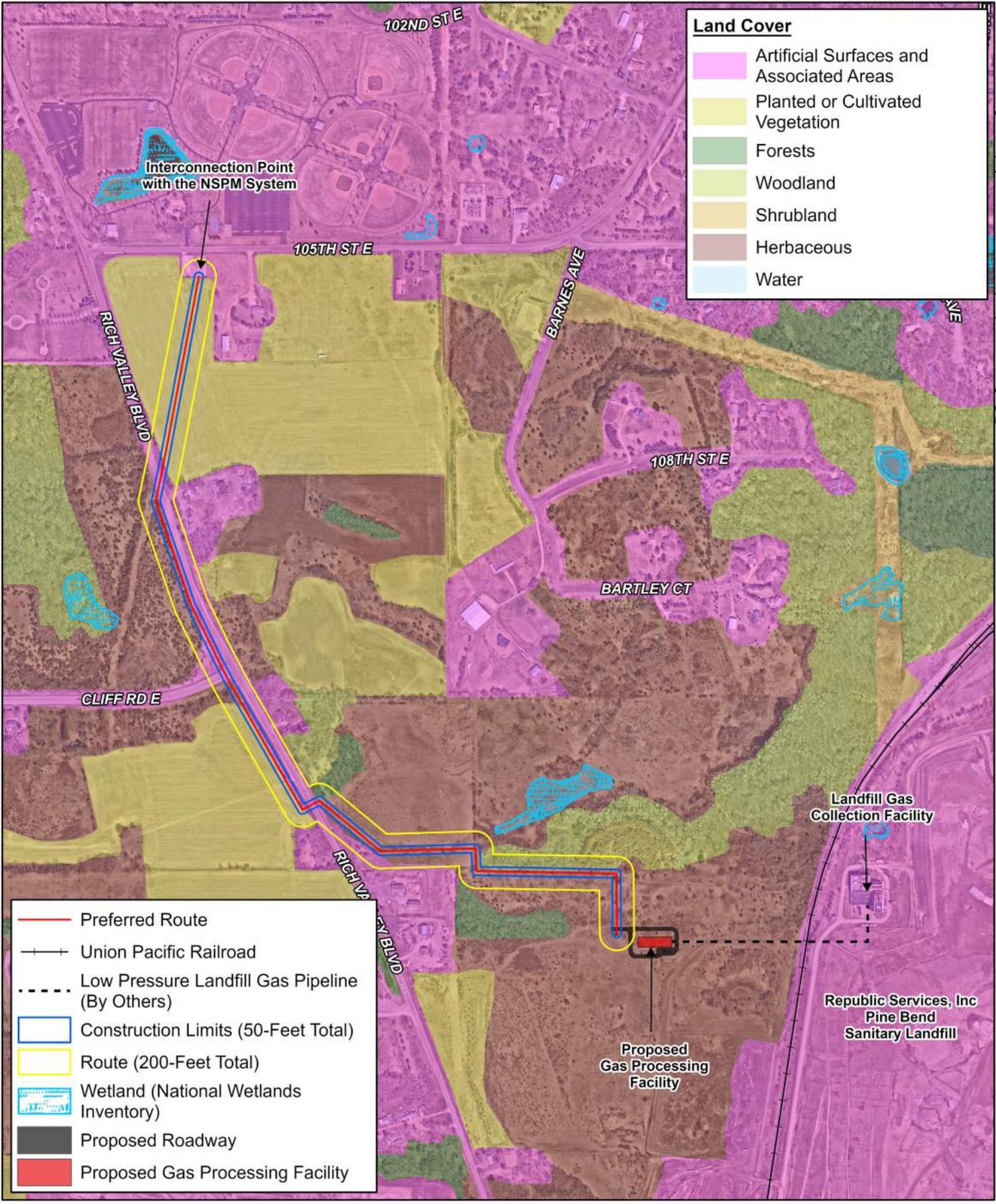
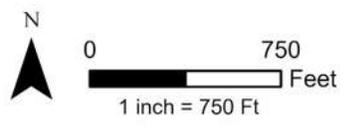


Figure 7 - Land Cover

Pine Bend Pipeline
PFC

Docket No. IP-7042/PPL-20-872



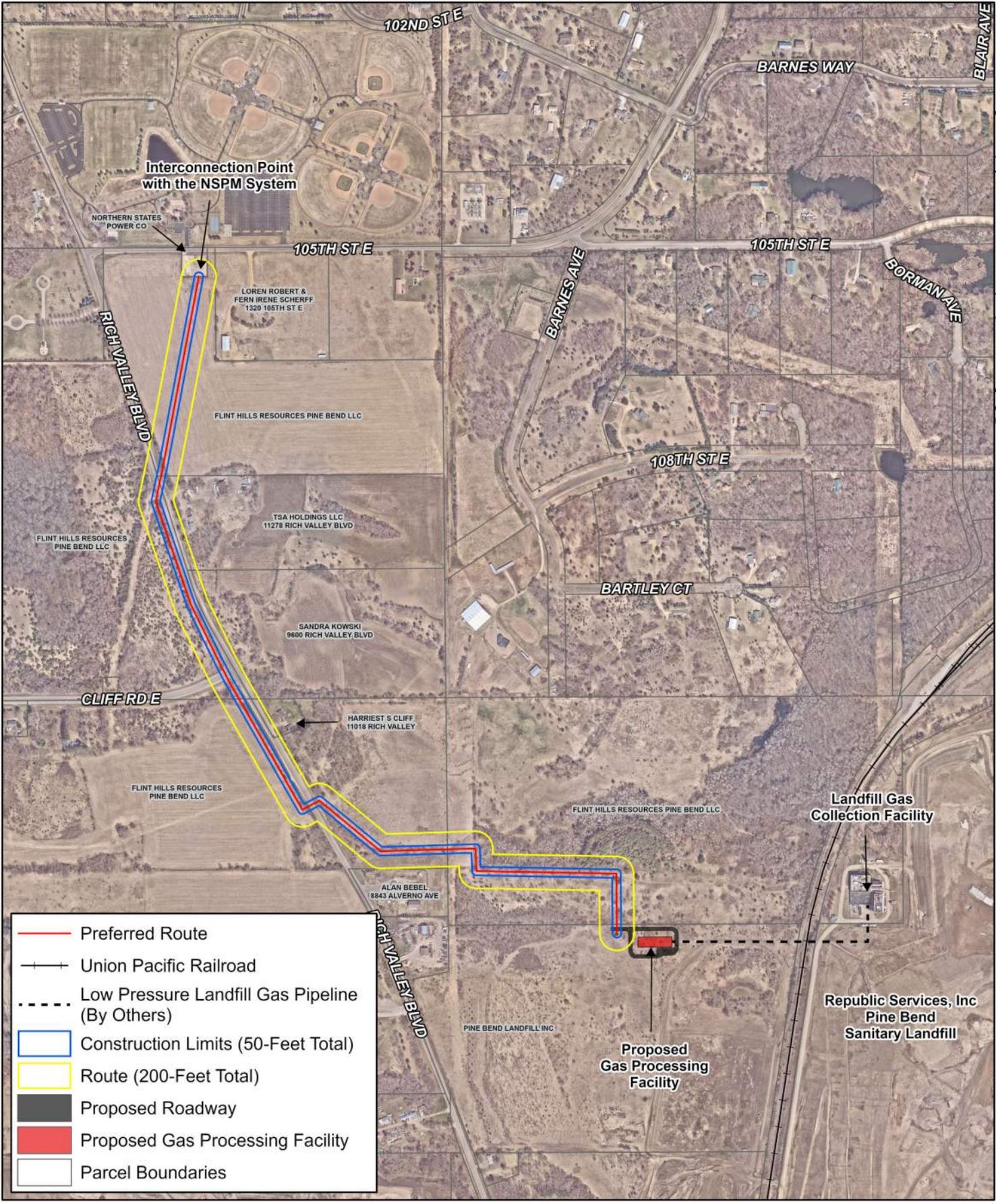
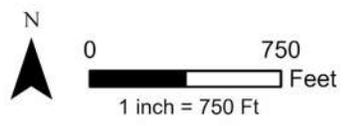


Figure 8 - Human Settlements

Pine Bend Pipeline
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Docket No. IP-7042/PPL-20-872



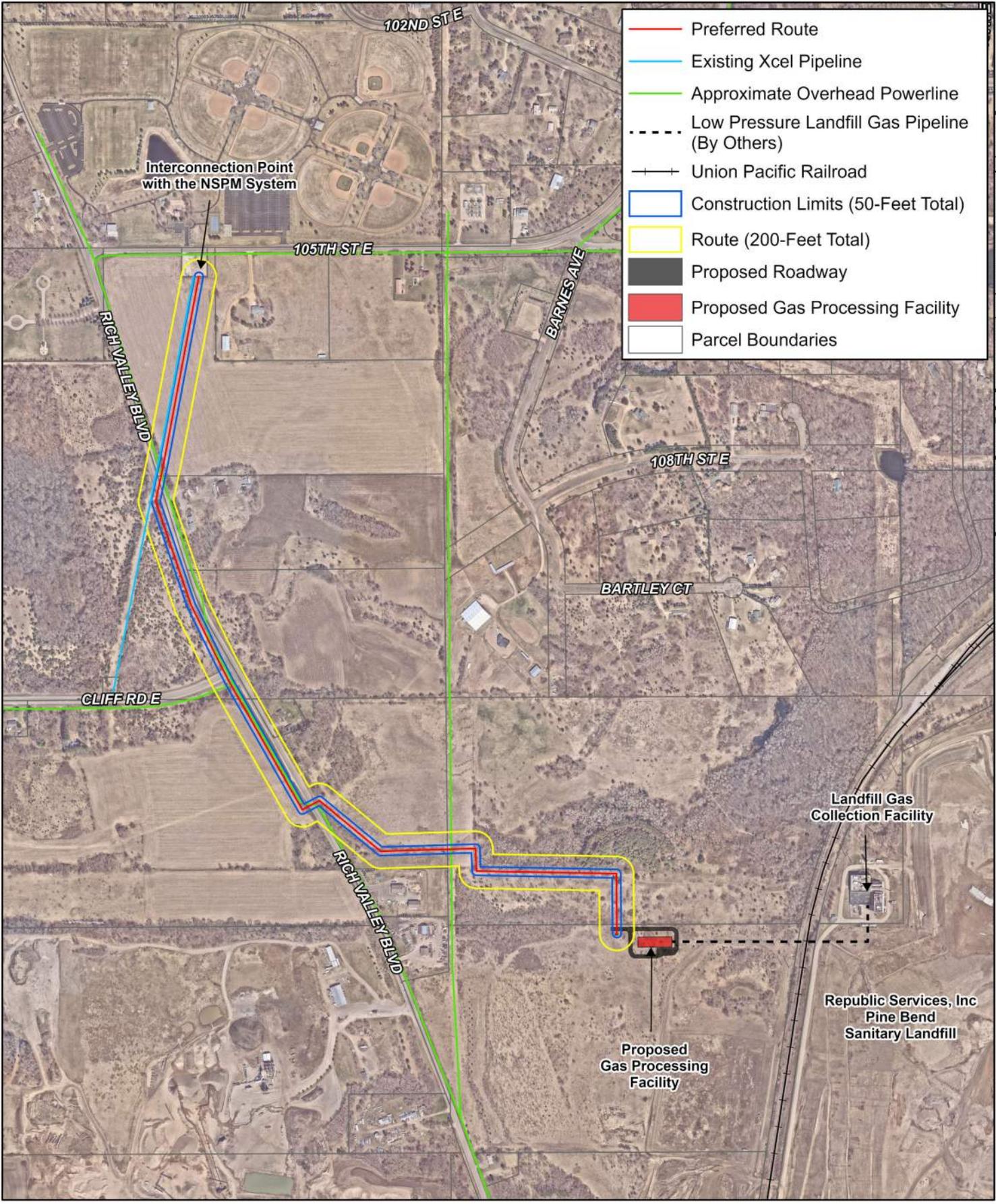
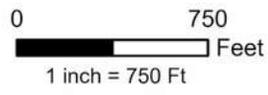


Figure 9 - Existing Right-Of-Way Paralleling

Pine Bend Pipeline
PFC

Docket No. IP-7042/PPL-20-872



ROUTE PERMIT APPLICATION

EXHIBIT A Affidavit

Petroleum Fuels Company
Pine Bend Pipeline Project

Route Permit Application
Docket No. IP-7042/PPL-20-872

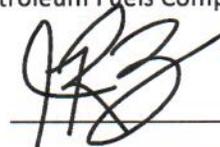
STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION

In the Matter of the Application of)
Petroleum Fuels Company) Docket No. IP-7042/PPL-20-872
For a Natural Gas Pipeline)
Route Permit)

AFFIDAVIT OF J. REID BUMGARNER

I, J. Reid Bumgarner, being duly sworn, do hereby state that I am the President of Petroleum Fuels Company, and that I am authorized to act on behalf of Petroleum Fuels Company, which is the owner of the proposed pipeline, and that all necessary authorizations have been duly granted for me to sign and pursue this application for a route permit. Further, on behalf of Petroleum Fuels Company, I hereby authorize the following people/entities to act on behalf of Petroleum Fuels Company in its application for a route permit:

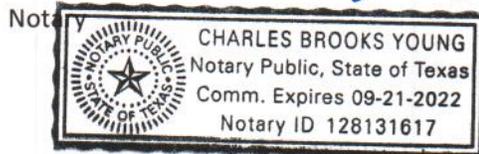
Brian Meloy to act as outside legal counsel for Petroleum Fuels Company; and
WSB Engineering to act as engineering consultant to Petroleum Fuels Company.



J. Reid Bumgarner

Subscribed and sworn to before me
this 29TH day of December 2020.





ROUTE PERMIT APPLICATION

Exhibit B Project Map

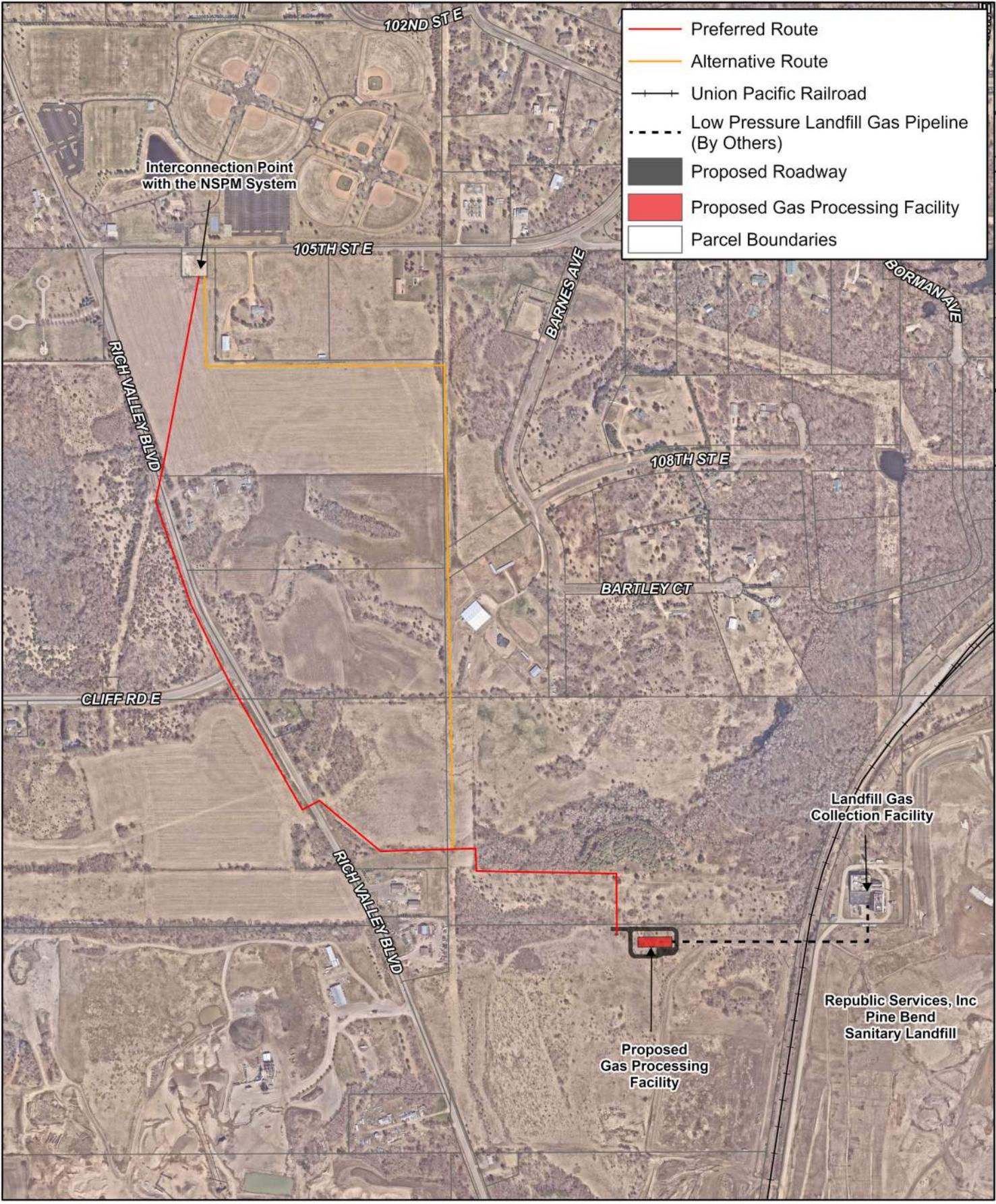
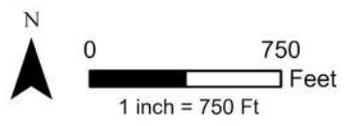


Exhibit B - Project Map

Pine Bend Pipeline
PFC

Docket No. IP-7042/PPL-20-872



ROUTE PERMIT APPLICATION

Exhibit C

Material Safety Data Sheet for Natural Gas

Exhibit C
Safety Data Sheet
Natural Gas

Section 1 - Product and Company Identification

Product Name: Natural Gas	
Recommended Use: Fuel	Restrictions On Use: None known
Manufacturer's Name: FORTISTAR Methane Group	Emergency Telephone Number: 281-635-2120
Address: 1405 Oceanside Lane League City, TX 77573	Telephone Number for Information: 281-635-2120

Section 2 - Hazardous Ingredients

Physical Hazards:

Flammable Gas Category 1

Gases Under Pressure Compressed Gas
Category 1

Health Hazards:

Simple Asphyxiant

Label Elements:

Danger!

**Hazard Phrases:**

Extremely flammable gas.

Contains gas under pressure; may explode if heated. May displace oxygen and cause rapid suffocation.

Precautionary Phrases:

Keep away from unintended heat, sparks, open flames and hot surfaces.

No smoking. Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

Eliminate all ignition sources if safe to do so. Protect from sunlight.

Store in a well-ventilated place.

Section 3 - Composition/Information on Ingredients

<u>Chemical Component</u>	<u>CAS #</u>	<u>Percentage by Volume</u>
Methane	74-82-8	80-99%
Ethane	74-84-0	0.1-12%
Propane	74-98-6	0-5%
n-Butane	106-97-8	0-1.5%
Carbon Dioxide	124-38-9	0-3%

Note: The listed concentrations are approximate ranges. Odorant, at trace amounts, may be comprised of some or all of the following components and/or blends thereof: Tetrahydrothiophene, tertiary-Butyl Mercaptan and/or other mercaptans.

Section 4 - First Aid Measures

Inhalation: If respiratory symptoms occur, remove to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult have qualified personnel administer oxygen. Get medical attention. **Eye Contact:** If irritation or redness develops from exposure, flush eyes with clean water. Seek medical attention if symptoms persist. **Skin Contact:** Not known to be a skin irritant. Skin absorption is unlikely. Good practice to wash any chemical from skin. **Ingestion:** This product is a gas. Under normal atmospheric conditions, ingestion is unlikely.

Section 5 - Fire-Fighting Measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, or halon. Water may be ineffective on flames but useful for other purposes; including cooling heated surfaces or preventing the creation of static electricity.

Specific Hazards Arising from the Chemical:

Gas is extremely flammable and may readily be ignited by static charge, sparks and flames. A hazard from re-ignition and explosion exists if the flame is extinguished without stopping flow of gas and/or cooling surroundings and eliminating ignition source. Gas may travel a considerable distance to a source of ignition and flash back. Combustion may produce carbon dioxide and water with trace amounts of carbon monoxide, nitrogen oxides, sulfur oxides, aldehydes and soot.

Protection of Firefighters:

For fires involving this material, do not enter any enclosed or confined space without proper protective equipment, including, but not limited to, self-contained breathing apparatus. Use approved gas detectors in confined spaces.

Section 6 - Fire and Explosion Hazard Data

Personal Precautions, Protective Equipment, and Emergency Procedures: Keep away from flames and chemical oxidants. Eliminate all sources of ignition and in emergency ensure gas supply is shut off. Do not breathe gas. Use non-sparking tools and explosion-proof electrical equipment when working around gas. Ventilate area and allow to evaporate. Stay upwind and away from any accidental releases. Isolate immediate hazardous area and keep unauthorized personnel out. Appropriate protective equipment should be worn as conditions warrant. Before entering storage tanks and confined areas check the atmosphere for oxygen content and flammability.

Environmental hazards: Report spill as required by local and federal regulations.

Methods and materials for containment and cleaning up: Notify local authorities in accordance with all applicable regulations.

Section 7 - Handling and Storage

Precautions for safe handling: Work involving gas should be done by qualified professionals. Use non-sparking tools and explosion-proof electrical equipment. Ground container and transfer equipment to eliminate static electric sparks. Before entering storage tanks and confined areas, check the atmosphere for oxygen content and flammability. Purging of gas lines, blow-downs and other planned releases of natural gas should only be performed by qualified gas professionals. Such gas release operations should only be performed in well-ventilated areas or by safely venting the contents of gas lines and equipment to the outside atmosphere away from people, animals, structures and sources of ignition. All possible ignition sources should be extinguished before and during such operations. Do not release the contents of a gas line into a confined space.

Conditions for safe storage, including any incompatibilities: Store in cool, dry, well-ventilated areas, away from sources of heat, ignition and direct sunlight. Do not allow temperatures in cylinder storage area to exceed 52°C (125°F). Isolate from oxidizers such as oxygen, chlorine, or fluorine. Use a check valve or trap in the discharge line to prevent hazardous backflow. Post “No Smoking or Open Flame” signs in storage and use areas. Protect tanks that are stored in the open against extremes of weather and from ground dampness to prevent rusting. Empty containers retain product residues. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. Outdoor or detached storage is preferred.

Odor Fade: Under certain conditions, the distinctive odorant added to natural gas may be diminished or lost so that it cannot be smelled. Gas detection equipment should be used, particularly when working in confined areas. Do not rely on sense of smell alone to determine if there is a gas leak or if gas is otherwise present.

Section 8: Exposure Controls/Personal Protection

Chemical Component	Exposure Limit	NIOSH IDLH
Methane	None Established	None Established
Ethane	None Established	None Established
Propane	1000 ppm TWA OSHA PEL 1000 ppm TWA Cal/OSHA PEL	2100 ppm
n-Butane	800 ppm TWA OSHA PEL 800 ppm TWA Cal/OSHA PEL	None Established
Carbon Dioxide	5000 ppm TWA OSHA PEL 5000 ppm TWA Cal/OSHA PEL 5000 ppm TWA, 30,000 ppm STEL ACGIH TLV	40,000 ppm

Engineering Controls: If the recommended exposure limit is exceeded increased mechanical, non-sparking ventilation such as local exhaust may be required.

Respiratory Protection: If exposure limits are exceeded or if oxygen levels are unknown or deficient, use a NIOSH approved supplied air respirator. Selection of respiratory protection depends on the contaminant type, form and concentration. Select in accordance with OSHA 29 CFR 1910.134/CCR, Title 8, Section 5144, GISO and good Industrial Hygiene practice.

Eye/Face Protection: Wear safety glasses when handling cylinders or when exposure to high pressure gas.

Skin Protection: Work gloves are recommended for general usage. Wear flame retardant clothing in potentially flammable areas.

Other: Wear protective clothing if needed to avoid prolonged skin contact. Suitable washing facilities should be available in the work area. Explosion proof equipment should be used.

Section 9 - Physical and Chemical Properties

Appearance: Colorless gas or liquid.	Physical State: Vapor or liquid.
Color: None.	Odor: Often odorless in its natural state. A distinctive warning odorant is added to give it the characteristic unpleasant odor often associated with natural gas. However, the gas odor may not be detectable by smell because of an impaired sense of smell, when
Odor Threshold: Not available.	pH: Not applicable.
Freezing Point: Not applicable.	Boiling Point: -259° F/-162°C (methane).
Flash Point: Flammable gas.	Evaporation Rate: Not applicable.
Flammability (solid, gas): Gaseous state.	Upper Flammability Limit: 15% in volume in
Lower Flammability Limit (also referred to as LEL): 4.5% in volume in air.	Vapor Pressure: Not applicable.
Vapor Density (Air = 1): 0.57 - 0.62.	Relative Density: 0.57-0.62.
Solubility (water): 3.5 mL/100 mL water at 62.6 °F/17°C.	Partition Coefficient (n-octanol/water): Not applicable.
Auto-ignition Temperature: 1170°F /632°C minimum ignition temp, in air for methane.	Percent Volatile, wt. %: 100 %.

Section 10 - Stability and Reactivity

Reactivity: Not expected to be reactive.

Chemical Stability: Stable.

Conditions to Avoid: Heat, sparks flames and all sources of ignition.

Possibility of Hazardous Reactions: Heat will increase the pressure of gas in cylinders and may cause an explosion.

Incompatible Material: Strong oxidizing agents including, chlorine, chlorine dioxide, bromine pentafluoride, nitrogen trifluoride, liquid oxygen and oxygen difluoride.

Hazardous Decomposition Products: Combustion may produce carbon dioxide and water with trace amounts of carbon monoxide, nitrogen oxides, sulfur oxides, hydrocarbons, aldehydes, and soot.

Section 11 - Toxicology Information

Inhalation: Simple asphyxiant. At high concentrations, inhalation can cause symptoms of oxygen deprivation (asphyxiation), which includes shortness of breath, drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting, which are reversible when exposure ceases. Continued exposure, however, can lead to hypoxia (inadequate oxygen), unconsciousness and death. Ethane and propane have been shown to cause cardiac sensitization in some studies in laboratory animals. When gas is incompletely combusted, hazardous by-products can be produced such as carbon monoxide, which can cause carbon monoxide poisoning), and other potentially harmful substances.

Eye Irritation: Not expected to cause eye irritation.

Skin Irritation: Not expected to cause skin irritation.

Sensitization: None of the components are skin or respiratory sensitizers.

Chronic Effects: None known.

Carcinogenicity: None of the components listed in Section 3 are regulated as a carcinogen by OSHA, IARC or NTP.

Acute Toxicity Values:

Methane: Inhalation mouse LC50 539,600 ppm/2 hr. Ethane: Inhalation mouse LC50 520,400 ppm/2 hr.

Propane: Inhalation mouse LC50 520,400 ppm/2 hr. Carbon Dioxide: No toxicity data available.

Nitrogen: No toxicity data available.

Section 12 - Ecological Information

Ecotoxicity:

Methane: 96 hr LC50 fish 27.98 mg/L (estimate). Ethane: 96 hr LC50 fish 27.98 mg/L (estimate). Propane: 96 hr LC50 fish 27.98 mg/L (estimate).

Carbon Dioxide: 96 hr LC50 *Oncorhynchus mykiss* 35 mg/L. Nitrogen: No data available.

Persistence and Degradability: The product is easily biodegradable.

Bioaccumulation Potential: The product is not bioaccumulating.

Mobility in Environment: This is a volatile substance, which may spread in the atmosphere.

Other Adverse Effects: Natural gas is expected to readily evaporate and not cause adverse effects on the aquatic environment.

Section 13 - Disposal Considerations

Disposal: Recycle container. Dispose in accordance with all local, state and federal regulations.

Section 14: Transportation Information

	UN Number	Proper shipping name	Hazard Class	Packing Group	Environmental Hazard
DOT	UN1971	Natural Gas, Compressed	2.1	N/A	No

Transport in bulk (according to Annex II of MARPOL and the IBC Code): Not applicable
73/78 a Special precautions: None known.

Section 15: Regulatory Information

CERCLA Hazardous Substances (Section 103)/RQ: This product is not subject to CERCLA reporting requirements as it is sold. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

EPA SARA 311 Hazard Classification: Acute Health, Fire Hazard, Pressure Hazard.

SARA 313: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): None.

California Safe Drinking Water and toxic Enforcement Act of 1986 (Proposition 65): This product may contain a material or materials which is/are known by the State of California to cause cancer, birth defects or other reproductive harm.

US EPA Toxic Substances Control Act: All of the components of this product are listed on the TSCA inventory.

Section 16: Other Information

SDS Revision History: First Edition

Date of preparation: December 2020.

Date of last revision: December 2020.

Disclaimer: *Natural gas is obtained from a number of sources and composed of a mixture of chemical compounds which can vary depending on the source of the gas. The information contained in this document was compiled from sources believed to be reliable. Though the information contained herein is believed to be accurate as of the date this Safety Data Sheet was created, it may be incomplete or otherwise incorrect. The information applies only to the specific material listed and may not be valid for this material if it is used in combination with any other material or is not used as intended. It is the user's responsibility to satisfy himself/herself/itself as to the suitability and completeness of this information for his/her/its own particular use, and for his/her/its safety and the safety of the public, the environment and workers. This document is not intended to convey legal advice. Users should consult all applicable federal, state and local statutes, codes, ordinances, rules, regulations and standards relative to the use, storage, transportation and hazards of natural gas. The information contained in this document is provided without warranty, express or implied. If errors in the information provided herein are discovered, please report them promptly to FORTISTAR Methane Group*

ROUTE PERMIT APPLICATION

Exhibit D

Draft Agricultural Mitigation Plan



EXHIBIT D AGRICULTURAL MITIGATION PLAN

PINE BEND PIPELINE

INVER GROVE HEIGHTS, DAKOTA COUNTY, MN

DECEMBER 18, 2020

Prepared for:
Petroleum Fuels Company
6750 West Loop South
Suite 748
Bellaire, TX 77401

Docket No. IP-7042/PPL-20-872
WSB PROJECT NO. 016962-000



AGRICULTURAL MITIGATION PLAN

**EXHIBIT D
DRAFT AGRICULTURAL MITIGATION PLAN
CITY OF INVER GROVE HEIGHTS, MN**

**FOR:
PETROLEUM FUELS COMPANY**

DECEMBER 18, 2020

Prepared By:



AGRICULTURAL MITIGATION PLAN

TABLE OF CONTENTS

1.	Purpose and Applicability	1
2.	General Provisions	1
3.	Mitigation Measures	2
3.1	Right-of-Way Width	2
3.2	Pipeline Depth Cover	3
3.3	Winter Construction.....	3
3.4	Temporary Erosion and Sediment Control.....	4
3.5	Topsoil Stripping, Trenching, Soil Storage, and Replacement	4
3.6	Repair of Damaged and Adversely Affected Tile	6
3.7	Agricultural Drainage Ditches.....	7
3.8	Rock Removal	7
3.9	Removal of Construction Debris	8
3.10	Compaction, Rutting, and Soil Restoration	8
3.11	Fertilization and Liming	8
3.12	Land Leveling	9
3.13	Prevention of Soil Erosion.....	9
3.14	Repair of Damaged Soil Conservation Practices.....	9
3.15	Interference with Irrigation Systems.....	9
3.16	Ingress and Egress	9
3.17	Temporary Roads.....	9
3.18	Weed Control	10
3.19	Pumping of Water from Open Trenches	10
3.20	Construction in Wet Conditions.....	10
3.21	Procedures for Determining Construction-Related Damages.....	10
3.22	Advance Notice of Access to Private Property	11
3.23	Indemnification obligations.....	11
3.24	Tile Repair Following Pipeline Installation	11

AGRICULTURAL MITIGATION PLAN

DEFINITIONS

Agricultural Land: Land that is actively managed for agricultural purposes, including: cropland, hayland, or pasture; silvicultural activities (i.e., tree farms); and land in government set-aside programs such as Conservation Reserve Program and Conservation Reserve Enhancement Program. Agricultural Land may also include land that is otherwise fallow but would likely be cultivated within 5 years of Project completion.

Agricultural Monitor: On-site third-party monitor retained and funded by PFC, but providing direct reports to the Minnesota Department of Agriculture and/or Trade, and Consumer Protection and responsible for auditing PFC's compliance with provisions of this Plan.

ATWS: Additional Temporary Workspace.

BMP: Best Management Practices

CFR: Code of Federal Regulations

Commission: Minnesota Public Utilities Commission

Cropland: Land actively managed for growing row crops, small grains, or hay.

Easement: The agreement(s) and/or interest in privately owned Agricultural Land held by PFC by virtue of which it has the right to construct and operate the Project together with such other rights and obligations as may be set forth in such agreement.

Environmental Inspector: On-site inspector retained by PFC to verify compliance with requirements of this Plan and other environmental requirements during construction of the Project.

Final Cleanup: Pipeline construction activity that occurs after backfill but before restoration of fences and required reseeding. Final Cleanup activities include replacing Topsoil, removal of construction debris, removal of excess rock, decompaction of soil as required, final grading, and installation of permanent erosion control structures.

Landowner: Person(s) holding legal title to Agricultural Land on the Project route from whom PFC is seeking, or has obtained, a temporary or permanent Easement. The term Landowner shall include any person(s) authorized in writing by the actual Landowner to make decisions regarding the mitigation or restoration of agricultural impacts to such Landowner's property.

MDA: Minnesota Department of Agriculture

Non-Agricultural Land: Any land that is not Agricultural Land as defined above.

Person: An individual or entity, including any partnership, corporation, association, joint stock company, trust, joint venture, limited liability company, unincorporated organization, or governmental entity (or any department, agency, or political subdivision thereof).

PFC: Petroleum Fuels Corporation

Plan: Agricultural Mitigation Plan

Planned Tile: Locations where the proposed Tile installation is made known in writing to PFC by the Landowner either: 1) within 60 days after the signing of an Easement; or 2) before the issuance of a Route Permit to PFC; whichever is sooner.

Right-of-way: The land included in permanent and temporary Easements that PFC possess for the purpose of constructing and operating the Project.

AGRICULTURAL MITIGATION PLAN

Route Permit: Route permit issued by the Commission.

Spoil Storage Side: Non-working side of the construction Right-of-way where ditch spoil and temporary Topsoil are stored (as needed).

Tenant: Any person, other than the Landowner, lawfully residing on or in possession or control of the land that makes up the right-of-way as defined in this Plan.

Tile: Subsurface drainage systems and their aboveground appurtenances.

Topsoil: The uppermost horizon (layer) of the soil, typically with the darkest color and highest content of organic matter and nutrients.

Trench Crown: The placement of subsoil and Topsoil in the trench to a finished elevation somewhat above the surrounding ground surface to account for post-construction settling of soil returned to the trench.

TWS: Temporary Workspace

USC: United States Code

USDA: United States Department of Agriculture USDOT United States Department of Transportation

AGRICULTURAL MITIGATION PLAN

1. Purpose and Applicability

This Agricultural Mitigation Plan (Plan) was developed by Petroleum Fuels Company (PFC) and is based on a recent agricultural mitigation plan template provided by the Minnesota Department of Agriculture (MDA). PFC has applied for a Pipeline Route Permit (PRP) from the Minnesota Public Utilities Commission (Commission) for the Project and has included this Plan as supplemental information supporting the application. Through the Commission public notice and review processes associated with the applications, other agencies (including the MDA), local authorities, Landowners, Tenants, and other stakeholders are able to review and provide comments on the Plan. This Plan will be incorporated by reference into the Route Permit issued by the Commission for the Project. Once finalized, this Plan may also be incorporated by reference into other federal, state, and local permits issued for the Project. The objective of the Plan is to identify measures that PFC will implement to avoid, mitigate, or provide compensation for negative agricultural impacts that may result from pipeline construction. The construction standards described in this document apply only to construction activities occurring partially or wholly on privately owned Agricultural Land.

2. General Provisions

All mitigation measures are subject to change by Landowners, provided such changes are negotiated in advance of construction and acceptable to PFC. If any provision of this Plan is held to be unenforceable, no other provision will be affected by that holding, and the remainder of the Plan will be interpreted as if it did not contain the unenforceable provision. PFC will consider any federal, state, and local permit, including a Route Permit, issued for the Project to be the controlling authority. To the extent a mitigation measure contemplated by this Plan is determined to be unenforceable in the future due to requirements of other permits issued for the Project, PFC will inform the MDA and the regulatory authority that issued the permit that made a mitigation measure unenforceable of the conflict and will develop reasonable alternative measures. PFC will implement the mitigation measures and Best Management Practices (BMPs) described in this Plan to the extent they do not conflict with the requirements of federal and state rules and regulations, and permits and approvals obtained by PFC. Certain provisions of this Plan require PFC to consult and/or reach agreement with the Landowner of a property. PFC will engage in a good faith effort to secure the agreement. Tenants will not be consulted except where a Landowner has designated in writing that a Tenant has decision making authority on their behalf. PFC will retain qualified contractors to implement mitigation measures; however, PFC may negotiate with Landowners to implement the mitigation measures that Landowners wish to perform themselves. PFC will employ an Environmental Inspector whose role is to verify compliance with the requirements of this Plan and other environmental requirements during construction of the pipeline. The Environmental Inspector will be employed by and report to PFC and will be a part of PFC's environmental inspection team.

The Environmental Inspector will:

- Be a full-time member of PFC's environmental inspection team;
- Provide construction personnel with training on provisions of this Plan before construction begins;
- Provide construction personnel with field training on specific topics, such as protocols for Topsoil stripping;
- Observe construction activities on Agricultural Land on a continual basis;
- Be responsible for verifying PFC's compliance with provisions of this Plan and other environmental requirements during construction;
- Work collaboratively with PFC inspectors, right-of-way agents, and the Agricultural Monitor in achieving compliance with this Plan;
- Document instances of noncompliance and work with construction personnel to identify and implement appropriate corrective actions as needed; and
- Have the authority to stop construction activities that are determined to be out of compliance with the provisions of this Plan.

AGRICULTURAL MITIGATION PLAN

In addition to the Environmental Inspector, an Agricultural Monitor will also inspect construction work on Agricultural Lands. The Agricultural Monitor will be retained and funded by PFC, but will function as an independent third-party inspector providing direct reports to the MDA, and will be responsible for auditing PFC's compliance with the provisions of this Plan. PFC will provide resumes of candidates who meet the qualifications of an Agricultural Monitor for review and final selection by the MDA. The Agricultural Monitor will not be a member of PFC's environmental inspection team. The Agricultural Monitor will not have the authority to direct construction activities or manage PFC employees or contractors. The Agricultural Monitor will work through PFC's Environmental Inspector and MDA if compliance issues are identified. The Agricultural Monitor will have full access to Agricultural Land crossed by the Project and will have the option to attend meetings where construction on Agricultural Land is discussed. Specific duties of the Agricultural Monitor will include:

- Participate in preconstruction training activities sponsored by PFC;
- Monitor construction and restoration activities on Agricultural Land for compliance with provisions of this Plan;
- Report instances of noncompliance to PFC's Environmental Inspector;
- Prepare regular compliance reports and submit them to the MDA;
- Act as a liaison between Landowners and the MDA when necessary and requested by the Landowner;
- Serve as a resource to investigate complaints at the direction of the MDA and to explain any proposed changes to this Plan during construction; and
- Maintain a written log of communications from Landowners regarding compliance with this Plan as well as report Landowner complaints to PFC's Environmental Inspector or right-of-way representative.

Both the Environmental Inspector and Agricultural Monitor will have a bachelor's degree in agronomy, soil science, natural resources, or equivalent work experience. In addition, the Environmental Inspector and Agricultural Monitor will have demonstrated practical experience with pipeline construction and restoration on Agricultural Land. PFC will provide each Landowner with a telephone number and address that can be used to contact PFC, during and following construction, regarding the agricultural mitigation work that is performed on their property or other construction-related matters. If the contact information changes following construction, PFC will provide the Landowner with updated contact information. PFC will respond to Landowner telephone calls and correspondence within a reasonable time. Mitigation measures identified by PFC pursuant to this Plan, unless otherwise specified in this Plan or in an Easement or other agreement with an individual Landowner, will be initiated within forty-five (45) days following completion of Final Cleanup on an affected property, weather permitting or unless otherwise delayed at the request of the Landowner. If implementation of mitigation measures requires additional time, PFC will make temporary repairs, as needed, to minimize the risk of additional property damage or interference with the Landowner's access to or use of the property.

3. Mitigation Measures

3.1 Right-of-Way Width

Prior to construction, PFC will establish the right-of-way width for construction and temporary workspace (TWS) on Agricultural Lands based on prior project experience, engineering and construction requirements or best practices, and safety needs. The construction limits will be shown on alignment sheet drawings provided to the construction contractor, Environmental Inspector, Agricultural Monitor, and regulatory authorities.

- A. The typical construction workspace will be governed by the Route Permit and other Project permits but will consist of a 50-foot-temporary construction right-of-way and will include 30 feet of permanent right-of-way. The TWS will be used during construction for soil storage

AGRICULTURAL MITIGATION PLAN

and operation of equipment and vehicles along the entire length of the pipeline. At certain areas where the pipeline crosses natural geographic or larger man-made features such as roads, railroads, streams, or wetland crossings, where horizontal directional drilling may be necessary, a defined area of additional temporary workspace (ATWS) will be required on each side of the feature.

- B. The construction boundaries of ATWS will be staked prior to the work at each location.
- C. If the area of the ATWS is not sufficient to perform the work and implement BMPs, PFC will refrain from construction in that area until an adequate work area is available and approved. PFC will discuss the need for ATWS with the construction contractor, construction inspection team, Environmental Inspector, Agricultural Monitor, and the Landowner, and will not use any additional workspace until approved by the Landowner, Agricultural Monitor, and regulatory authorities, as applicable.

3.2 Pipeline Depth Cover

- A. Except for aboveground facilities, such as valves, and except as otherwise stated in this Plan, the pipeline will be buried with the following depths of cover on Agricultural Land:
 - 1. The pipeline will be constructed at a depth of at least 4.5 (54 inches) feet below the surface in accordance with the Dakota County Zoning ordinance. This also meets the minimum depth of cover of 30 inches as required by U.S. Department of Transportation (DOT) regulations in 49 CFR Part 195.248. Section 216G.07 of the Minnesota Statutes further requires a minimum depth of cover of 54 inches unless waived by the Landowner. However, PFC will ask Landowners to waive the 54-inch-deep minimum cover requirement, as allowed by Minn. Stat. § 216G.07.
 - 2. Where existing or planned Tile systems are present, the pipeline will be installed at a depth that will achieve at least a 12-inch-wide separation between the pipeline and overlying Tiles as described in Section 2.C. of this Plan.
- B. PFC will construct the pipeline under existing non-abandoned Tile and Planned Tile within six (6) feet of the surface, unless the Landowner determines otherwise in writing. PFC may install the pipeline over Tile buried deeper than six (6) feet. If the Landowner plans to install a new Tile system, the Landowner must provide to PFC plans drawn by a qualified professional with experience in Tile design and installation. In determining the proper depth of the pipeline, PFC will accommodate the depth and grade needed for both existing and Planned Tile to function properly. PFC will not change the grade of existing Tile to accommodate the pipeline without the Landowner's advance written consent.
- C. A minimum of twelve (12) inches of separation will be maintained between the pipeline and Tile unless the Landowner agrees in writing to a lesser separation. If unforeseen physical conditions are discovered during construction that prevents minimum separation, the Landowner will be informed of the situation prior to the installation of the pipeline over the Tile. If a good faith effort is made and the Landowner is unavailable, the Agricultural Monitor will be informed, and construction will continue.

3.3 Winter Construction

PFC intends on avoiding construction in Agricultural Lands in the winter season. However, to protect the productivity of Agricultural Lands in the event that winter construction is unavoidable as a result of weather, permit acquisition, or any other unforeseen delays, the following mitigation measures are proposed:

AGRICULTURAL MITIGATION PLAN

- A. Minimize Topsoil Stripping in frozen conditions. Frozen conditions can preclude effective Topsoil stripping. When soil is frozen to a depth greater than the depth of the Topsoil, Topsoil cannot be efficiently stripped from the subsoil. If Topsoil stripping must proceed under these conditions, it will only be removed from the area of the trench. A ripper will be used to break up the frozen Topsoil over the trenchline and a backhoe will remove the Topsoil layer and store the material in a separate pile. The ripper will extend to the depth of Topsoil to twelve (12) inches.
- B. Minimize Final Clean-up activities in frozen conditions. Frozen conditions can preclude effective Topsoil replacement, removal of construction debris, removal of excess rock, decompaction of soil as required, final grading, and installation of permanent erosion control structures. If seasonal or other weather conditions preclude Final Clean-up activities, the trench and temporary workspace areas will be backfilled, stabilized, and temporary erosion control measures will be installed until restoration can be completed. If Topsoil/spoil piles remain throughout the winter, the Topsoil/spoil piles will be stabilized by an application of mulch and a tackifier or other methods approved by the regulatory authority. To prevent subsidence, backfill operations will resume when the ground is thawed, and the subsoil will be compacted (as needed) prior to Final Clean-up activities. The construction contractor must monitor these areas until final restoration is complete.
- C. Topsoil Stripping and Final Clean-up activities proposed in Agricultural Lands in frozen conditions in Minnesota will be discussed with the MDA, respectively prior to commencement of these activities.

3.4 Temporary Erosion and Sediment Control

Temporary erosion and sediment controls will be implemented as required.

3.5 Topsoil Stripping, Trenching, Soil Storage, and Replacement

- A. Full and partial Topsoil stripping methods are similar except for the area where the Topsoil is removed. With full Topsoil stripping, the Topsoil is removed from the entire working side (traffic lane, trench spoil storage, and trench area) of the right-of-way. Under partial Topsoil stripping, the Topsoil will not be removed from under the Topsoil storage piles. Topsoil will also be removed and segregated in other areas, such as bore pits at road and railroad crossings, where the footprint may be larger and/or irregularly shaped. Topsoil is typically stored on the outer most edge of the working side of the construction right-of-way, however, PFC may also store Topsoil on the spoil storage side of the construction workspace where there are workspace constraints.

PFC will use the following Topsoil segregation methods during construction of the Project on Agricultural lands. The method selected will be dependent on specific Landowner approvals or agreements, field conditions, regulatory authority or permit requirements and/or other factors.

1. Modified Ditch-Plus-Spoil-Side Method – This method involves stripping Topsoil horizon from the spoil storage area, the pipeline trench, and the primary portion of the travel lane.
2. Full Right-of-Way Method – This method involves stripping Topsoil from the entire width of the construction right-of-way. This method typically results in less soil mixing between Topsoil and subsoil caused by equipment rutting over areas where Topsoil was not stripped. A larger volume of Topsoil will be generated using this method and,

AGRICULTURAL MITIGATION PLAN

- consequently, may warrant the need for Topsoil to also be stored on both sides of the construction right-of-way.
3. Trenchline-Only Method – This method involves removing Topsoil from over the proposed trench only, and may be used where PFC determines that the width of the construction right-of-way is insufficient for storing Topsoil and maintaining a sufficient width to perform construction activities and allow equipment to pass.
- B. The maximum depth of Topsoil stripping will be twelve (12) inches unless otherwise agreed to with MDA. The Environmental Inspector will observe Topsoil operations so that appropriate depths are removed.
 - C. Equipment operators will be trained to discriminate between Topsoil and subsoil based on obvious color changes. In locations where the Topsoil/subsoil color changes are not easily distinguishable or variable, the Agricultural Inspector will determine the depth.
 - D. Before removing Topsoil during wet soil conditions, the Environmental Inspector will assess whether the moisture content in the surface horizon is suitable for grading. If the soil is considered too wet to segregate, stripping may be postponed. Based on the Environmental Inspector's recommendation, PFC may allow Topsoil removal in areas where soils are persistently wet.
 - E. PFC may also remove Topsoil from ATWS as dictated by site-specific conditions and Landowner agreements. Topsoil will be removed in all cut and fill areas prior to grading.
 - F. In specific areas of deep Topsoil and as determined in consultation between the Environmental Inspector and/or the Agricultural Monitor, the modified ditch-plus spoil method will be used. However, the area requiring Topsoil stripping may be adjusted from the modified ditch-plus-spoil method where the Agricultural Inspector determines that such modification is necessary for safety or would be more protective of the soil resource. The adjusted method may include trenchline-only Topsoil segregation, such as in instances where Topsoil is removed under frozen conditions (i.e., winter construction). In all cases where modifications are proposed, approval from PFC, the MDA, or other regulatory authority may be required.
 - G. If the Agricultural Monitor and the Environmental Inspector cannot agree on the proposed adjustment in the Topsoil segregation method, the Agricultural Monitor will document the objection and provide documentation to the MDA and PFC.
 - H. Trench spoil will be placed in a stockpile that is separate from Topsoil. PFC will maintain a minimum one (1)-foot-wide separation or place a barrier between Topsoil and subsoil piles to avoid mixing. In areas where the Topsoil has not been stripped from the subsoil storage area, subsoil can be stored on a thick layer of mulch or another physical barrier that identifies and protects the unstripped Topsoil.
 - I. Backfilling will follow lowering the pipe into the trench. During trench backfilling, subsoil material will be replaced first, followed by Topsoil. To prevent subsidence, subsoil will be backfilled and compacted. Compaction by operating construction equipment along the trench is acceptable.
 - J. Rock excavated from the trench may be included with backfill provided the rock content of the pre-construction soils is not significantly increased. In the event excess rock cannot be returned to the trench without substantially increasing pre-existing rock content, rocks will be considered construction debris and removed.

AGRICULTURAL MITIGATION PLAN

- K. Replacing Topsoil will be initiated within fourteen (14) days after backfilling the trench. If seasonal or other weather conditions prevent compliance with this timeframe, temporary erosion control measures must be implemented and maintained until conditions allow completion of cleanup. Topsoil will be replaced across the stripped area as near as practicable to its original depth. A Trench Crown over the trenchline is permissible to offset potential settling. Following placement of the subsoil crown, Topsoil would be uniformly returned across the stripped area. The height of the crown will generally be equal to, or less than, twelve (12) inches at the center. Breaks in the crown may be cut to accommodate overland water flow across the right-of-way.

3.6 Repair of Damaged and Adversely Affected Tile

If Tile is damaged during installation of the pipeline, the Tile will be repaired in a manner that restores operating condition. If Tile lines immediately adjacent to the construction area are adversely affected by the pipeline installation, PFC will restore the Tile, including the relocation, reconfiguration, or replacement of the Tile. The affected Landowner may settle with PFC for payment to repair, relocate, reconfigure, or replace the damaged Tile. In the event the Landowner chooses to perform the repair, relocation, reconfiguration, or replacement of the damaged Tile, PFC will not be responsible for correcting Tile repairs after completion of the pipeline and the Landowner's repairs. PFC is only responsible for correcting Tile repairs if the repairs were made by PFC or its agents or designees. Prior to pipeline installation, PFC will contact Landowners to determine if Tile systems will be affected. Tile systems that will be damaged, cut, or removed during construction will be marked by placing a highly visible flag at the edge of the construction right-of-way directly over the Tile lines. These markers will not be removed until the Tile has been permanently repaired and approved and accepted by the Landowner, or the Agricultural Monitor. The pipeline trench shall provide a minimum of twelve (12) inches of clearance, where practicable, between the pipe and drainage Tiles. In most situations, the pipe will be installed under the drainage Tile; however, where drain Tiles are deeper than six (6) feet PFC may elect to install the pipe above the Tile lines. PFC will ensure that the construction contractor repairs damaged Tile in a manner consistent with industry-accepted methods. At the Landowner's request and with PFC's approval, local contractors may perform the repair, replacement, or reconfiguration of the Tiles damaged or cut during pipeline construction. Where damaged Tile is repaired by PFC, the following procedures will apply:

- A. Before completing permanent repairs, Tiles will be examined on both sides of the trench for their entire length within the work area to check for damage by construction equipment. If Tiles are found to be damaged, they will be repaired to preconstruction conditions.
- B. Tiles will be repaired with material of the same or better quality as that which was damaged.
- C. Filter-covered drain Tiles will be replaced with filter-covered drain Tiles.
- D. If the Tile is clay, ceramic, or concrete, any connection made with new material must be made with comparably available connectors, wrapped in plastic, or sealed with Sakrete (concrete mix) to prevent soil intrusion.
- E. If water is flowing through a damaged Tile, temporary repairs will be promptly completed and maintained until permanent repairs can be made.
- F. Where Tiles are damaged or severed by the pipeline trench, repairs will be made according to the following procedures:

AGRICULTURAL MITIGATION PLAN

1. Where Tiles are severed by the pipeline trench, double-walled drain Tile pipe, or its equivalent material, will be used for Tile repairs.
 2. Within the trench, one and one-half (1.5) inch river gravel, four (4) inch crushed stone, sandbags, bags of Sakrete (or an equivalent), or poured concrete will be backfilled under Tiles, as needed, to provide support and prevent settling. Concrete blocks are also acceptable forms of support as are protective pads on the pipeline.
 3. The support member will be of sufficient strength to support loads expected from normal farming practices (i.e., loads up to a ten (10) ton point load) on the surface directly above the repaired Tile.
 4. The support member will extend a minimum of two (2) feet into the soil on both sides of the trench and will be installed in a manner that will prevent it from overturning. If the repairs involve clay Tile, the support member will extend to the first Tile joint beyond the minimum two (2) -foot-wide distance.
 5. There will be a minimum clearance as required by Section 2.C. of this Plan.
 6. The grade of the Tile will not be changed.
- G. PFC will initiate efforts to complete permanent Tile repairs within a reasonable timeframe after Final Cleanup, weather and soil conditions permitting.
- H. Following completion of the final cleanup, PFC will be responsible for correcting repairs to Tile that fail, but only if PFC or its agents or designees made the initial repairs. PFC will not be responsible for Tile repairs that PFC has paid the Landowner to perform.
- I. Any necessary modifications to the configuration of existing Tile systems must be consistent with the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service, and Minnesota Wetland Conservation Act restrictions, and other regulatory authorities on wetland drainage.

3.7 Agricultural Drainage Ditches

Where the pipeline route crosses agricultural drainage ditches that are operated by the Landowner, pipeline will be installed at a depth that is sufficient to allow for ongoing maintenance of the ditch. After the pipeline is installed, the ditch will be restored to its preconstruction contours with erosion controls as needed. Ditches that are operated and maintained by a public entity will be crossed in accordance with applicable permits.

3.8 Rock Removal

The following conditions will apply on Agricultural Land: A. If trenching, blasting, or boring operations are required in bedrock, suitable precautions will be taken to minimize the potential for rocks to become mixed with the backfill. B. After the construction right-of-way has been decompacted as required in Section 10 of this Plan and the Topsoil replaced, PFC will remove rocks from the surface of the entire construction area so that the size, density, and distribution of rock on the right of-way is similar to that on adjacent off-right-of-way areas. PFC will consult with the Landowner to identify suitable rock disposal locations on the construction right-of way, or the rocks will be removed for disposal at another approved disposal location. Written authorization from the Landowner is required for disposal on the Landowner's property. Rock disposal will comply with any federal, state, or local regulations involving fill and disposal of construction debris.

AGRICULTURAL MITIGATION PLAN

3.9 Removal of Construction Debris

Construction-related debris, material, and litter will be removed from the Landowner's property at PFC's expense. The Landowner or land-managing agency may approve leaving specific materials onsite that may provide for beneficial uses for stabilization or habitat restoration.

3.10 Compaction, Rutting, and Soil Restoration

- A. In an effort to minimize soil compaction prior to trenching activities, PFC will, where practical, transport pipe joints (i.e., stringing trucks) as closely as possible along the pipeline centerline.
- B. After construction, compaction of the subsoil will be alleviated on cropland using deep-tillage equipment, as needed. Decomposition of the topsoil, if necessary, will be performed during favorable soil conditions. If the Environmental Inspector and/or Agricultural Monitor determine that the soil is too wet, decomposition will be delayed until the subsoil is friable/tillable in the top eighteen (18) inches.
- C. Deep subsoil ripping in cropland will occur in all traffic and work areas of the pipeline right-of-way where there was full right-of-way Topsoil stripping, unless the Environmental Inspector determines compaction has not occurred. This includes ATWS.
- D. Subsoil ripping equipment may include v-rippers, chisel plows, or equivalents.
- E. If the Landowner makes a written claim for damages related to soil compaction greater than that of immediately adjacent Agricultural Land owned by the Landowner but unaffected by pipeline construction, PFC will retain a Professional Licensed Soil Scientist, or an appropriately qualified professional engineer. The Professional Soil Scientist or engineer will perform a survey of the construction right-of-way, ATWS, and adjacent unaffected land owned by the Landowner for soil compaction using field equipment such as a soil penetrometer. In addition, where there are row crops, samples will be taken in the middle of the row, but not in rows where the drive wheels of farm equipment normally travel. Copies of the results of the survey will be provided to the Landowners making such claim within thirty (30) days of completion of the soil survey. These surveys for soil compaction will be completed at PFC's expense.
- F. PFC will restore rutted land as near as practical to its preconstruction condition.
- G. PFC will compensate Landowners, as appropriate, for damages caused by PFC during Project construction. Damages will be paid for the cost of soil restoration on the construction right-of-way and ATWS to the extent such restoration work is not performed by PFC.
- H. In the event of a dispute between the Landowner and PFC regarding what areas need to be deep tilled (i.e., ripped) or chiseled, or the depth at which compacted areas should be ripped or chiseled, PFC will determine the appropriate actions based on the Agricultural Monitor's opinion.

3.11 Fertilization and Liming

Fertilizers and lime will be applied based on Landowner requirements.

AGRICULTURAL MITIGATION PLAN

3.12 Land Leveling

Following completion of the Project, PFC will restore the construction work areas as practicable to the original preconstruction contours. If uneven settling occurs or surface drainage problems develop as a result of pipeline construction, PFC will provide additional land leveling services within forty-five (45) days of receiving a Landowner's written notice, weather and soil conditions permitting. Alternatively, PFC will negotiate with the Landowner for reasonable compensation in lieu of restoration.

3.13 Prevention of Soil Erosion

PFC will install permanent erosion control devices during restoration to prevent erosion.

3.14 Repair of Damaged Soil Conservation Practices

Soil conservation practices (e.g., terraces, grassed waterways) that are damaged by pipeline construction will be restored to their preconstruction condition.

3.15 Interference with Irrigation Systems

- A. If it is feasible and mutually acceptable to PFC and the Landowner, temporary measures will be implemented to allow an irrigation system to continue to operate across land on which the pipeline is being constructed.
- B. If the pipeline right-of-way and/or ATWS interfere with an operational (or soon-to-be operational) spray irrigation system, PFC will inform the Landowner of the need to take the Irrigation system out of service. PFC and the Landowner will agree upon an acceptable amount of time the irrigation system may be out of service. If PFC and the Landowner are unable to agree on the amount of time within ten (10) days of PFC informing the Landowner of the need to take the irrigation system out of service, construction will proceed and the Landowner will be asked to take the irrigation system out of service.
- C. If, as a result of pipeline construction, interruption of an irrigation system results in crop damages, either on the right-of-way or off-right-of-way, compensation of Landowners will be determined as described in Section 21 of this Plan.

3.16 Ingress and Egress

Prior to pipeline construction, PFC will identify the means of entering and exiting the right-of-way should access to the right-of-way not be practical or feasible from adjacent tracts or from public highway or railroad rights-of-way, consistent with PFC's Easement rights. Temporary access ramps may be constructed using locally obtained Topsoil as needed to facilitate the movement of equipment between public highways and the right of-way.

3.17 Temporary Roads

- A. If public roads do not provide sufficient access, PFC will attempt to use existing farms roads for access to and from the right-of-way, subject to approval from the Landowner or PFC's Easement rights. If PFC needs to construct a new temporary access road across Agricultural Land, the location will be made in collaboration with the Landowner. Temporary roads that are needed during construction will be located to minimize impacts on the landowner's or tenant's use of the agricultural land. If temporary roads in Agricultural Lands require gravel stabilization, geotextile construction fabric will be placed beneath the rock to add stability and to provide a distinctive barrier between the rock and soil surface. During restoration of the

AGRICULTURAL MITIGATION PLAN

right-of-way, temporary access roads will be removed or restored to preconstruction conditions, except as described in Section 17.C of this Plan.

- B. Temporary roads will be designed so as not to impede drainage and will be constructed to minimize soil erosion.
- C. Following construction, new temporary roads may be left intact through mutual agreement of the Landowner and PFC unless otherwise restricted by federal, state, or local regulations.
- D. If the temporary roads are to be removed, the Agricultural Land on which the temporary roads are constructed will be returned to its previous use and restored to a condition equivalent to what existed prior to construction. Restoration techniques for temporary roads will be similar to those used in restoring the Project right-of-way (e.g., decompaction).

3.18 Weed Control

PFC will provide weed control at its aboveground facility sites (i.e. valve sites, pump stations) to avoid the spread of weeds onto adjacent Agricultural Land during operation of the Project. Weed control spraying, will be conducted in accordance with applicable regulatory authorities.

3.19 Pumping of Water from Open Trenches

- A. PFC will follow the steps outlined in Section 7852.2800 Subparts 1C and 1D of the Route Permit Application submitted to the Commission.
- B. When dewatering trenches, PFC will discharge the water in a manner that will minimize damaging adjacent Agricultural Land, crops, and/or pasture. Such damages may include, but are not limited to, inundation of crops for more than twenty-four (24) hours and deposition of sediment in cropland and drainage ditches. If water-related damage during discharge from trenches results in a loss of yield, compensation of Landowners will be determined as described in Section 21 of this Plan.
- C. Discharge of water will be conducted in accordance federal and state regulations, and permit conditions.

3.20 Construction in Wet Conditions

Should the Agricultural Monitor determine that continued construction in wet conditions could result in damage to soil structure and compromise future cropland productivity, the Agricultural Monitor may request PFC's Environmental Inspector to temporarily halt the activity on a Landowner's property until the Agricultural Monitor and Environmental Inspector consult with PFC's Construction Manager. Should PFC elect to continue construction activities over the objection of the Agricultural Monitor, PFC will retain a Professional Licensed Soil Scientist or an appropriately qualified Professional Engineer licensed by the State of Minnesota, at its own expense, to perform a survey of the construction right-of-way, ATWS, and adjacent unaffected land owned by the Landowner for soil compaction, prior to final restoration and using the procedures described above.

3.21 Procedures for Determining Construction-Related Damages

- A. PFC will negotiate in good faith with Landowners who assert claims for construction related damages. The procedure for resolution of these claims will be in accordance with the terms of the Easements.

AGRICULTURAL MITIGATION PLAN

- B. Negotiations between PFC and any affected Landowner will be voluntary in nature and no party is obligated to follow a specific procedure or method for computing the amount of loss for which compensation is sought or paid, except as otherwise specifically provided in the Easements. In the event a Landowner should decide not to accept compensation offered by PFC, the compensation offered is only an offer to settle, and the offer shall not be introduced in any proceeding brought by the Landowner to establish the amount of damages PFC must pay. In the event that PFC and a Landowner are unable to reach an agreement on the amount of compensation, any such Landowner may seek further recourse as provided in the Easement.

3.22 Advance Notice of Access to Private Property

- A. PFC or its agents will provide the Landowner with a minimum of twenty-four (24) hours' notice before accessing his/her property for construction, in addition to any regulatory notifications.
- B. Prior notice will consist of personal or telephone contact, whereby the Landowner is informed of PFC's intent to access the land. If the Landowner cannot be reached in person or by telephone, PFC will mail or hand-deliver to the Landowner's home a dated, written notice of PFC's intent. The Landowner need not acknowledge receipt of the written notice before PFC enters the property.

3.23 Indemnification obligations

Indemnification obligations relating to the pipeline installation covered by this Plan shall be determined in accordance with the terms of the Easements and applicable law.

3.24 Tile Repair Following Pipeline Installation

If, after pipeline installation, the Landowner must make repairs to the Tile system within the right-of-way, or plans to install a new Tile system, the Landowner must obtain Applicant approval of the work plan prior to commencing any activities within the right-of-way. PFC may impose such requirements and limitations on the work as necessary to protect the safety and integrity of PFC's facilities. The Landowner will be responsible for contacting 811 or the local one call center prior to any excavation near the pipeline and complying with all necessary requirements imposed by PFC to protect the safety and integrity of PFC's facilities. PFC will, at its own expense, follow the procedures below. An Applicant representative will be present while the excavation work is being performed but will not perform the excavation work. If the pipeline is above the Tile system, PFC will be responsible for reasonable extra costs incurred by the Landowner to excavate and expose the pipeline in accordance with PFC's requirements for protection of the pipeline.