

Part I – Supplement to the Application Form

PERMIT APPLICATION

**Michigan Natural Resources & Environmental Protection Act
(1994 PA-451)
Part 301, Inland Lakes and Streams
Part 303, Wetlands Protection
Part 31, Floodplain/Water Resources Protection**

TO:

**Michigan Department of Environmental Quality
Water Resources Division, Jackson District**

FOR THE:

**ROVER PIPELINE PROJECT
LENAWEE AND WASHTENAW, COUNTIES, MICHIGAN**

PROPOSED BY:

**Rover Pipeline LLC
1300 Main Street, Houston, TX 77022**

Addendum 1, June 2015

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This Addendum 1 to Rover’s application only includes those sections and tables where modifications have been made to the Rover Pipeline Project as submitted in February 2015.

1.0 PROJECT LOCATION INFORMATION

The Rover Pipeline Project (Project) will include approximately 57.3 miles of 42-inch-diameter natural gas pipeline, one meter station, and associated pipeline facilities within Lenawee and Washtenaw counties in the Michigan Department of Environmental Quality (MDEQ), Jackson District. See Section 3 for additional information on the Project and facilities in the MDEQ, Jackson District.

Table 1-1 lists the municipalities/townships crossed by the pipeline, as well as the township, range, and section.

County	Municipality	Township	Range	Section
Washtenaw	Putnam Township	01N	04E	34
Washtenaw	Putnam/Dexter Township	01S	04E	3
Washtenaw	Dexter Township	01S	04E	9
Washtenaw	Dexter Township	01S	04E	10
Washtenaw	Dexter Township	01S	04E	16
Washtenaw	Dexter Township	01S	04E	21
Washtenaw	Dexter Township	01S	04E	27
Washtenaw	Dexter Township	01S	04E	28
Washtenaw	Dexter Township	01S	04E	34
Washtenaw	Dexter/Lima Township	02S	04E	3
Washtenaw	Lima Township	02S	04E	10
Washtenaw	Lima Township	02S	04E	15
Washtenaw	Lima Township	02S	04E	21
Washtenaw	Lima Township	02S	04E	22
Washtenaw	Lima Township	02S	04E	28
Washtenaw	Lima Township	02S	04E	33
Washtenaw	Lima/Freedom Township	03S	04E	4
Washtenaw	Freedom Township	03S	04E	9
Washtenaw	Freedom Township	03S	04E	16
Washtenaw	Freedom Township	03S	04E	21
Washtenaw	Freedom Township	03S	04E	28
Washtenaw	Freedom Township	03S	04E	29
Washtenaw	Freedom, Bridgewater Township	03S	04E	32
Washtenaw	Manchester Township	04S	03E	12
Washtenaw	Manchester Township	04S	03E	13
Washtenaw	Manchester Township	04S	03E	24
Washtenaw	Manchester Township	04S	03E	25
Washtenaw	Manchester Township	04S	03E	26
Washtenaw, Lenawee	Manchester/Franklin Township	04S	03E	35
Washtenaw	Bridgewater Township	04S	04E	5
Washtenaw	Bridgewater Township	04S	04E	6
Washtenaw	Bridgewater/Manchester Township	04S	04E	7
Washtenaw, Lenawee	Franklin Township	05S	03E	2
Lenawee	Franklin Township	05S	03E	3
Lenawee	Franklin Township	05S	03E	10



**TABLE 1-1
Project Location Information**

County	Municipality	Township	Range	Section
Lenawee	Franklin Township	05S	03E	15
Lenawee	Franklin Township	05S	03E	21
Lenawee	Franklin Township	05S	03E	22
Lenawee	Franklin Township	05S	03E	28
Lenawee	Franklin Township	05S	03E	29
Lenawee	Franklin Township	05S	03E	32
Lenawee	Franklin, Adrian Township	06S	03E	5
Lenawee	Adrian Township	06S	03E	8
Lenawee	Adrian Township	06S	03E	17
Lenawee	Adrian Township	06S	03E	18
Lenawee	Adrian Township	06S	03E	19
Lenawee	Adrian Township	06S	03E	30
Lenawee	Adrian, Madison Township	06S	03E	31
Lenawee	Madison, Dover Township	07S	02E	12
Lenawee	Dover Township	07S	02E	13
Lenawee	Dover Township	07S	02E	23
Lenawee	Dover Township	07S	02E	24
Lenawee	Dover Township	07S	02E	26
Lenawee	Dover, Seneca Township	07S	02E	35
Lenawee	Madison Township	07S	03E	6
Lenawee	Madison Township	07S	03E	7
Lenawee	Seneca Township	08S	02E	2
Lenawee	Seneca Township	08S	02E	3
Lenawee	Seneca Township	08S	02E	10
Lenawee	Seneca Township	08S	02E	15
Lenawee	Seneca Township	08S	02E	16
Lenawee	Seneca Township	08S	02E	21
Lenawee	Seneca Township	08S	02E	28
Lenawee	Seneca Township	08S	02E	33
Lenawee	Seneca Township	09S	02E	4
Lenawee	Seneca Township	09S	02E	5
Lenawee	Seneca Township	09S	02E	8

3.0 PROJECT DESCRIPTION

3.1 WATERBODIES AND WETLANDS

See Section 10 for detailed information on waterbodies crossed and Section 12 for information on wetlands crossed.

3.2 OVERVIEW OF THE ROVER PIPELINE PROJECT

Rover Pipeline LLC (Rover) is seeking authorization from the Federal Energy Regulatory Commission (FERC) pursuant to Section 3 and Section 7(c) of the Natural Gas Act to construct, own, and operate the proposed Rover Pipeline Project (Project). The Rover Pipeline Project is a new natural gas pipeline system that will consist of approximately 712.9 miles of Supply Laterals and Mainlines, 10 compressor stations, and associated meter stations and other aboveground facilities that will be located in parts of West Virginia, Pennsylvania, Ohio, and Michigan. The Project will include approximately 510.7 miles of proposed right-of-way, including approximately 202.2 miles of dual pipelines, extending from the vicinity of New Milton, Doddridge County, West Virginia to the vicinity of Howell, Livingston County, Michigan.

The Project will consist of the following components and facilities:

- Supply Laterals:
 - eight supply laterals consisting of approximately 201.2 miles of 24-, 30-, 36-, and 42-inch-diameter pipeline in West Virginia, Pennsylvania, and Ohio,
 - two parallel supply laterals, each consisting of approximately 18.6 miles (for a total of approximately 37.2 miles) of 42-inch-diameter pipeline (Supply Connector Line A and Line B) in Ohio,
 - approximately 72,645 horsepower (hp) at six new compressor stations to be located in Doddridge and Marshall counties, West Virginia; Washington County, Pennsylvania; and Noble, Monroe, and Harrison counties, Ohio, and
 - two new delivery, 11 new receipt, and two bi-directional meter stations on the Supply Laterals.

- Mainlines A and B:
 - approximately 190.9 miles of 42-inch-diameter pipeline (Mainline A) in Ohio,
 - approximately 183.6 miles of parallel 42-inch-diameter pipeline (Mainline B) in Ohio,
 - approximately 114,945 hp at three new compressor stations to be located in Carroll, Wayne, and Crawford counties, Ohio, and
 - two new delivery meter stations in Defiance County, Ohio.

- Market Segment:
 - approximately 100.0 miles of 42-inch diameter pipeline in Ohio and Michigan,
 - approximately 25,830 hp at one new compressor station to be located in Defiance County, Ohio, and

- two new delivery meter stations in Washtenaw and Livingston counties, Michigan.

3.3 PROJECT FACILITIES WITHIN THE JACKSON DISTRICT

A portion of the Market Segment of the Project is located within the Michigan Department of Environmental Quality’s (MDEQ) Jackson District in Lenawee and Washtenaw counties. The Market Segment also crosses the MDEQ, Lansing District in Livingston County.

The following facilities are within the MDEQ’s Jackson District as shown on Figure IIA-4 (USGS Topographic Maps) and Figure IIC (Alignment Sheets) that are provided in *Part II – Maps and Drawings* of the Permit Application.

- 57.3 miles of 42-inch-diameter pipeline extending north from the Ohio/Michigan state line near Morenci, Michigan in Seneca Township at the Fulton, OH/Lenawee county line to the Washtenaw/Livingston county line, between milepost (MP) 27.4 to MP 84.7),
- Consumers Energy Meter Station located at MP 75.0 in Lima Township, Washtenaw County.
- Mainline Valves (MLV) located at:
 - MLV 3 at MP 30.7 in Seneca Township, Lenawee County,
 - MLV 4 at MP 48.9 in Adrian Township, Lenawee County,
 - MLV 5 at MP 58.9 in Manchester Township, Washtenaw County,
 - MLV 6 at MP 75.0 co-located in the Consumer Energy Meter Station, and
 - MLV 7 at MP 81.03 in Dexter Township, Washtenaw County.
- Access Roads as listed in Table 3-1:

TABLE 3-1 Permanent and Temporary Access Roads in the Jackson District					
Access Road ID	MP	Township, County	Temporary / Permanent	Existing Surface / Land Type	Estimated Length (ft)
MI-LE-018.000-PAR-2	30.64	Lenawee, MI	Perm	New - Agriculture	109
MI-LE-029.000-TAR-32	33.57	Lenawee, MI	Temp	Existing – Dirt	2,394
MI-LE-047.000-TAR-3	38.02	Lenawee, MI	Temp	Existing - Dirt	1,231
MI-LE-096.500-TAR-34	47.65	Lenawee, MI	Temp	Existing – Gravel	3,344
MI-LE-100.000-PAR-3	48.95	Lenawee, MI	Perm	New - Agriculture	110
MI-LE-123.000-TAR-5	54.38	Lenawee, MI	Temp	Existing - Dirt	1,184
MI-WA-014.000-PAR-4	58.85	Washtenaw, MI	Perm	New – Forest, Open	109
MI-WA-032.000-TAR-26	62.9	Washtenaw, MI	Temp	Existing – Gravel	1,082
MI-WA-052.000-TAR-7	66.73	Washtenaw, MI	Temp	Existing – Dirt	1,749
MI-WA-054.000-TAR-8	67.21	Washtenaw, MI	Temp	Existing – Dirt	451
MI-WA-056.000-TAR-8	67.47	Washtenaw, MI	Temp	Existing – Dirt	513
MI-WA-056.000-PAR-5	67.93	Washtenaw, MI	Perm	New - Agriculture	202

TABLE 3-1 Permanent and Temporary Access Roads in the Jackson District					
Access Road ID	MP	Township, County	Temporary / Permanent	Existing Surface / Land Type	Estimated Length (ft)
MI-WA-090.500-TAR-27	74.73	Washtenaw, MI	Temp	Existing – Gravel	2,409
MI-WA-091.500 PAR-008	75.06	Washtenaw, MI	Perm	Existing – Gravel	1,938
MI-WA-108.000-PAR-6	81.3	Washtenaw, MI	Perm	New - Agriculture	156

- Contractor Yards – No contractor yards are currently proposed in Lenawee or Washtenaw counties.

The locations where HDDs are proposed are listed in Table 3-2. Site-specific plans for the HDDs, including access paths along the path of the drill, are shown on Figure IID (Site-Specific HDD Drawings) that are provided as *Part II – Maps and Drawings* section of the Permit Application. These HDD figures replace those provided in February 2015.

TABLE 3-2 HDD Locations in the Jackson District			
Feature	Approximate Entry MP	Approximate Exit MP	Total Length (feet)
State Route 52 (Austin Road)	62.20	62.78	3,091
Interstate 94	74.73	74.32	2,144

4.0 PROJECT PURPOSE, USE AND ALTERNATIVES

4.2 ALTERNATIVES

In response to landowner comments that the pipeline be placed within existing utility rights-of-way, Rover contacted the International Transmission Company (ITC) to discuss the possibility of installing the pipeline within ITC's electric transmission corridor along parts of the Market Segment in Michigan. On January 12, 2015, Rover and ITC met and agreed to investigate the potential of co-location and overlapping of easements where feasible. ITC granted survey permission and surveys were completed in the spring of 2015.

From the information gathered during the 2015 surveys on the ITC corridor and adjacent properties as available, Rover identified two locations where Rover believes co-location within the ITC corridor is possible based on constructability and safe operating procedures, and overlapping of construction easements where co-location would not be possible and the pipeline would need to be adjacent to the ITC corridor. Rover submitted the revised plans to ITC and met with them on May 22, 2015. ITC is currently reviewing the plans for compatibility with future expansion plans, engineering constraints, and safe construction procedures, as well as operational challenges that co-location would potentially create.

The route in Michigan as currently proposed places the pipeline adjacent to the ITC corridor, where feasible, with some overlap into the ITC corridor for the construction right-of-way. However, there are two locations where Rover would like to co-locate the pipeline within ITC's corridor. These two areas are designated Planned Route Variation MS26 in Washtenaw County and Planned Route Variation MS27 in Livingston County. Planned Route Variation MS 26 in Washtenaw County would begin at Market Segment MP 78.45, just south of Island Lake Road, and would co-locate the pipeline within the ITC corridor for approximately 5,800 feet to approximate Market Segment MP 79.72. Planned Route Variation MS 26 is shown on Figure IIA-5, included in *Part II – Maps and Drawings* section of the Permit Application.

If acceptable to ITC, Rover would incorporate Planned Route Variations MS26 and MS27 into its proposed route. Rover will provide updates of the continuing discussions with ITC concerning these variations.

5.0 LOCATING YOUR PROJECT SITE

As a natural gas pipeline, the Project crosses a number of federal, state, and county roads in Lenawee and Washtenaw counties as listed on Table 5-1 and shown on Figures IIA-4 and IIC included in *Part II – Maps and Drawings* section of the Permit Application.

TABLE 5-1 Road Crossings in the Jackson District				
Road/Railroad Name	Approximate MP	Type	Jurisdiction	Crossing Method
LENAWEE COUNTY				
STATE ROUTE M-120 (MORENCI RD)	27.78	ASPHALT	STATE	BORE
WEST YANKEE RD	28.43	ASPHALT	COUNTY	BORE
WEST WESTON RD	29.23	ASPHALT	COUNTY	BORE
WEST MULBERRY ROAD	29.61	ASPHALT	COUNTY	BORE
WEST RIDGEVILLE ROAD	30.64	GRAVEL	COUNTY	BORE
WOLFE RD	31.73	GRAVEL	COUNTY	BORE
SENECA HWY	32	ASPHALT	FEDERAL	BORE
PACKARD RD	32.96	GRAVEL	COUNTY	BORE
NORFOLK SOUTHERN RR	33.55	RAILROAD	RAILROAD	BORE
TUTTLE HWY	34.72	GRAVEL	COUNTY	BORE
BRYANT RD	35.38	ASPHALT	COUNTY	BORE
WEST GORMAN RD	35.92	ASPHALT	COUNTY	BORE
DEMINGS LAKE RD	37.16	ASPHALT	COUNTY	BORE
TOMER RD	37.7	GRAVEL	COUNTY	BORE
SWORD HWY	38.8	GRAVEL	COUNTY	BORE
W CARLETON RD	38.96	GRAVEL	COUNTY	BORE
W CADMUS RD	40.04	ASPHALT	COUNTY	BORE
WHIG HWY	40.86	GRAVEL	COUNTY	BORE
STATE ROUTE M-34 (W BEECHER)	41.73	ASPHALT	STATE	BORE
US ROUTE 223 (NORTHVIEW)	43.05	ASPHALT	FEDERAL	BORE
FORRISTER RD	43.56	GRAVEL	COUNTY	BORE
BURTON RD/ HUNT RD	44.66	ASPHALT	COUNTY	BORE
ROME RD	45.82	ASPHALT	COUNTY	BORE
WOLF CREEK HWY	46.01	ASPHALT	COUNTY	BORE
BRAZEE RD	46.49	ASPHALT	COUNTY	BORE
SHEPHERD RD	48.07	ASPHALT	COUNTY	BORE
TEACHOUT RD	48.98	GRAVEL	COUNTY	BORE
BEEBE HWY	50.5	GRAVEL	COUNTY	BORE
STATE ROUTE M-50 (MONROE ROAD)	51.7	ASPHALT	STATE	BORE
TIPTON HWY	52.54	ASPHALT	COUNTY	BORE
MUNGER RD	52.93	GRAVEL	COUNTY	BORE
WHELAN RD	53.44	GRAVEL	COUNTY	BORE
SERVICE ROAD	55.3	GRAVEL	COUNTY	BORE
WISNER HWY	55.41	GRAVEL	COUNTY	BORE
US ROUTE 12 (WEST MICHIGAN AVENUE)	56.45	ASPHALT	FEDERAL	BORE



TABLE 5-1
Road Crossings in the Jackson District

Road/Railroad Name	Approximate MP	Type	Jurisdiction	Crossing Method
WASHTENAW COUNTY				
LEMM RD	57.6	GRAVEL	COUNTY	BORE
BOWENS RD	58.82	GRAVEL	COUNTY	BORE
STATE ROUTE M-52	60.29	ASPHALT	STATE	BORE
LOGAN RD	60.71	GRAVEL	COUNTY	BORE
HOGAN RD	61.79	GRAVEL	COUNTY	BORE
E AUSTIN RD	62.35	ASPHALT	CITY	HDD
NEAL RD	63.24	GRAVEL	COUNTY	BORE
SCHWAB RD	63.61	GRAVEL	COUNTY	BORE
BEMIS RD	64.37	GRAVEL	COUNTY	BORE
EISMAN RD	65.17	GRAVEL	COUNTY	BORE
BETHEL CHURCH RD	65.83	GRAVEL	COUNTY	BORE
E PLEASANT LAKE RD	67.97	ASPHALT	COUNTY	BORE
WELLSWORTH RD	69.1	GRAVEL	COUNTY	BORE
WATERS RD	70.14	GRAVEL	COUNTY	BORE
SCIO CHURCH RD	71.5	ASPHALT	COUNTY	BORE
S LIMA CENTER RD	72.01	GRAVEL	COUNTY	BORE
JERUSALEM RD	72.96	GRAVEL	COUNTY	BORE
S LIMA CENTER RD	73.46	GRAVEL	COUNTY	BORE
JACKSON RD (OLD EAST US 12)	74.37	ASPHALT	COUNTY	HDD
I 94	74.57	ASPHALT	FEDERAL	HDD
I 94	74.61	ASPHALT	FEDERAL	HDD
TRINKLE RD	75.37	DIRT	COUNTY	BORE
DEXTER CHELSEA RD	76.38	ASPHALT	COUNTY	BORE
NORFOLK SOUTHERN CORPORATION	76.68	RAILROAD	RAILROAD	BORE
BEACH RD	77.21	GRAVEL	COUNTY	BORE
ISLAND LAKE RD	78.44	ASPHALT	COUNTY	BORE
COLBY RD	80.01	GRAVEL	COUNTY	BORE
QUIGLEY RD	81.09	GRAVEL	COUNTY	BORE
N TERRITORIAL RD	81.57	ASPHALT	COUNTY	BORE
DEXTER TOWNHALL RD	82.8	ASPHALT	COUNTY	BORE
STINCHFIELD WOODS RD	83.46	GRAVEL	COUNTY	BORE
DEXTER TOWNHALL RD	84.15	ASPHALT	COUNTY	BORE

8.0 ADJOINING PROPERTY OWNERS

Rover will obtain easements from property owners to install and operate the pipeline. Table A1 in Appendix A lists the names and addresses of property owners whose property includes regulated wetlands, lakes or streams affected by the Rover Pipeline Project or who abut properties with regulated wetland, lake, or stream impacts. Appendix A is submitted as privileged and confidential.

10.0 PROJECTS IMPACTING INLAND LAKES, STREAMS, GREAT LAKES, WETLANDS, OR FLOODPLAINS

Field delineation surveys for waterbodies and wetlands were conducted from mid-June 2014 through May 2015. Approximately 97 percent of the proposed route in the MDEQ, Jackson District has been surveyed. The remaining surveys for approximately 1.6 miles will be conducted as soon as landowner permission has been obtained. All wetland surveys were conducted in accordance with the U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual (USACE, 1987), and the Regional Supplements to the USACE Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0), and Midwest Region (Version 2.0).

A. Projects Requiring Fill

The Project involves the temporary excavation of a trench, temporary storage of excavated materials (at least 10 feet from the ordinary high water mark when crossing streams), installation of the pipeline, and backfill of the trench with excavated materials. As such there is no permanent fill. Backfilling will be done with previously excavated material.

The area of disturbance for the pipeline crossings of streams in Lenawee and Washtenaw counties is listed in Table 10-1.

B. Projects Requiring Dredging or Excavation

The Project involves the temporary excavation of a trench, temporary storage of excavated materials (at least 10 feet from the ordinary high water mark when crossing streams), installation of the pipeline, and backfill of the trench with excavated materials. As such there is no permanent fill. Backfilling will be done with previously excavated material.

The area of disturbance for the pipeline crossings of streams in Lenawee and Washtenaw counties is listed in Table 10-1.

TABLE 10-1
Streams and Ponds Crossed in the Jackson District

Approx. Enter Milepost	Waterbody ID Number	Waterbody Name	County	Subwatershed Name (HUC 8)	Flow	Crossing Method	Length Across Construction Right-of-Way (ft)	Dimensions of Dredge and Backfill ¹			Volume (cubic yards)
								OHWM Width (feet)	Average Depth (feet)	Trench Width (feet)	
28.74	S1K-LE-106	UT to Silver Creek	Lenawee	Tiffin	Perennial	Open Cut	173.77	15.20	8.5	25.0	119.6
34.30	S1K-LE-103	Bear Creek	Lenawee	Raisin	Perennial	Open Cut	191.81	8.0	8.5	25.0	63.0
35.74	S1K-LE-142	Stony Creek	Lenawee	Raisin	Perennial	Open Cut	159.57	8.0	8.5	25.0	63.0
39.76	S2K-LE-227	South Branch Raisin River	Lenawee	Raisin	Perennial	Open Cut	129.83	32.0	8.5	25.0	251.9
42.69	S2K-LE-231	UT to Wolf Creek	Lenawee	Raisin	Intermittent	Open Cut	143.98	8.0	8.5	25.0	63.0
42.79	S2K-LE-232	Wolf Creek	Lenawee	Raisin	Perennial	Open Cut	136.76	22.0	8.5	25.0	173.1
43.75	S2K-LE-177	Wolf Creek	Lenawee	Raisin	Perennial	Open Cut	145.81	24.0	8.5	25.0	188.9
44.52	S1K-LE-175	Wolf Creek	Lenawee	Raisin	Perennial	Open Cut	131.65	40.0	8.5	25.0	314.8
44.95	S1K-LE-174	Black Creek	Lenawee	Raisin	Perennial	Open Cut	126.01	13.0	8.5	25.0	102.3
49.99	S1K-LE-118	Black Creek	Lenawee	Raisin	Perennial	Open Cut	156.46	11.5	8.5	25.0	90.5
53.80	S5K-LE-437	Evans Creek	Lenawee	Raisin	Perennial	Open Cut	129.51	8.0	8.5	25.0	63.0
56.91	S2K-WA-163	UT to Hudson Lake	Washtenaw	Raisin	Perennial	Open Cut	65.85	8.0	8.5	25.0	63.0
57.45	S2K-WA-110	UT to Iron Creek	Washtenaw	Raisin	Intermittent	Open Cut	168.22	1.5	8.5	25.0	11.8
58.29	S1K-WA-173	Iron Creek	Washtenaw	Raisin	Perennial	Open Cut	82.93	18.0	8.5	25.0	141.7
59.97	S1K-WA-255	Unnamed Tributary	Washtenaw	Raisin	Intermittent	Open Cut	140.92	3.0	8.5	25.0	23.6
61.21	S1K-WA-261	UT to Raisin River	Washtenaw	Raisin	Intermittent	Open Cut	190.19	3.0	8.5	25.0	23.6
61.91	WB5K-WA-361	Unnamed Pond	Washtenaw	Raisin	Pond-Natural	Open Cut	95.56	70.22	8.5	25.0	552.7
62.18	S5K-WA-364	River Raisin*	Washtenaw	Raisin	Perennial	HDD	50.09	95.0	-	-	-
62.47	WB7K-WA-169	Unnamed Pond*	Washtenaw	Raisin	Pond-Manmade	HDD	42.72	34.32	-	-	-
63.07	S5K-WA-370	UT to Raisin River	Washtenaw	Raisin	Perennial	Open Cut	210.99	7.0	8.5	25.0	55.1
63.87	S7K-WA-180	Unnamed Tributary	Washtenaw	Raisin	Ephemeral	Open Cut	167.86	2.0	8.5	25.0	15.7
65.13	S2K-WA-200	UT to Raisin River	Washtenaw	Raisin	Perennial	Open Cut	126.65	6.0	8.5	25.0	47.2
66.01	S5K-WA-372	UT to Raisin River	Washtenaw	Raisin	Perennial	Open Cut	161.55	11.0	8.5	25.0	86.6
70.5	S2K-WA-195	UT to Mill Creek	Washtenaw	Huron	Intermittent	Open Cut	100.87	7.0	8.5	25.0	55.1

TABLE 10-1
Streams and Ponds Crossed in the Jackson District

Approx. Enter Milepost	Waterbody ID Number	Waterbody Name	County	Subwatershed Name (HUC 8)	Flow	Crossing Method	Length Across Construction Right-of-Way (ft)	Dimensions of Dredge and Backfill ¹			Volume (cubic yards)
								OHWB Width (feet)	Average Depth (feet)	Trench Width (feet)	
70.74	S2K-WA-216	UT to Mill Creek	Washtenaw	Huron	Perennial	Open Cut	108.45	5.0	8.5	25.0	39.4
71.17	S7K-WA-159	UT to Mill Creek	Washtenaw	Huron	Perennial	Open Cut	189.12	9.0	8.5	25.0	70.8
71.29	S7K-WA-159	UT to Mill Creek	Washtenaw	Huron	Perennial	Open Cut	108.19	9.0	8.5	25.0	70.8
71.38	S7K-WA-160	UT to Mill Creek	Washtenaw	Huron	Intermittent	Open Cut	103.14	2.0	8.5	25.0	15.7
71.68	S5K-WA-358	UT to Mill Creek	Washtenaw	Huron	Perennial	Open Cut	118.95	8.0	8.5	25.0	63.0
72.19	S2K-WA-122	Mill Creek	Washtenaw	Huron	Perennial	Open Cut	158.25	22.0	8.5	25.0	173.1
72.43	S2K-WA-123	UT to Mill Creek	Washtenaw	Huron	Intermittent	Open Cut	243.37	15.0	8.5	25.0	118.1
73.76	S5K-WA-374	UT to North Fork Mill Creek	Washtenaw	Huron	Perennial	Open Cut	93.67	11.0	8.5	25.0	86.6
73.93	S7K-WA-155	North Fork Mill Creek	Washtenaw	Huron	Perennial	Open Cut	105.34	19.0	8.5	25.0	149.5
79.63	S5K-WA-426	Dexter County Drain No. 1	Washtenaw	Huron	Perennial	Open Cut	153.29	12.0	8.5	25.0	94.4
81.83	S7K-WA-146	UT to Little Portage Lake	Washtenaw	Huron	Perennial	Open Cut	136.98	4.0	8.5	25.0	31.5
Total											3,482.10

Notes:

* = Water crossed using Horizontal Directional Drill (HDD)
OHWM = Ordinary high water mark as documented during field surveys.

¹ All impacts are temporary. Material excavated from trench will be stored on site and returned to the trench for backfill following pipe installation. Following installation of the pipeline, the stream bed and banks will be restored as closely as possible to pre-construction contours. Streams banks will be stabilized and seeded within 24 hours, weather conditions permitting.

12.0 ACTIVITIES THAT MAY IMPACT WETLANDS

Table 12-1 provides a list of wetlands crossed or affected in Lenawee and Washtenaw counties, including length of each crossing, acres affected, depth of trench, volume of fill excavated and backfilled.

TABLE 12-1
Wetlands Affected in the Jackson District

Approx. Enter Milepost	Wetland ID Number	Subwatershed Name (HUC 8)	Wetland Type ¹	Length of Crossing (feet) ²	Acres Affected				Temporary Dredging ⁴			County
					Temp.	Perm.	Total	Conversion from PFO/PSS to PEM ³	Average Depth (feet)	Average Width (feet)	Volume (cubic yards)	
36.54	W1K-LE-105	Raisin	PEM	22.2	0.08	0.03	0.11	0	8.5	12.0	83.87	Lenawee
36.54	W2K-LE-136	Raisin	PSS	107.7	0.07	0.11	0.18	0.11	8.5	12.0	406.87	Lenawee
37.88	W1K-LE-146	Raisin	PEM	160.0	0.72	0.2	0.92	0	8.5	12.0	604.44	Lenawee
38.34	W2TB-LE-411	Raisin	PFO	71.8	0.03	0.08	0.11	0.05	8.5	12.0	271.24	Lenawee
38.53	W2TB-LE-412	Raisin	PEM	63.4	0.06	0.06	0.12	0	8.5	12.0	239.51	Lenawee
40.05	W1K-LE-111	Raisin	PEM	-	0.01	0	0.01	0	-	-	-	Lenawee
41.77	W5K-LE-181	Raisin	PEM	-	0.35	0.03	0.38	0	-	-	-	Lenawee
41.99	W5K-LE-106	Raisin	PEM	28.0	0.06	0.04	0.1	0	8.5	12.0	105.78	Lenawee
45.8	W2K-LE-178	Raisin	PEM	124.6	0.12	0.14	0.26	0	8.5	12.0	470.71	Lenawee
45.83	W2K-LE-233	Raisin	PEM	127.2	0.15	0.15	0.3	0	8.5	12.0	480.53	Lenawee
46.77	W7K-LE-174	Raisin	PSS	185.3	0.54	0.2	0.74	0.2	8.5	12.0	700.02	Lenawee
49.01	W1K-LE-122	Raisin	PFO	248.7	0.18	0.30	0.48	0.18	8.5	12.0	939.53	Lenawee
49.03	W1K-LE-123	Raisin	PEM	115.6	0.04	0.12	0.16	0	8.5	12.0	436.71	Lenawee
49.08	W1K-LE-125	Raisin	PEM	-	0.01	0.01	0.02	0	-	-	-	Lenawee
49.37	W1K-LE-129	Raisin	PEM	313.6	0.38	0.38	0.76	0	8.5	12.0	1184.71	Lenawee
51.7	W1K-LE-132	Raisin	PSS	38.5	0.12	0.05	0.17	0.05	8.5	12.0	145.44	Lenawee
54.23	W5K-LE-436	Raisin	PEM	3.2	0.08	0.01	0.09	0	8.5	12.0	12.09	Lenawee
54.9	W2K-LE-137	Raisin	PEM	33.8	0.02	0.04	0.06	0	8.5	12.0	127.69	Lenawee
55.03	W2K-LE-138	Raisin	PEM	-	0.04	0	0.04	0	-	-	-	Lenawee
55.93	W5K-LE-435	Raisin	PEM	46.5	0.08	0.05	0.13	0	8.5	12.0	175.67	Lenawee
56.27	W1K-LE-242	Raisin	PEM	41.7	0.09	0.05	0.14	0	8.5	12.0	157.53	Lenawee
56.73	W2K-WA-165	Raisin	PEM	110.9	0.26	0.13	0.39	0	8.5	12.0	418.96	Washtenaw

TABLE 12-1
Wetlands Affected in the Jackson District

Approx. Enter Milepost	Wetland ID Number	Subwatershed Name (HUC 8)	Wetland Type ¹	Length of Crossing (feet) ²	Acres Affected				Temporary Dredging ⁴			County
					Temp.	Perm.	Total	Conversion from PFO/PSS to PEM ³	Average Depth (feet)	Average Width (feet)	Volume (cubic yards)	
56.9	W2K-WA-164	Raisin	PFO	85.0	0.03	0.09	0.12	0.06	8.5	12.0	321.11	Washtenaw
57	W1K-WA-292	Raisin	PSS	220.2	0.51	0.28	0.79	0.28	8.5	12.0	831.87	Washtenaw
57.04	W1K-WA-291	Raisin	PEM	223.9	0.49	0.25	0.74	0	8.5	12.0	845.84	Washtenaw
58.22	W1K-WA-173	Raisin	PEM	-	0.23	0.02	0.25	0	-	-	-	Washtenaw
58.24	W5K-WA-433	Raisin	PSS	-	0.13	0	0.13	0	-	-	-	Washtenaw
58.48	W2K-WA-103	Raisin	PEM	91.3	0.05	0.09	0.14	0	8.5	12.0	344.91	Washtenaw
58.94	W2K-WA-101	Raisin	PEM	-	0.03	0	0.03	0	-	-	-	Washtenaw
59.79	W1K-WA-271	Raisin	PFO	84.0	0.05	0.08	0.13	0.06	8.5	12.0	317.33	Washtenaw
59.85	W1K-WA-270	Raisin	PFO	-	0.01	0	0.01	0	-	-	-	Washtenaw
59.97	W1K-WA-254	Raisin	PFO	75.0	0.06	0.09	0.15	0.05	8.5	12.0	283.33	Washtenaw
60.03	W1K-WA-253	Raisin	PFO	45.4	0.02	0.05	0.07	0.03	8.5	12.0	171.51	Washtenaw
60.6	W2K-WA-167	Raisin	PEM	114.0	0.06	0.12	0.18	0	8.5	12.0	430.67	Washtenaw
60.7	W2K-WA-168	Raisin	PEM	34.8	0.02	0.04	0.06	0	8.5	12.0	131.47	Washtenaw
60.95	W1K-WA-257	Raisin	PEM	50.7	0.07	0.06	0.13	0	8.5	12.0	191.53	Washtenaw
61.03	W1K-WA-259	Raisin	PEM	-	0.15	0.04	0.19	0	-	-	-	Washtenaw
61.06	W1K-WA-260	Raisin	PFO	-	0.01	0	0.01	0	-	-	-	Washtenaw
62.19	W5K-WA-367*	Raisin	PSS	547.5	0	0.63	0.63	0.63	-	-	-	Washtenaw
63.07	W5K-WA-371	Raisin	PEM	33.8	0.09	0.05	0.14	0	8.5	12.0	127.69	Washtenaw
63.55	W7K-WA-168	Raisin	PEM	67.6	0.07	0.07	0.14	0	8.5	12.0	255.38	Washtenaw
64.4	W5K-WA-431	Raisin	PEM	33.3	0.04	0.03	0.07	0	8.5	12.0	125.80	Washtenaw
66.01	W1K-WA-157	Raisin	PEM	-	0.03	0	0.03	0	-	-	-	Washtenaw
66.75	W1K-WA-278	Raisin	PEM	254.0	0.48	0.29	0.77	0	8.5	12.0	959.56	Washtenaw



TABLE 12-1
Wetlands Affected in the Jackson District

Approx. Enter Milepost	Wetland ID Number	Subwatershed Name (HUC 8)	Wetland Type ¹	Length of Crossing (feet) ²	Acres Affected				Temporary Dredging ⁴			County
					Temp.	Perm.	Total	Conversion from PFO/PSS to PEM ³	Average Depth (feet)	Average Width (feet)	Volume (cubic yards)	
66.99	W2K-WA-199	Raisin	PEM	37.5	0.03	0.03	0.06	0	8.5	12.0	141.67	Washtenaw
67.13	W5K-WA-264	Huron	PEM	45.9	0.07	0.05	0.12	0	8.5	12.0	173.40	Washtenaw
67.18	W2K-WA-198	Huron	PSS	118.8	0.12	0.14	0.26	0.14	8.5	12.0	448.80	Washtenaw
67.21	W5K-WA-287	Huron	PEM	80.8	0.08	0.09	0.17	0	8.5	12.0	305.24	Washtenaw
68.85	W5K-WA-356	Huron	PEM	-	0.04	0	0.04	0	-	-	-	Washtenaw
68.92	W1K-WA-151	Huron	PEM	279.3	0.36	0.33	0.69	0	8.5	12.0	1055.13	Washtenaw
69.13	W1K-WA-147	Huron	PEM	-	0.05	0	0.05	0	-	-	-	Washtenaw
69.22	W1K-WA-149	Huron	PFO	32.7	0.03	0.05	0.08	0.02	8.5	12.0	123.53	Washtenaw
69.23	W1K-WA-150	Huron	PEM	40.1	0.03	0.05	0.08	0	8.5	12.0	151.49	Washtenaw
69.32	W1K-WA-282	Huron	PFO	83.4	0.05	0.1	0.15	0.06	8.5	12.0	315.07	Washtenaw
69.53	W5K-LI-339	Huron	PFO	236.0	0.09	0.23	0.32	0.16	8.5	12.0	891.56	Washtenaw
70.49	W2K-WA-194	Huron	PEM	221.8	0.26	0.26	0.52	0	8.5	12.0	837.91	Washtenaw
70.71	W2K-WA-196	Huron	PSS	425.1	0.49	0.49	0.98	0.49	8.5	12.0	1605.93	Washtenaw
71.12	W7K-WA-162	Huron	PEM	1129.4	1.38	1.32	2.7	0.00	8.5	12.0	4266.62	Washtenaw
71.6	W2K-WA-120	Huron	PEM	668.4	0.73	0.75	1.48	0	8.5	12.0	2525.07	Washtenaw
71.75	W2K-WA-121	Huron	PEM	71.8	0.12	0.1	0.22	0	8.5	12.0	271.24	Washtenaw
71.98	W2K-WA-192	Huron	PEM	165.8	0.16	0.18	0.34	0	8.5	12.0	626.36	Washtenaw
72.02	W2K-WA-193	Huron	PEM	692.2	0.77	0.78	1.55	0.00	8.5	12.0	2614.98	Washtenaw
72.07	W5K-WA-430	Huron	PSS	169.5	0.22	0.21	0.43	0.21	8.5	12.0	640.33	Washtenaw
72.43	W2K-WA-124	Huron	PEM	297.3	0.14	0.31	0.45	0	8.5	12.0	1123.13	Washtenaw
72.7	W2K-WA-125	Huron	PEM	208.0	0.29	0.25	0.54	0	8.5	12.0	785.78	Washtenaw
73.75	W5K-WA-373	Huron	PFO	388.1	0.22	0.44	0.66	0.27	8.5	12.0	1466.16	Washtenaw



TABLE 12-1
Wetlands Affected in the Jackson District

Approx. Enter Milepost	Wetland ID Number	Subwatershed Name (HUC 8)	Wetland Type ¹	Length of Crossing (feet) ²	Acres Affected				Temporary Dredging ⁴			County
					Temp.	Perm.	Total	Conversion from PFO/PSS to PEM ³	Average Depth (feet)	Average Width (feet)	Volume (cubic yards)	
73.86	W7K-WA-157	Huron	PSS	339.0	0.37	0.39	0.76	0.39	8.5	12.0	1280.67	Washtenaw
73.94	W7K-WA-156	Huron	PSS	260.3	0.3	0.29	0.59	0	8.5	12.0	983.36	Washtenaw
74.58	-	Huron	PEM	64.9	0	0.07	0.07	0	8.5	12.0	245.18	Washtenaw
74.63	W7K-WA-116*	Huron	PEM	430.3	0.01	0.48	0.49	0	-	-	-	Washtenaw
74.81	W7K-WA-114	Huron	PEM	811.5	0.98	0.95	1.93	0	8.5	12.0	3065.67	Washtenaw
75.26	W5K-WA-393	Huron	PEM	143.1	0.1	0.13	0.23	0	8.5	12.0	540.60	Washtenaw
75.77	W7K-WA-120	Huron	PEM	637.3	0.73	0.73	1.46	0	8.5	12.0	2407.58	Washtenaw
75.92	W7K-WA-121	Huron	PSS	-	0.11	0.03	0.14	0.03	-	-	-	Washtenaw
76.69	W5K-WA-398	Huron	PSS	132.5	0.22	0.15	0.37	0.15	8.5	12.0	500.56	Washtenaw
76.9	W5K-WA-397	Huron	PSS	321.0	0.28	0.36	0.64	0.36	8.5	12.0	1212.67	Washtenaw
77.11	W5K-WA-396	Huron	PEM	222.3	0.31	0.27	0.58	0	8.5	12.0	839.80	Washtenaw
77.18	W5K-WA-395	Huron	PEM	82.9	0.05	0.08	0.13	0	8.5	12.0	313.18	Washtenaw
77.26	W2K-WA-128	Huron	PEM	77.6	0.13	0.09	0.22	0	8.5	12.0	293.16	Washtenaw
77.27	W2K-WA-129	Huron	PFO	697.0	0.4	0.8	1.2	0.48	8.5	12.0	2633.11	Washtenaw
77.41	W2K-WA-131	Huron	PSS	552.3	1.24	0.63	1.87	0.63	8.5	12.0	2086.47	Washtenaw
77.51	W2K-WA-133	Huron	PSS	209.6	0.24	0.24	0.48	0	8.5	12.0	791.82	Washtenaw
77.88	W1M-WA-217	Huron	PEM	63.4	0.1	0.08	0.18	0	8.5	12.0	239.51	Washtenaw
78.34	W1M-WA-215	Huron	PEM	351.1	0.35	0.4	0.75	0	8.5	12.0	1326.38	Washtenaw
80.41	W5K-WA-351	Huron	PSS	-	0.27	0	0.27	0	-	-	-	Washtenaw
81.14	W5K-WA-354	Huron	PEM	889.6	0.97	1.01	1.98	0.00	8.5	12.0	3360.71	Washtenaw
81.55	W1M-WA-214	Huron	PEM	96.1	0.21	0.11	0.32	0	8.5	12.0	363.04	Washtenaw
81.81	W7K-WA-147	Huron	PEM	-	0.01	0	0.01	0	-	-	-	Washtenaw



TABLE 12-1
Wetlands Affected in the Jackson District

Approx. Enter Milepost	Wetland ID Number	Subwatershed Name (HUC 8)	Wetland Type ¹	Length of Crossing (feet) ²	Acres Affected				Temporary Dredging ⁴			County
					Temp.	Perm.	Total	Conversion from PFO/PSS to PEM ³	Average Depth (feet)	Average Width (feet)	Volume (cubic yards)	
81.82	W7K-WA-144	Huron	PSS	359.5	0.40	0.39	0.79	0.39	8.5	12.0	1358.11	Washtenaw
82.58	W7K-WA-131	Huron	PFO	22.7	0.06	0.02	0.08	0.01	8.5	12.0	85.76	Washtenaw
83.12	W7K-WA-134	Huron	PEM	-	0.02	0	0.02	0	-	-	-	Washtenaw
83.28	W7K-WA-133	Huron	PSS	-	0.11	0.05	0.16	0.05	-	-	-	Washtenaw
83.4	W7K-WA-132	Huron	PSS	153.1	0.24	0.18	0.42	0.18	8.5	12.0	578.38	Washtenaw
83.49	W2K-WA-213	Huron	PFO	763.5	0.44	0.89	1.33	0.52	8.5	12.0	2884.33	Washtenaw
84.06	W7K-WA-151	Huron	PSS	-	0.01	0	0.01	0	-	-	-	Washtenaw
84.08	W7K-WA-152	Huron	PSS	23.2	0.06	0.04	0.1	0.04	8.5	12.0	87.64	Washtenaw
Totals				16,898.9	20.57	19.48	40.05	6.28			60,146.39	

¹ PEM = emergent; PSS = scrub-shrub; PFO = forested

² Pipeline crossing length. If no crossing length, wetland encroaches into the workspace.

³ Conversion based on maintaining a 10 to 30-foot-wide corridor centered on the pipeline centerline in forested wetlands and up to 50 feet in scrub-shrub wetlands.

⁴ Trench spoil will be sidecast along trench and returned to trench after pipeline is installed.

* Wetland to be Horizontal Directional Drilled (HDD)

13.0 FLOODPLAIN ACTIVITIES

Portions of the Project cross floodplain. However in accordance with MDEQ’s Part 31 Floodplain Rules at R 323.1312(J) Rule 312, the floodplain rules do not apply to utility crossings where “the floodplain will be restored essentially to existing elevations.”

Table 13-1 lists Federal Emergency Management Agency (FEMA) Flood Hazard zones crossed by the Project in the Jackson District.

TABLE 13-1 FEMA Flood Hazard Zones Crossed in the Jackson District				
County	MP Begin	MP End	Total Distance (mi)	FEMA Flood Zone ¹
Washtenaw, MI	72.18	72.23	0.05	AE
Washtenaw, MI	73.75	73.98	0.23	AE

1 Floodplain Definitions: A=subject to inundation by the 1-percent-annual-chance-flood; AE=subject to inundation by the 1-percent-annual-chance-flood, Base Flood Elevations determined.

Source:
[FEMA] Federal Emergency Management Agency. 2014. FEMA Flood Map Service Center. Accessed online at: <https://msc.fema.gov/portal>.



ROVER PIPELINE
An ENERGY TRANSFER Company

*ROVER PIPELINE PROJECT
Addendum 1, Permit Application Supplement, Part I
Parts 31, 301 and 303 MDEQ, Jackson District*

Appendix A

Property Owners (Privileged and Confidential)



ROVER PIPELINE
An ENERGY TRANSFER Company

Volume IIB, Attachment 2B,
MIDEQ - Jackson District, Appendix A

Property Owners (Privileged and Confidential)

Redacted to separate cover under Volume IV-PRIV,
Attachment 2B, Jackson District, Appendix A.



Volume IIB, Attachment 2B, Appendix D

Wetland Delineation Report, Addendum 1

Contained under separate cover.

Refer to June 10, 2015 Supplemental Filing